

## SUMMER

### 'Birak' Noongar Season

Birak is the season where the rain eases and the warm weather really starts to take hold. The afternoons are cooled by the sea breezes from the south west. Moodjar (Christmas Trees) are in bloom as are the tree like candlestick banksia (*Banksia attenuata*) and bull banksia (*Banksia grandis*), as well as various Eucalypts. Birak is an excellent time for birds and honey possums, as nectar is being produced by many plants.

**15.4°C**   **29.8°C**  
Low   High

Average Temperature

**12.0mm**

Average Rainfall

## BLOOMING

### South West Forests

- Blackbutt *Eucalyptus patens* 🍯
- Bull Banksia *Banksia grandis* 🍯
- Candlestick Banksia *Banksia attenuata* 🍯
- Chenille Honeymyrtle *Melaleuca huegelii* 🍯
- Coastal Blackbutt (north of Perth) *Eucalyptus todtiana* 🍯
- Compacted Feather Flower *Verticordia densiflora* 🍯
- Drummond's Gum *Eucalyptus drummondii* 🍯
- Grey Stinkwood *Jacksonia furcellata* 🍯
- Holly-Leaved Banksia *Banksia ilicifolia* 🍯
- Karri Hazel *Trymalium odoratissimum* 🍯
- Marri *Corymbia calophylla* 🍯
- Moonah *Melaleuca preissiana*
- Mountain Marri *Corymbia haematoxylon* 🍯
- Powderbark Wandoo *Eucalyptus accedens* 🍯
- Rottnest Island Teatree *Melaleuca lanceolata*
- Stinkwood *Jacksonia sternbergiana* 🍯
- Summer Starflower *Calytrix flavescens* 🍯
- Swamp Sheoak *Casuarina obesa* 🍯
- Tuart *Eucalyptus gomphocephala* 🍯
- WA Christmas Tree 'Moodjar'; *Nuytsia floribunda* 🍯
- Wandoo/White Gum *Eucalyptus wandoo* 🍯
- Wonnich/Native Willow *Callistachys lanceolata* 🍯
- Woody Pear *Xylomelum occidentale* 🍯

### South Coast Heath

- Bull Banksia *Banksia grandis* 🍯
- Candlestick Banksia *Banksia attenuata* 🍯
- Karri Hazel *Trymalium odoratissimum* 🍯
- Moonah *Melaleuca preissiana*
- Moort *Eucalyptus platypus* 🍯
- Rottnest Island Teatree *Melaleuca lanceolata*
- Scarlet Banksia *Banksia coccinea*
- Silver Mallet *Eucalyptus falcata* 🍯
- Summer Starflower *Calytrix flavescens* 🍯
- WA Christmas Tree 'Moodjar' *Nuytsia floribunda* 🍯
- Woody Pear *Xylomelum occidentale* 🍯
- Yate *Eucalyptus cornuta* 🍯
- Yellow Tingle *Eucalyptus guilfoylei* 🍯

### Urban

- Alyssum
- Basil
- Coneflower
- Cosmos
- Dandelions 🍯
- Grevilleas 🍯
- Marguerette Daisy
- Oregano
- Queen Anne's Lace
- River Red Gum *Eucalyptus camaldulensis* 🍯
- Sage
- Salvias
- Snow in Summer *Melaleuca linearifolia*

🍯 Pollen Source   🍯 Nectar Source



# BEEKEEPING ACTIVITIES

## THE COLONY

The hive will be near full strength at this time of year.

The landing board will be busy with bees coming and going looking for forage or water. Orientation and cleansing flights can become large and last for longer periods of time. On the warm days it will be common for bees to beard and/or be wash boarding at the entrance to assist with temperature and humidity control within the hive. In some years Marri will begin to flower in late January. It is also highly likely there will be a decrease in nectar availability for most of January.

## INSPECTION

You should be in a routine now with inspections every 10 - 14 days to ensure that any swarm management can be put in place. When inspecting ensure that there is sufficient space for the brood and that honey supers have sufficient space for any nectar being brought in. Monitor the brood pattern. It is important to be aware that there may be a nectar dearth from mid December to late January. If this is the case it can lead to a higher chance of robbing to be triggered during inspections. Be aware of robbing and have a plan if it starts to occur. It is also important to be aware of whether any total fire, harvest or vehicle movement bans are in place for your locality and adjust your inspections appropriately.

## NUTRITION

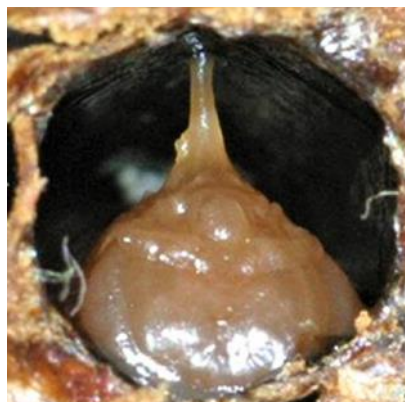
Continue to monitor the stores of pollen and nectar/honey in your hive to ensure they are sufficient for the time of year.

## PESTS & DISEASES

American foulbrood (AFB) is a disease of honeybee larvae caused by the bacterium *Paenibacillus larvae*. Beekeepers should ensure their apiaries are free of this disease to prevent reduced production and dead beehives. The first signs of American foulbrood are sunken and damaged cappings on the sealed brood.

The dead larvae turn yellow at first and then chocolate brown and are drawn down into the cells. On stirring with a probe such as a matchstick, the contents of the cell may rope out forming a characteristic fine elastic thread up to 30mm long.

As a responsible beekeeper become familiar with the signs, testing, and response to AFB. As a reportable disease an apiary inspector must be notified within 48 hours of suspecting American foulbrood in a hive. Further information can be found on the Department of Primary Industry and Regional Development website and information brochures such as [Preventing spread of American foulbrood disease](#).



## POPULATION MANAGEMENT

The management of the population can become critical at this time of year and it is important to continue to practice "frame rotation" as a means to minimise and manage the population. This simply relies on the rotation of brood frames above the queen excluder and replaced with new frames or harvested frames ("stickies").

The clean frames rotated into the brood box provide room for the queen to maintain her egg laying regime and not become crowded and outgrow the brood box.

The brood frames rotated above the queen excluder allow the bee larvae to continue development and emerge, thus contributing to the development and ongoing strength of the colony. As the bees emerge the cells are cleaned and filled with nectar. Once full they can be harvested and rotated back below the queen excluder.

## EQUIPMENT

During this hot period it is important to be aware of the fire danger of using your smoker. Monitor not only the emergency alerts that prohibit your use of a smoker but also be pragmatic when you can. Make sure you have a fire plan that adequately deals with the risks of using a smoker in your apiary. Discretion is the better part of valour and it is always better to delay an inspection to a later day than risk a fire from your activities.

## HARVEST

Continue to monitor your honey supers and harvest as needed.

## APIARY MAINTENANCE

As the heat builds be aware of whether you need to have artificial shade to provide cooling for a hive in the afternoon on hot days.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University  
[Noongar Six Seasons](#)

Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
[An Apiary Guide to Swarm Control](#)

Beekeeping Certificate III  
[RTE3153A Manage Honey Bee Swarms \(2008\)](#)

The Apiarist Blog (2020)  
[Principles of swarm control](#)

Information Bulletin No. 187  
A Cornell Extension Publication  
Seeley, Morse and Nowogrodzki (1989)  
[Bait hives for honey bees.](#)

Honeybee Democracy. Seeley (2010)

WAAS  
[Best-Practice Guideline for Urban Beekeepers](#)  
[Vermont Beekeepers Association Mentor Program](#)



Western Australian Apiarists' Society  
**Greater Bunbury Region**

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# CREATING A NUCLEUS HIVE WITH A MATED QUEEN OR QUEEN CELL

## CREATING THE NUCLEUS HIVE

### To produce a good nucleus hive you need:

Strong hive/s containing enough bees and brood to split.

A young laying queen, or queen cell, bought from a reputable breeder.

Good beekeeping weather.

Time to attend your bees.

A suitable box to house the nuc.

Frames to put back into the parent hive.

Many beekeepers adhere to this definition of a nuc but there is still wide variation. So ask questions!

Ideally, splitting a hive is done while most forager bees are out working. Open your parent hive, lift off any honey supers to get down into the brood. Nucs need bees and brood, not honey.

You now need to find the queen. Do not proceed until you have found the queen. Having found your queen put the frame containing the queen carefully aside as that frame and the queen must go back into the parent hive. You can do some pre-preparation for the split by raising frames with brood above a queen excluder five days prior to the split. This will ensure the queen is separated from the frames you take, they are covered with nurse bees and there is no young larvae that could be made into a queen cell.

Carefully transfer frames containing mostly sealed brood that are well covered with bees into your nuc box. Keep the lid on the nuc box, only removing it for long enough to insert the frames. This keeps as many of the

flying bees on the frames in the nuc as possible. You need 2 frames which both have a very large patch of brood on each side. You should take no more than 40% of the total brood from your parent hive. If when you get to this stage you have the difficult choice of producing a small nuc or taking too much brood from your colony, there is another option if you have more than one hive. You can boost your nuc with a frame of brood with nurse bees, from another hive. If you have to go this way, try to choose a frame with mostly sealed brood which will emerge soon and boost the strength of the nuc.

Assuming you have all the brood and bees you need on 2 frames, add a 3rd frame containing mostly honey. This keeps the bees going until they can collect enough for themselves. Then add a fully drawn, but mostly empty, 4th frame to give your new queen somewhere to start laying as soon as she is introduced into the nuc.

Re-assemble the parent hive, checking the queen has definitely been put back. Push the remaining brood frames together in the centre of the brood box and fill up the empty spaces on both sides with spare frames.

If you are leaving the nuc within 2-3km of the parent hive any foraging bees will return to the parent hive. In this circumstance you may wish to shake in an extra frame of mostly nurse bees to ensure sufficient population in the nuc hive.





# CREATING A NUCLEUS HIVE...

## INTRODUCING A MATED CAGED QUEEN

The bees will quickly realise that they are queenless and the new queen can be introduced in her cage immediately. Position the cage between the two brood frames so that the candy end is upper most and in parallel with the frame top bar. Squeeze the frames around the cage to firmly suspend it (the bees will repair any damage to the comb once the cage is removed). Depending on the prevailing conditions you may also wish to feed one or both of sugar syrup or pollen substitute.

Once the queen has been introduced leave the bees alone while they eat the candy plug and release the queen from the cage and get themselves established. You can check the cage after four to five days to be sure she has been released. After five to seven days, open and inspect the nuc to ensure the queen is out of the cage and laying. If she has been released and you want to make sure she has been accepted

you do not have to find her. Instead, look for eggs. The colony should be disturbed as little as possible for the next two weeks while the queen establishes her brood nest.

The general temperament of the nuc is a good guide to their wellbeing. A calm hive with all the bees going about their business probably means everything is okay and, if there are eggs and perhaps young larva as well, your nuc is now a small but fully functioning hive. All it needs is time and decent conditions to grow strong and productive.

If you do not find eggs or young larvae (grubs) on the first look, don't panic. Check the queen is out of the cage or tip her out. Close up and look again in a few days. Young queens sometimes take a while to get into a good laying pattern. However until you find eggs and young larvae the nuc is not a separate viable colony.



# CREATING A NUCLEUS HIVE...

## INTRODUCING A QUEEN CELL

Introducing a queen cell is very similar to the above process. It is important that you do not use brood frames with eggs or very young larvae as the nucleus may decide to raise its own queen. You install the queen cell between the two frames of brood. Simply press the top of the cell into the comb near some brood, being careful not to damage the cell. It is also wise to protect the queen cell with a cage to stop bees tearing it down before the queen emerges. Again, depending on the prevailing conditions you may also wish to feed one or both of sugar syrup or pollen substitute.

The queen will typically emerge in the two days after introduction of the queen cell. She will then fully develop over the next three to four days before heading out on her mating flights. Weather dependent she will then potentially mate in another three to four days. After which she will mature and start to lay eggs.

It is prudent to wait approximately two to three weeks after the queen cell being placed in the nucleus hive before checking to see whether the queen hatched, mated, returned to the hive and started to lay.



# CREATING A NUCLEUS HIVE...

## TIPS AND TRICKS

### Be Prepared

If you don't want to rush it all on one day you can also do some preparation by moving brood frames above a queen excluder in the donor hive four to five days prior. This allows you to be confident you aren't transferring your donor hive queen to the new nuc. It also allows sufficient time for nurse bees to cover the frames and any eggs or young larvae to develop to the stage the new nuc will not be able to create queen cells and you will have sufficient nurse bees to care for the brood.

### Assess the Queen

When you receive your queen in a cage be sure to assess the health of the queen and her attendant bees. When you receive your queen, open the box and place a drop of water on the cage. The attendants and workers will be thirsty and hungry and the water will help dissolve the candy. Inspect the cage to check if the queen is alive and moving. It is not uncommon for one or more attendants to be dead in the cage, but that is not an indication of any problem.

### Caring for the Queen in the Cage

It is best to install the queen as soon as possible, however a caged queen can survive for several days before introduction if cared for. Keep the cage in a dark place at room temperature and place a drop of water on the cage once or twice a day. Avoid keeping the queen in any location where it might become in contact with pesticides or any residues of pesticides.

### Slow Introduction

A slow introduction into the nuc is desirable to ensure the queenless nuc accepts the new queen when she is released from the cage. The cage will have a candy plug that will allow the release of the queen over 2-3 days. Be sure there is sufficient plug prior to installation. If it needs to be added to, use some additional queen candy, creamed honey or marshmallow to top up the plug to ensure a slower release.







## SUMMER

### 'Bunuru' Noongar Season

This month marks the start of the Noongar season Bunuru. Which is a time of white flowers with lots of white flowering gums in full bloom, including Marri and Ghost Gums

This is the hottest time of the year with little to no rain. It is typified by hot easterly winds with a cooling sea breeze most afternoons - if you're close to the coast.

**15.8°C**   **30.0°C**  
Low   High

Average Temperature

**6.9mm**

Average Rainfall

## BLOOMING

### South West Forests

- Acorn Banksia *Banksia prionotes*
- Beaufortia* species
- Blackbutt *Eucalyptus patens* 🌸🔥
- Candlestick Banksia *Banksia attenuata* 🌸🔥
- Coastal Blackbutt (north of Perth) *Eucalyptus todtiana* 🌸🔥
- Drummond's Gum *Eucalyptus drummondii* 🌸🔥
- Firewood Banksia *Banksia menziesii*
- Karri *Eucalyptus diversicolor* 🔥
- Marri *Corymbia calophylla* 🌸🔥
- Mountain Marri *Corymbia haematoxylon* 🌸🔥
- Narrow-winged Wattle *Acacia stenoptera*
- Panjang *Acacia lasiocarpa*
- Powderbark Wandoo *Eucalyptus accedens* 🌸🔥
- Quandong *Santalum acuminatum*
- Regelia ciliata* 🌸🔥
- Rottnest Island Teatree *Melaleuca lanceolata*
- Summer Starflower *Calytrix flavescens* 🌸
- Tuart *Eucalyptus gomphocephala* 🔥
- Wandoo/White Gum *Eucalyptus wandoo* 🌸🔥
- Woody Pear *Xylomelum occidentale* 🔥

### South Coast Heath

- Baxter's Kunzea *Kunzea baxteri* 🌸
- Beaufortia* species
- Candlestick Banksia *Banksia attenuata* 🌸🔥
- Karri *Eucalyptus diversicolor* 🔥
- Marri *Corymbia calophylla* 🌸🔥
- Moort *Eucalyptus platypus* 🌸🔥
- Narrow-winged Wattle *Acacia stenoptera*
- Panjang *Acacia lasiocarpa*
- Red Flowering Gum *Corymbia ficifolia* 🌸🔥
- Rottnest Island Teatree *Melaleuca lanceolata*
- Scarlet Banksia *Banksia coccinea*
- Silver Mallet *Eucalyptus falcata* 🌸🔥
- Summer Starflower *Calytrix flavescens* 🌸
- Woody Pear *Xylomelum occidentale* 🔥
- Yate *Eucalyptus cornuta* 🌸🔥
- Yellow Tingle *Eucalyptus guilfoylei* 🌸🔥

### Urban

- Abelia x grandiflora*
- Alyssum
- Basil
- Crepe Myrtle
- Dandelions 🌸
- Duranta erecta*
- Grevilleas eg. Robin Gordon 🔥
- Japanese Honeysuckle *Lonicera japonica*
- Oregano
- Queen Anne's Lace
- River Red Gum *Eucalyptus camaldulensis* 🌸🔥
- Roses
- Sage
- Salvias
- Snow in Summer *Melaleuca linearifolia*

🌸 Pollen Source   🔥 Nectar Source



# BEEKEEPING ACTIVITIES

## THE COLONY

This is usually a time of plenty for a bee colony and the beekeeper.

There is always one question that is on a beekeepers mind at this time of year - when will the Marri flower and when will the nectar flow. There are a couple of rules of thumb that the long term beekeepers use. One is that the Marri flow won't start until early February. Another is that the Marri flow will start on the first day the dew point is reached. Predicting how good the flow will be is currently done at the end when the honey has been harvested. There is an increasing interest in trying to not only predict the start of the Marri flow but also how good it will be from a production stand point. Do you have any predictors that help you? .

## INSPECTION

For whatever reason the marri flow can make bees more aggressive and their stings more painful. It is important to make sure you have appropriate PPE and be aware of any activities planned by your household or neighbours during or after any planned inspections. If it is a good Marri flow there can be another peak in swarming as a response. It is important that regular inspections are maintained and swarm management practises implemented.

## NUTRITION

Continue to monitor the stores of pollen and nectar/honey in your hive to ensure they are sufficient for the time of year.

## PESTS & DISEASES

Continue to monitor for signs of pests or disease. Have you seen any signs of chalkbrood near the landing board or during inspections? Are there signs of other pests and disease during your inspections of the hive? Do you know what to do if there is? Helpful information can be obtained from the [Department of Primary Industry and Regional Development](#).

## POPULATION MANAGEMENT

The management of the population can become critical at this time of year and it is important to continue to practice "frame rotation" as a means to minimise and manage the population. This simply relies on the rotation of brood frames above the queen excluder and replaced with new frames or harvested frames ("stickies").

The clean frames rotated into the brood box provide room for the queen to maintain her egg laying regime and not become crowded and outgrow the brood box.

The brood frames rotated above the queen excluder allow the bee larvae to continue development and emerge, thus contributing to the development and ongoing strength of the colony. As the bees emerge the cells are cleaned and filled with nectar. Once full they can be harvested and rotated back below the queen excluder.





## EQUIPMENT

Does your veil have any holes? How are the zips on your suit or is it time for a new pair of boots? Take the opportunity to check your PPE and make sure that they still function the way they did when new.

## HARVEST

Continue to monitor your honey supers and harvest as needed. Make sure any maintenance or purchases are made to your extraction equipment so it is ready to go. Also make plans to have sufficient storage for any honey that is produced and smaller containers so that you can gift or sell the bounty from the hive.

## APIARY MAINTENANCE

As the heat builds be aware of whether you need to have artificial shade to provide cooling for a hive in the afternoon on hot days. It is also important to ensure there is sufficient water for your hives.

## EDUCATION

If it is an average to good Marri flow this could be a good time to learn how to produce queens to meet your needs. This could be as simple as creating splits to the more technically challenging grafting. This could provide new queens to use in the hives you will be over wintering to reduce their likelihood of swarming or helping expand your hive numbers.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
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Wally Shaw  
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# BEE STINGS

**Beekeeping comes with one little setback- the stings! Sure, we do our best to avoid getting stung, because once one of the bees stings us, she will die. And, yes, getting stung hurts! But there is a bigger reason to avoid stings, one that could potentially be fatal.**

As a beekeeper, it is important to truly understand an anaphylactic response to bee stings and what is a normal sting response.

Most people have some reaction to a bee sting. Bee sting reactions can be classified as mild, moderate or systemic. Mild and moderate stings are considered a normal reaction to the bee venom, and symptoms subside in hours to days. These reactions may be limited to the sting site, or they may

spread across a larger area or entire limb.

Systemic reactions are full body allergic reactions to an allergen such as peanuts, shellfish or bee venom. Whereas mild and moderate reactions affect only the localised sting site (like a hand or arm), systemic reactions impact body systems not involved in the sting location, like the respiratory system. If a systemic reaction occurs it is important to seek immediate medical assistance.

## OUCH! YOU'VE JUST BEEN STUNG BY A BEE. WHAT SHOULD YOU DO NEXT?

The first thing you should do is immediately remove the stinger. Attached to the stinger is a small venom sac which pumps venom into victims. To minimise the amount of venom you receive and reduce the sting reaction, quickly remove the stinger by any means necessary.

Next, wash the sting site. Washing the sting site with soap and water reduces the risk of infection. All jewellery near the sting site, especially rings, should be removed right away before swelling starts.

Reduce swelling by elevating and icing the sting site. Ice will also help reduce pain.

Acetaminophen or Ibuprofen can help reduce pain. Otherwise, the pain should subside within a few hours. Don't scratch! Even though stings itch, excessive scratching can break the skin and lead to infection. Itching can be reduced with cortisone cream, an antihistamine cream, or calamine lotion. Benadryl will help, but will also make you very sleepy!





## AUTUMN

### 'Bunuru' Noongar Season

This is a time of white flowers with lots of white flowering gums in full bloom, including Marri and Ghost Gums

The hot and dry weather continues. This is the hottest time of the year with little to no rain. It is typified by hot easterly winds with a cooling sea breeze most afternoons - if you're close to the coast.

**14.3°C**   **27.7°C**  
Low   High

Average Temperature

**19.0mm**

Average Rainfall

## BLOOMING

### South West Forests

- Candlestick Banksia *Banksia attenuata* 🌸👉
- Firewood Banksia *Banksia menziesii*
- Holly Leaf Banksia *Banksia ilicifolia* 🌸👉
- Acorn Banksia *Banksia prionotes*
- Swamp Banksia *Banksia littoralis* 🌸👉
- Marri *Corymbia calophylla* 🌸👉
- Mountain Marri *Corymbia haematoxylon* 🌸👉
- Powderbark Wandoo *Eucalyptus accedens* 🌸👉
- Karri *Eucalyptus diversicolor* 🌸👉
- Tuart *Eucalyptus gomphocephala* (undependable nectar flow)
- Coastal Blackbutt *Eucalyptus todtiana* (north of Perth) 🌸
- Wandoo *Eucalyptus wandoo* subsp. *wandoo* 🌸👉
- Native Pigface *Mesembryanthemum* spp.

### South Coast Heath

- Candlestick Banksia *Banksia attenuata* 🌸👉
- Swamp Banksia *Banksia littoralis* 🌸👉
- Marri *Corymbia calophylla* 🌸👉
- Red Flowering Gum *Corymbia ficifolia* 🌸👉
- Yate *Eucalyptus cornuta* 🌸👉
- Karri *Eucalyptus diversicolor* 👉
- Silver Mallet *Eucalyptus falcata* 🌸👉
- Red Tingle *Eucalyptus jacksonii* 🌸👉
- Native Pigface *Mesembryanthemum* spp.

### Urban

- Ageratum 👉
- Alyssum 👉
- Basil 🌸👉
- Buddleia 👉
- Red Capped Gum *Eucalyptus erythrocorys* 🌸👉
- Marigolds 👉
- Phlox
- Salvias 👉
- Verbena

🌸 Pollen Source   👉 Nectar Source





# BEEKEEPING ACTIVITIES

## THE COLONY

The number of bees per hive will be among the highest for the year given the season of plenty.

Bees will continue to forage bringing in more nectar and pollen. The colony will still maintain and produce additional drones. After a large Marri flow there is the potential for the colony to become aggressive and some beekeepers believe their stings are more painful. This increased aggression is a signal that the flow is slowing or stopping and the colony becomes defensive to protect their stores and prevent robbing.

## INSPECTION

Inspections should still be every 10-14 days. Attention should be paid to the brood pattern and composition. There is a likelihood that during this period of plenty the colony may decide to either swarm or supercede a queen. Be alert to queen cells and if they are produced what they mean - is it a swarm or supercedure cell - and take appropriate action.

## NUTRITION

Bees will still be bringing in resources. As the major eucalypt flows are coming to an end, it is important to start planning for nutrition for over the coming winter. Planning to ensure there are sufficient resources for winter (honey, nectar and pollen) should be undertaken. The rough rule of thumb is for every brood frame leave two frames of resources for winter.

## PESTS & DISEASES

Continue to monitor for American Foulbrood, wax moths, ants and other pests and diseases that could impact on the health of the colony. As required install or renew ant barriers to restrict access by ants. Also make sure weeds are kept away from hive bodies so ants cannot use them to gain access to hives.

## POPULATION MANAGEMENT

There is still the possibility for swarms to develop and/or queens to be superseded. There will still be sufficient drones to mate successfully.





## EQUIPMENT

With the possibility of robbing occurring it is important to know what you will pre-emptively or reactively do to manage robbing. Will you reduce entrances or place screens on small or weak colonies proactively? Or will you suck it and see and react if you see signs of robbing? What is your plan to reactively manage robbing - reduce or close the entrance, put a wet sheet over the hive and/or put on a robbing screen?

## HARVEST

Harvest honey that is surplus to the colony's needs. Follow a harvest plan for what happens to the stickies, will they be returned and maintained on the hive or placed on the hive for cleaning and then stored.

## APIARY MAINTENANCE

Continue pulling weeds around hives. Check to make sure hives are secure and lids won't blow off or hives knocked over.

## EDUCATION

Research pollinator friendly plants for your area. Late Autumn and Winter are a great time for planting.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University  
[Noongar Six Seasons](#)

Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
[An Apiary Guide to Swarm Control](#)

Beekeeping Certificate III  
[RTE3153A Manage Honey Bee Swarms \(2008\)](#)

The Apiarist Blog (2020)  
[Principles of swarm control](#)

Information Bulletin No. 187  
A Cornell Extension Publication  
Seeley, Morse and Nowogrodzki (1989)  
[Bait hives for honey bees.](#)

Honeybee Democracy. Seeley (2010)

WAAS  
[Best-Practice Guideline for Urban Beekeepers](#)

[Vermont Beekeepers Association Mentor Program](#)



Western Australian Apiarists' Society  
**Greater Bunbury Region**

**This document has been prepared by:**

Helen Humphreys  
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Jodi Wildy

# LEGAL OBLIGATIONS

Bees are considered to be livestock under the Biosecurity and Agriculture Management Act (2007) and as such there are certain legal obligations involved in keeping them. There are a number of benefits to being a registered beekeeper and includes biosecurity notifications when pest or disease incursions occur in your local area.

## REGISTERING AS A BEEKEEPER

It is a requirement of the States Biosecurity and Agriculture Management Act (2013) that beekeepers are registered, that each beekeeper has a unique identifier and that 'brand' is scored below the surface of all supers (brood and honey).

Information on the requirements and how to register can be found on the Department of Primary Industry and Regional Development website - [Registering as an owner of stock or as a beekeeper](#).

In a nut shell the following applies:

1

A person must not be or become a beekeeper unless the person is a registered beekeeper.

2

A beekeeper must identify every hive the beekeeper owns, or cause it to be identified, with the beekeeper's registered identifier for hives

3

A registered identifier for hives is to consist of a combination of one or more letters and one or more numerals as allotted.

4

A registered identifier applied to a hive must be burnt in, stamped, carved or scored, so that it is distinctly impressed below the level of the surface of one exterior surface of each brood and honey super.

5

Each letter and numeral forming part of a registered identifier for hives must be not less than 12 mm in height, set in alignment but not conjoined.

6

A beekeeper must apply the beekeeper's registered identifier to a hive within 7 days of taking possession of the hive.

7

The date on which the super was first used should be written on each super with indelible ink.



## APIARY SIGNAGE

On land a beekeeper does not own or reside on they are required to display a sign. The sign is to be positioned to be clearly visible to all persons approaching the apiary. The sign must contain, in letters of not less than 50 mm in height, the following details:

1

The full name of the beekeeper.

2

The telephone number of the beekeeper.

3

The registered identifier for the hives.

4

The street address of the place of residence or business of the beekeeper.

## SELLING OR DISPOSING OF A HIVE AND/OR NUCLEUS

If you sell, lease, supply or dispose of a bee hive or nucleus you are required to record the persons:

1

Name and postal address

2

confirmed, by reference to the register, that the person is the registered owner of the identifier for hives and made a written record of that confirmation

3

Retain the record for not less than 7 years.

A beekeeper must apply their registered identifier to a hive within 7 days of taking possession of the hive. A hive to which an identifier of one or more previous owners is applied must

1

Identify the hive, or cause it be identified, with his or her registered identifier for hives, applied immediately below the last preceding owner's identifier.

2

Cancel the last preceding owner's identifier, or cause it to be cancelled, by burning, carving or scoring a straight line through it.

A beekeeper who establishes a new apiary or who removes an apiary or part of an apiary from one site to another site must, as soon as practical after the event, make a written record of the establishment of the new apiary or of the removal of the apiary, or part of the apiary, to the other site. This record is to be kept for 7 years.







## AUTUMN

### 'Djeran' Noongar Season

The Noongar season of 'Djeran' sees a break in the really hot weather. A key indicator of the change of season is the cool nights that bring a dewy presence in the early mornings.

The winds will also change, especially in their intensity, with light breezes generally swinging from southerly directions. Many flying ants can be seen cruising around in the light winds.

Djeran is a time of red flowers, especially from the red flowering gum (*Corymbia ficifolia*), as well as the smaller and more petite flowers of the summer flame (*Beaufortia squarrosa*). Banksias start to display their flowers, ensuring that there are nectar food sources for the many small mammals and birds that rely upon them.

**11.7°C**   **24.2°C**  
Low   High

Average Temperature

**36.5mm**

Average Rainfall

## BLOOMING

### South West Forests

- Firewood Banksia *Banksia menziesii*
- Acorn Banksia *Banksia prionotes*
- Swamp Banksia *Banksia littoralis* 🌸🍯
- Gravel Bottlebrush *Beaufortia decussata*
- Sand Beaufortia *Beaufortia squarrosa* 🍯
- Powderbark Wandoo *Eucalyptus accedens* 🌸🍯
- Karri *Eucalyptus diversicolor* 🌸🍯
- Tuart *Eucalyptus gomphocephala* (undependable nectar flow)
- Flat-Topped Yate *Eucalyptus occidentalis* 🌸🍯
- Native Pigface *Mesembryanthemum spp.* 🌸

### South Coast Heath

- Swamp Banksia *Banksia littoralis* 🌸🍯
- Gravel Bottlebrush *Beaufortia decussata* 🍯
- Red Flowering Gum *Corymbia ficifolia* 🌸🍯
- Yate *Eucalyptus cornuta* 🍯
- Karri *Eucalyptus diversicolor* 🌸🍯
- Silver Mallet *Eucalyptus falcata* 🌸🍯
- Flat-Topped Yate *Eucalyptus occidentalis* 🌸🍯
- Native Pigface *Mesembryanthemum spp.* 🌸

### Urban

- Ageratum 🍯
- Anemones 🌸
- Ashby's Banksia *Banksia Ashbyi* 🌸🍯
- Bottlebrush *Callistemon spp.* 🍯
- Camellia *sasanqua* 🌸
- Duranta erecta*
- Illyarrie (Red Capped Gum)  
*Eucalyptus erythrocorys* 🌸🍯
- 'Rosea' Red Flowering Yellow Gum  
*Eucalyptus leucoxydon* 🍯
- Western Coolibah *Eucalyptus victrix* 🌸
- Hibiscus spp.*
- Magnolia grandiflora*
- Rosemary 🌸🍯
- Salvia spp.* 🍯
- Sunflower *Helianthus spp.* 🌸
- Sweet Alyssum 🍯
- Garden Grevilleas 🍯

🌸 Pollen Source   🍯 Nectar Source





# BEEKEEPING ACTIVITIES

## INSPECTION

Inspections should be limited and for specific purposes as the weather continues to cool. Consider combining weak hives. In rural areas bees are no longer bringing in much, if any, nectar or pollen. As the amount of pollen coming in slows, so does the Queens laying. It is an ideal time to assess the stores of hives to determine what should be left for winter. If insufficient, a plan to manage insufficient stores should be put in place. Bees will be unlikely to draw comb unless provided supplementary feed. Bees will become defensive of their winter stores and could behave aggressively during inspections or as people, pets and livestock move near the hives.

## NUTRITION

It is time to consider feeding weaker hives as temperatures cool. If you are planning to build up stores to assist the hive over winter a 2:1 sugar syrup should be used as this prompts stores rather than brood. Other alternatives include the use of dry sugar or purpose made bee fondant.

## PESTS & DISEASES

Continue to monitor for American Foulbrood, wax moths, ants and other pests and diseases that could impact on the health of the colony. As required install or renew ant barriers to restrict access by ants. Also make sure weeds are kept away from hive bodies so ants cannot use them to gain access to hives.

## POPULATION MANAGEMENT

Drones will start to be evicted and it is likely the amount of brood will start to decrease. Swarming possibility will decrease but wild colonies may still be throwing small swarms particularly if a nectar flow occurred through March. Start to condense your hives down to ensure supers are full.



## EQUIPMENT

When storing any equipment ensure that it is clean and store in a way that prevents bees and pests becoming a problem. Freeze frames for greater than 24 hours and store in a pest free environment to prevent wax moth

## HARVEST

Some honey may remain to be harvested. It is time to start thinking about how wax can be processed from the wax cappings and any comb you have removed and need to render down.

## APIARY MAINTENANCE

With a little more time on your hands it may be time to tidy the apiary site. It is a good time to make sure the hives are weather tight by checking lids and super joints to prevent rain entering. It is also a good time to make sure lids are secure so they won't come off in stronger winter winds. Also make sure your hives have a stable footing so they won't sink and fall over or be blown over by strong winds.

## EDUCATION

Reflect on the season so far and identify any areas that you want to know more about. Do you need more information about pests and diseases, how to manage hives to prevent swarming, how to catch swarms, do cut/trap outs or queen rearing to name a few? Talk to other beekeepers, research online and/or make a note to do some training.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base

[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University

[Noongar Six Seasons](#)

Chadwick, J. (2020), Degrees of Defensive Behaviour.

Rittschof, C., Coombs, C., Frazier, M. et al.

[Early-life experience affects honey bee aggression and resilience to immune challenge. Sci Rep 5, 15572 \(2015\).](#)



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# DEGREES OF DEFENSIVE BEHAVIOUR

Why do bees sting? Bees sting by reaction, to defend themselves and to protect the colony, especially the queen. There are degrees of defensive behaviour that bees and hives display in response to these factors. These have recently been categorised by John Chadwick as:

DEGREE	BEE BEHAVIOUR	ACCEPTABLE
1	Generally disinterested	Desirable
2	Interested but not aggressive	Acceptable
3	Aggressive towards the beekeeper	Tolerable if not a trend Not Acceptable if a trend
4	Aggressive to people 10 metres away	Not acceptable
5	Aggressive to people/pets 20 metres	Not acceptable

As beekeepers we aim and prefer for our hives to have a degree of behaviour that can be categorised as Degree 1 or Degree 2. These hives are a pleasure to work and have, particularly around our gardens, neighbours, pets and stock. When we work or are around our hives we should be asking ourselves a number of questions about the degree of defensive behaviour: What degree of defensive behaviour is it? First time or is it a trend? Are there any obvious causes? The key to answering these questions is our record keeping.

## DEGREE 2

At a Defensive Behaviour Degree 2 during an inspection your bees will show little interest in you. The tone of the hive will not change. They might land on your gloves but are unlikely to sting. Comparatively few will mill around your

suit and likely these will be from interrupting a flight path to and from the entrance. After working the hive the bees will return to normal.



## DEGREE 3

At a Degree 3 Defensive Behaviour during inspection your bees demonstrate that they do not want you around. They might sit on the top of the frames with their stings facing you and fan defense pheromones your way. There will be a noticeable change in the noise coming from the hive. They will attack your gloves and clothing and actively sting you.

They will follow you when you exit the hive area and be difficult to lose. For a few hours after the inspection they will be defensive and possibly sting people and pets within 5m of the hive. Typically, a Degree 3 (aggression towards the beekeeper) is the result of one or more factors and there are a number of responses a beekeeper could make:

CAUSE	RESPONSE
Weather	Stop / Close up / Reschedule
Reaction to bee suit	Stop / Reschedule / Wash suit
Clumsy or rough handling	Cease being a bear
Recent negative experience	Reschedule
Robbing	Manage robbing, reduce entrance, etc
Nectar dearth	Pre-emptively prepare hives to manage robbing or move to nectar source
Hungry bees	Feed or move to nectar source
Suspect queen	Check presence

If this defensive behaviour is ongoing over months you will often see this by the bees being defensive near the entrance or around the hive outside of inspections. This can occur within a radius of a few metres. People and pets should try not to get too close, or if needed, move past quickly. If it is an ongoing or building trend it is likely a result of negative experiences of the colony or ongoing clumsy or rough handling. There is research that suggests these negative experiences can lead to an increase in aggression of 10-15% from young worker

bees. This lasts the lifetime of the bees which means that their negative reaction to us can persist for up to 50 days. If this is the case we need to improve our practises as beekeepers so that the bees do not learn that a beekeeper inspection is a negative experience.

Another reason for persistent or building aggression can be attributed to the lack of a queen and/or the replacement of the queen with poor offspring genetics. In this situation requeening should be considered.



## DEGREE 4/5

When displaying a Degree of Defensive Behaviour that is a 4 or 5 the bees will appear to defend their hive within a 10 metre or more perimeter. People and pets who enter this zone are liable to be stung, often without warning. This includes close neighbours even if separated by a fence. During inspection the bees are highly defensive and

aggressive with lots of bees stinging the beekeeper(s). This heightened aggressive nature will last into the following days. This level of aggressive behaviour should not be tolerated and action should be taken.

Something is very wrong and it is typically a queen issue.

CAUSE	RESPONSE
Queen is dead	Re-queening is generally the best option Or move the hive Or euthanise the hive
Queen is failing	
Queen producing bees with poor temperament	
Bees are overreacting to a recent negative event	

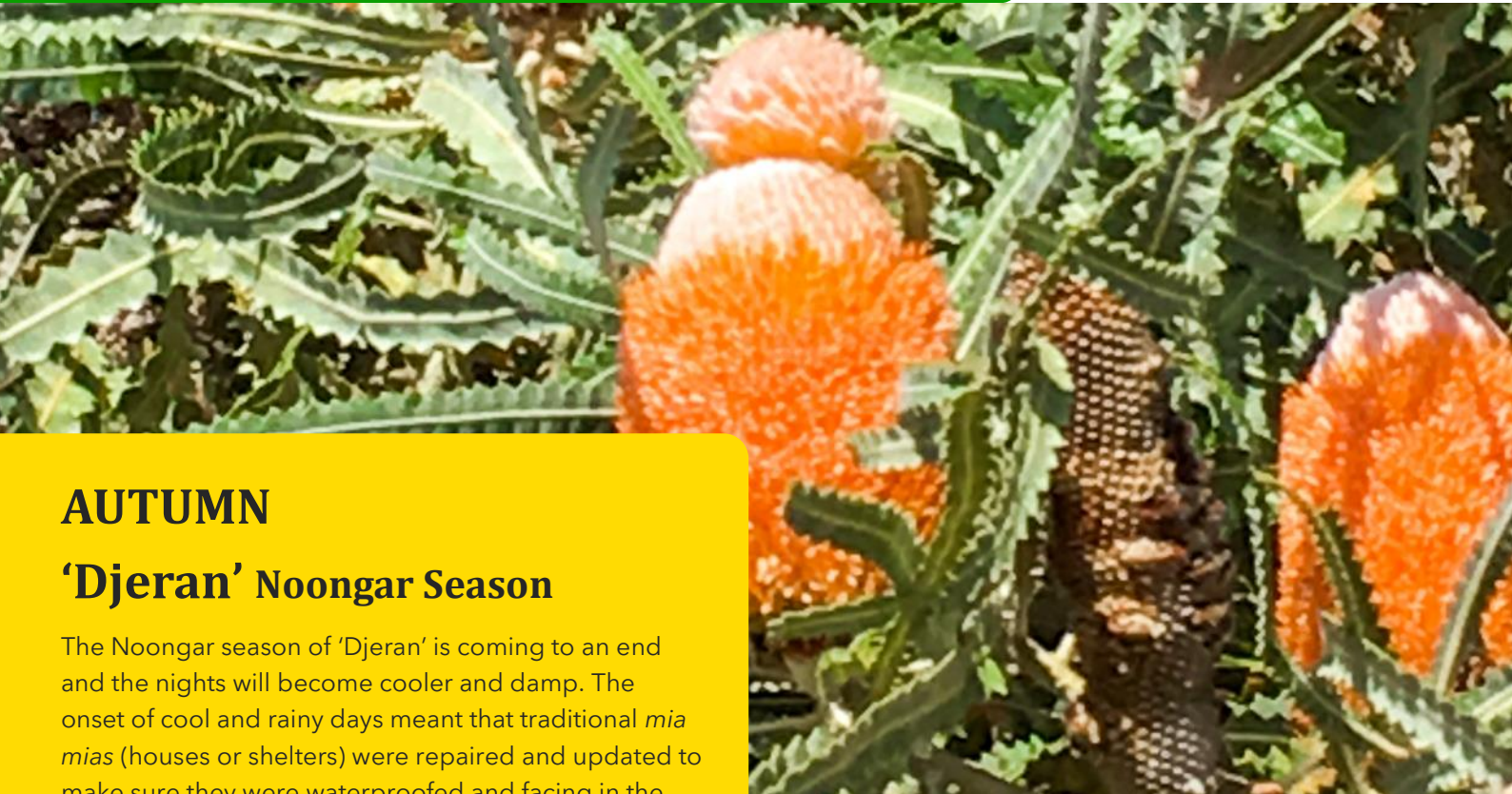
Your response to this heightened aggression needs to be informed by answering a number of questions including:

- How long can you and your neighbours wait?
- Can the hive be moved? Do you have somewhere to move the hive to?
- Can you manage the mayhem of having lots of aggressive bees in the air while replacing the queen? Can you find the queen to replace her?
- Can you obtain a gentle queen of known gentle stock?

**This is a very serious situation for everyone and your future ability to keep bees at this location. It can lead to discussions with your neighbours and maybe your local council with directions to move the hive.**







## AUTUMN

### 'Djeran' Noongar Season

The Noongar season of 'Djeran' is coming to an end and the nights will become cooler and damp. The onset of cool and rainy days meant that traditional *mia mias* (houses or shelters) were repaired and updated to make sure they were waterproofed and facing in the right direction in readiness for the deep wintery months to come. It is a good time for Beekeepers to prepare their hives for winter too. Are they water tight and do they have sufficient stores?

**9.2°C**  
Low

**21.0°C**  
High

**96.2mm**

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Firewood Banksia** | Mungyte | Mungite | *Banksia menziesii*
- Acorn Banksia** | Manryet | *Banksia prionotes*
- Swamp Banksia** | Pungura | *Banksia littoralis* 🌸🍯
- Yate** | Mo | Yandil | Yate | Yeit | *Eucalyptus cornuta* 🍯
- Karri** | Karri | Karril | *Eucalyptus diversicolor* 🌸🍯
- Bullich** | Bullich | *Eucalyptus megacarpa* 🌸🍯
- Swamp Yate** *Eucalyptus occidentalis* 🌸🍯
- Cockies Tongue** | Injid | *Templetonia retusa* 🌸🍯

### South Coast Heath

- Swamp Banksia** | Pungura | *Banksia littoralis* 🌸🍯
- Red Flowering Gum** | Boorn | Yorgam | *Corymbia ficifolia* 🌸🍯
- Yate** | Mo | Yandil | Yate | Yeit | *Eucalyptus cornuta* 🍯
- Silver Mallet** *Eucalyptus falcata* 🌸🍯
- Bell-fruited Mallee** *Eucalyptus preissiana* 🌸🍯
- Cockies Tongue** | Injid | *Templetonia retusa* 🌸🍯

### Urban

- Alyssum** 🍯
- Correa* species 🍯
- Garden Daisies** 🌸
- Eastern States Wattles** 🌸
- Grevillia olivacea* 🍯
- Garden variety grevilleas** 🍯
- Marigold**
- Peruvian Pepper Tree** *Shinus molle*
- Pin Cushion Hakea** *Hakea laurina* 🌸🍯
- Rosemary** 🌸🍯
- Salvia* spp. 🍯

🌸 Pollen Source    🍯 Nectar Source

Common Name | Known Noongar Names | Scientific Name



# BEEKEEPING ACTIVITIES

## INSPECTION

Inspections should be kept to a minimum and brief.

Inspect during the warmest part of the day when the wind is light and temperature is above 18°C. Only inspect for a particular purpose and keep it short.

You will be able to monitor the health of the hive using visual queues of what you see happening at the hive entrance. Are the bees still bringing in pollen, are there orientation flights occurring, are the last of the drones being removed, is there fighting at the entrance?

## PESTS & DISEASES

Wax moth risk decreases as temperatures cool . It does however mean that other animals may seek out the hive for food, warmth and/or shelter. Watch for ants and mice.

Monitor your hives for poisoning. It is at this time of year some gardeners use chemical controls that could impact your bees. If concerned seek advice and take action quickly.

## NUTRITION

Have you left sufficient stores for the hive to over winter?

The general rule of thumb is that approximately half the frame area should be nectar or preferably capped honey. For example, for each brood frame you should leave approximately one frame of food. If any remains after winter it can be harvested.

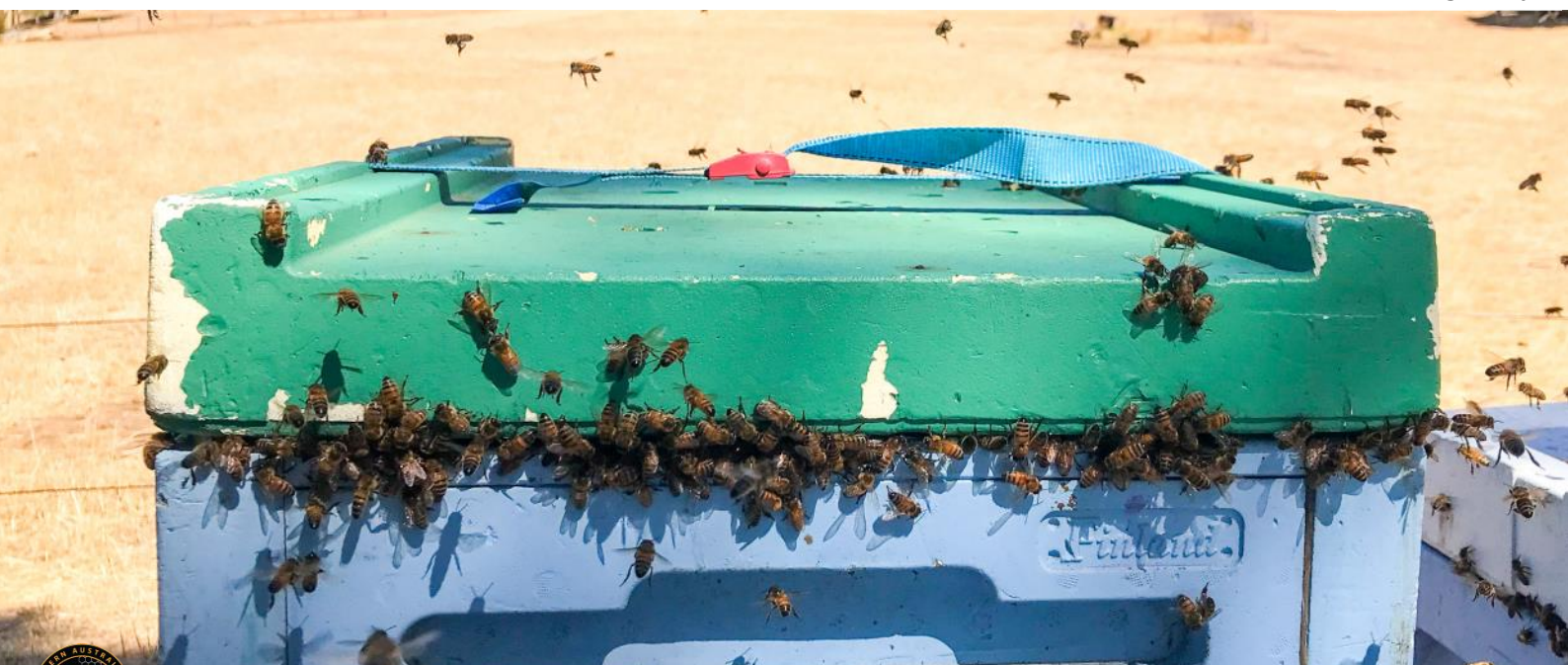
If feeding is required due to a light hive you can use syrup, candy or sugar. These are commercially available or can be homemade. Make sure that the feeding occurs inside the hive to reduce the likelihood of robbing and pests, particularly in residential areas.

Returning stickies to the hive for cleaning of the frames should only occur in hive too.

## POPULATION MANAGEMENT

Population numbers will have decreased with more frames used for stores than for brood. The hive will still be active on warm days. You'll notice over the month that the majority of drones will be kicked out of the hive.

Robbing frenzy





## EQUIPMENT

If you have harvested late make sure that you freeze and then store your frames where pests such as wax moth can't access them. It is a good opportunity to repair or make equipment for next season. Have you wanted to expand your hive numbers? Does the super you took off need some running repairs or a coat of paint?

## HARVEST

It is unlikely there will be any new honey to harvest. It is one of the last opportunities to remove frames of honey for harvest.

Make sure that you leave enough for the hive to over winter. What you leave and they do not consume can be harvested in spring.

## APIARY MAINTENANCE

With a little more time on your hands it may be time to tidy the apiary site and make sure all hives are secure. Ensure lids won't blow off and hives won't be knocked over in bad weather.

## EDUCATION

Start to make plans for next season. What are your goals? Do you want to produce more honey? Increase your number of hives? Offer pollination services? Raise Queens? Sell nucs? Determine your goals, and spend some time making a written plan on how you'll accomplish them.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base

[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University

[Noongar Six Seasons](#)

Hansen, V. and Horsfall, J. (2019), Noongar Bush Tucker. Bush food plants and fungi of the south-west of Western Australia. UWA Press.

Hansen, V. and Horsfall, J. (2019), Noongar Bush Medicine. Medicinal plants of the south-west of Western Australia. UWA Press.

PrimeFact NSW DPI

[Feeding sugar to honey bees](#)

Agriculture Victoria

[Feeding honey bees to prevent starvation](#)



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# FEEDING

## If you plan to feed your bees do it with a purpose and goal in mind.

The reason you are feeding your hive and the goal you have will dictate what and in what quantities you feed them. In formulating your plan be aware that the sugar, in whatever form you provide it, can end up in your honey supers if fed in large quantities or with honey supers on. If this occurs your honey will no longer be honey. One way to see where sugar syrup has been stored or moved to is to add a food dye to identify it. Another consideration is to feed smaller amounts to ensure the bees consume it.

The table below outlines the difference reasons you may feed and what you could use. Bees need both carbohydrate (sugar) and protein (pollen) to stay healthy and survive. If you are feeding your bees due to lack of stores or available forage it may also be a good idea to provide a pollen substitute. If there is insufficient pollen within the hive, or being brought in by foragers, there are commercially available pollen substitutes.

<b>ANY TIME</b>	1:1 Syrup   Fondant   Dry Sugar
	Emergency feeding if stores are low
<b>AUTUMN</b>	2:1 Syrup   Fondant   Dry Sugar
	Insufficient stores for winter
	Stimulate stores rather than food
<b>SPRING</b>	1:1 Syrup
	Encourage brood rearing (build numbers FOR the flow, not IN the flow)
	Comb drawing
	Queen rearing
	Nuc / split production

### Making Sugar Syrup

Measure by weight or volume - close enough is good enough - nectar comes in a range of ratios

Mix only what you need as it will spoil if kept too long

Only use white sugar

Add hot water to the sugar - if you boil your sugar syrup it can cause health problems for your bees

There are many thoughts on adding additives to the sugar syrup

Should be clear with a slight 'steeped' colour.



**Make sure the food you provide can only be accessed by the bees from INSIDE the hive to prevent robbing.**





## WINTER

### 'Makuru' Noongar Season

The Noongar season of 'Makuru' sees the coldest and wettest time of the year in the South West. Traditionally, this was a good time of the year to move back inland from the coast as the winds turned to the west and south bringing the cold weather, rains and occasionally snow on the peaks of the Stirling and Porongurup Ranges.

**7.1°C**      **17.3°C**  
Low              High

Average Temperature

**140.5mm**

Average Rainfall

## BLOOMING

### South West Forests

- Prickly Dryandra | *Banksia Armata*
- Bullich | Bullich | *Eucalyptus megacarpa* 🌸🍯
- One-sided Bottlebrush | *Calothamnus quadrifidus*
- Flooded Gum | *Eucalyptus rudis* 🌸
- Two-leaf Hakea | *Hakea Trifurcate* 🌸
- Honey Bush | *Hakea lissocarpa*
- Parrot Bush | *Banksia sessilis* 🌸🍯
- Prickly Moses | *Acacia pulchella* 🌸
- Whicher Scarp Jarrah
- Yate | Mo | Yandil | Yate | Yeit | *Eucalyptus cornuta* 🍯

### South Coast Heath

- Scarlet Banksia | *Banksia coccinea*
- Firestick Banksia | *Banksia menziesii* 🌸🍯
- Bell Mallee | *Eucalyptus preissiana*
- Cauliflower Hakea | *Hakea corymbosa* 🌸🍯
- Royal Hakea | *Hakea victoria* 🌸🍯

### Urban

- Capeweed 🌸
- Dandelion 🌸
- Eastern States Wattle
- Bell Mallee | *Eucalyptus preissiana*
- Rose Mallee | *Eucalyptus rhodantha* 🌸🍯
- Southern Mahogany | *Eucalyptus robusta*
- Ironbark | *Eucalyptus sideroxylon* 🍯
- Grevillea 🍯
- Pin Cushion Hakea | *Hakea laurina* 🌸🍯
- Marigold 🌸
- Pansy 🍯
- Petunia
- Rosemary 🍯

🌸 Pollen Source      🍯 Nectar Source

Common Name | Known Noongar Names | Scientific Name





# BEEKEEPING ACTIVITIES

## THE COLONY

For the next several months, the bees will remain focused on keeping the queen and any brood warm.

They will consume honey to maintain the high caloric requirements of heating the cluster to 35-36°C. On warmer days, bees will still leave the hives for cleansing flights. They will continue to forage when the day time temperature is above 14°C, bringing nectar and pollen where they can find it. This is more likely in residential areas due to the gardening activities of your neighbours.

The Winter Solstice also occurs in June. Following this shortest day of the year the bees activities will increase.



## INSPECTION

Inspections should be kept to a minimum, brief, and for a particular purpose. If you don't need to inspect - don't! You will be able to monitor the health of the hive using visual cues of what you see happening at the hive entrance.

- Are the bees still bringing in pollen?
- Are there orientation flights occurring?
- Are the last of the drones being removed?
- Is there fighting at the entrance?

Lift the back of the hive to get a feel for any significant changes in the weight, and therefore the stores in the hive.

## NUTRITION

Have you left sufficient stores for the hive to over winter? The general rule of thumb is that approximately half the frame area should be nectar or preferably capped honey. If feeding is required due to a light hive you can use sugar syrup, fondant or white sugar. These are commercially available or can be homemade. Make sure that the feeding occurs inside the hive to reduce likelihood of robbing and pests, particularly in residential areas. Returning stickies to the hive for cleaning of the frames should only occur inside the hive.

## PESTS & DISEASES

As temperatures cool wax moth risk decreases. It does however mean that other animals may seek out the hive for food, warmth and/or shelter. Watch for ants and mice.

## POPULATION MANAGEMENT

Population numbers will have decreased with more frames used for stores than for brood. The hive should still be active. Drones will be conspicuous in their absence, but some hives will still have very low numbers of drones present.





## EQUIPMENT

Ensure your equipment is stored where it will remain dry.

## APIARY MAINTENANCE

With a little more time on your hands it may be time to tidy the apiary site and make sure all hives are secure and lids and hives won't be knocked over in strong winds or by animals. Consider any repairs or re-painting of supers or other equipment now so that it is ready when it is needed.

## EDUCATION

With the cool days and higher likelihood of rain it is a great opportunity to buy some beekeeping books, watch relevant videos on YouTube or start to get organised for courses in the spring.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

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## WINTER

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**7.6°C**      **17.7°C**  
Low              High

Average Temperature

**120.2mm**

Average Rainfall

## BLOOMING

### South West Forests

- Prickly Moses | *Acacia pulchella* ❁
- Parrot Bush | *Banksia sessilis* ❁❁
- Water Bush | *Bossiaea aquifolium* ❁
- One-sided Bottlebrush | *Calothamnus quadrifidus* ❁❁
- Bullich | Bullich | *Eucalyptus megacarpa*
- Flooded Gum | *Eucalyptus rudis* ❁
- Native Wisteria *Hardenbergia comptoniana* ❁
- Honey Bush | *Hakea lissocarpha* ❁❁
- Two-leaf Hakea | *Hakea trifurcate* ❁

### South Coast Heath

- Firestick Banksia | *Banksia menziesii* ❁❁
- Parrot Bush | *Banksia sessilis* ❁❁
- Yate | Mo | Yandil | Yate | Yeit | *Eucalyptus occidentalis* ❁❁
- Bell Mallee | *Eucalyptus preissiana*
- Bacon & Egg Plants | eg. *Eutaxia myrtifolia* ❁
- Native Wisteria | *Hardenbergia comptoniana* ❁
- Cauliflower Hakea | *Hakea corymbosa* ❁❁
- Honey Bush | *Hakea lissocarpha* ❁❁
- Royal Hakea | *Hakea Victoria* ❁❁

### Urban

- Silver Princess | *Eucalyptus caesia* ❁❁
- Rose Mallee | *Eucalyptus rhodantha* ❁❁
- Ironbark | *Eucalyptus sideroxylon*
- Pin Cushion Hakea | *Hakea laurina* ❁❁
- Dandelions ❁
- Grevillea Shrubs ❁
- Marigolds ❁
- Pansy ❁
- Primrose ❁

❁ Pollen Source      ❁ Nectar Source

Common Name | Known Noongar Names | Scientific Name



# BEEKEEPING ACTIVITIES

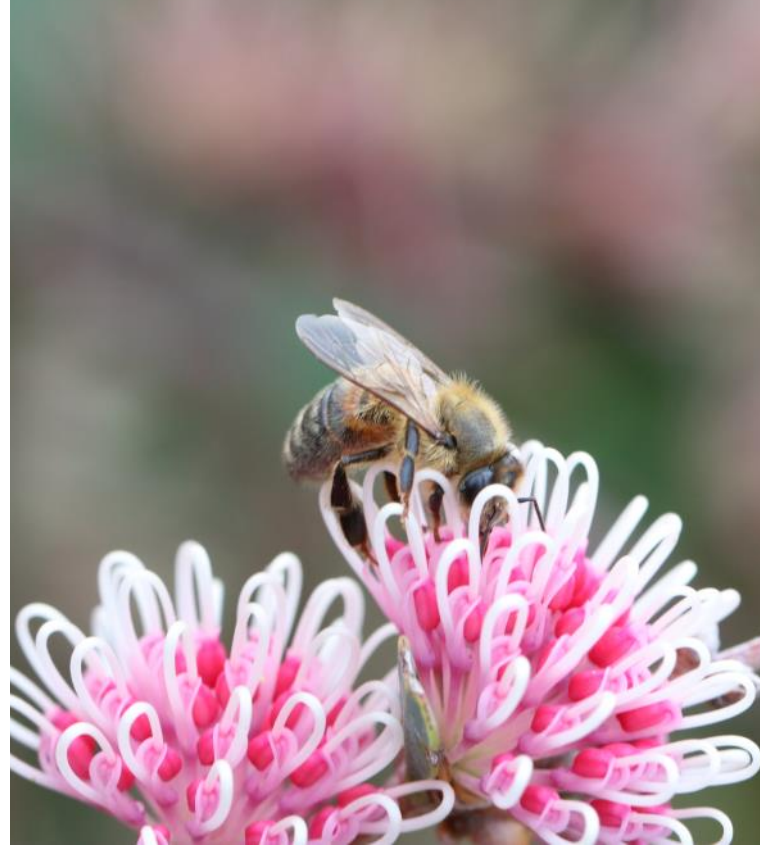
## THE COLONY

With lengthening days the hive will cue the queen to start to produce more brood.

You are also likely to see the first signs of drone brood as a precursor to the first likely swarming time in August. On warmer non rainy days, bees will leave the hive to forage bringing in nectar and pollen where they can find it. This is more likely in residential areas due to the gardening activities of your neighbours.

## INSPECTION

Inspections should be kept to a minimum and brief. Inspect during the warmest part of the day when the wind is light and temperature is above 18C. Only inspect for a particular purpose and keep it short. You will be able to monitor the health of the hive using visual cues of what you see happening at the hive entrance. Are the bees still bringing in pollen, are there orientation flights occurring, are the last of the drones being removed, is there fighting at the entrance? Lift the back of the hive to get a feel for any significant changes in the weight, and therefore the stores, in the hive.



## NUTRITION

How are the hive stores going? Do they have sufficient for the next month or two? If not consider feeding sugar syrup or a dry feed (fondant, dry white sugar, etc)

## PESTS & DISEASES

Continue to monitor your hives for impacts from chalk brood, wax moth and mice.

## POPULATION MANAGEMENT

Do not forget to order any Nuc(leus) colonies that you may want. It is a good time to order to be close to the front to receive a Nuc when you want it.





## EQUIPMENT

Ensure your equipment is stored where it will remain dry.

## APIARY MAINTENANCE

With a little more time on your hands it may be time to tidy the apiary site and make sure all hives are secure and lids and hives won't be knocked over.

## EDUCATION

Renew your annual membership to the Western Australian Apiarist Society. Look out for the training calendar to open up and book quickly, they fill up fast!

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base

[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University

[Noongar Six Seasons](#)

NSW AgNote DAI 82 (2002)

[Honey Bees on Canola](#)

## PLANNING

July is a great month reflect on the good the bad and the ugly and think about your goals and aspiration for the year ahead. If anything rapid expansion has taught that planning may have solved a lot of problems or slowed advice to a more manageable space. Are you ready for the wall of honey ..... because who really plans to have 200 kg of honey and the need to get supers back on hives. How do you un candy a 20 litre bucket of honey or pouring cold honey is soooooo frustrating.

- What new skills or equipment are you wanting to work on.
- Have I got enough equipment ready to go ... not in boxes
- Swarming management - do you have a proactive and re-active plan this year
- Queen breeding - does this interest you / controlled supersedure
- Colony stimulation
- If I do you do move you bees do you have a floral plan
- Have you considered other ways to make money from bees
- Are your bees angry !!! is it time to take charge and 1. Find your queen and 2. Replace he with a gentler line.
- Spring colony manipulation - huh!! Who does that?!



Western Australian Apiarists' Society  
**Greater Bunbury Region**

**This document has been prepared by:**

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## CANOLA HONEY

Canola (or oilseed rape) is a major beekeeping floral resource, producing quantities of both nectar and pollen in the early spring period. Canola is a winter-growing oilseed crop which is of major importance in the wheatbelt areas of temperate Australia.

Canola blossom is frequently one of the earliest floral species available to commercial honey bees in the South West, flowering from July to September, depending on time of sowing and general condition of the crop. Canola can be a major benefit in the management of honey bees or it can create major problems in bee management.

The management of honey from bees on canola crops is unlike managing honey from most other sources. Honey obtained from canola candies very rapidly. Frequently beekeepers, after working this floral source, are confronted with the problem of honey combs full of candied honey which it is not possible to extract. Often these combs have to be stored to feed back to bees at a later date or simply sent

back to the bees, where they are often only partly reworked by the bees and filled up with honey from a new floral source. The canola honey continues to act in seeding the new honey and this honey can also candy as a result, although not as rapidly as straight canola honey.

Canola honey should be removed as soon as it is ripe and capped. These combs should be extracted as soon as possible after removing them from the hive, preferably the same day or within 24 hours of removing the honey from the hive. Keeping the combs in a hot room will assist in slowing the candying process in the combs. Do not leave canola honey in the comb or at any stage in the extraction process (settling tank, sump or lines). Remember that this honey crop cannot be handled the same way as honey from other sources.





## WINTER

### 'Djilba' Noongar Season

Djilba is a transitional time of the year, with some very cold and clear days combining with warmer, rainy and windy days mixing with the occasional sunny day or two. This is the start of the massive flowering explosion that happens in the South West. Beginning with the yellow flowering plants such as the acacias. Wattles have little nectar but are a good pollen resource.

**7.6°C**  
Low

**17.7°C**  
High

**120.2mm**

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Prickly Moses *Acacia pulchella* 🍯
- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Parrot Bush *Banksia sessilis* 🍯🍯
- Water bush *Bossiaea aquifolium* 🍯
- One-sided Bottlebrush *Calothamnus quadrifidus* 🍯🍯
- Bullich *Eucalyptus megacarpa*
- Native Wisteria *Hardenbergia comptoniana* 🍯
- Honey Bush *Hakea lissocarpa* 🍯🍯
- Two-leaf Hakea *Hakea trifurcata* 🍯
- White Myrtle *Hypocalymma angustifolium* 🍯🍯
- Tassel Bush *Leucopogon verticillatus*
- Old Man's Beard *Clematis pubescens* 🍯🍯

### South Coast Heath

- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Firestick Banksia *Banksia menziesii* 🍯🍯
- Parrot Bush *Banksia sessilis* 🍯🍯
- Yate *Eucalyptus occidentalis* 🍯🍯
- Bell Mallee *Eucalyptus preissiana*
- Bacon & Egg Plants eg. *Eutaxia myrtifolia* 🍯
- Native Wisteria *Hardenbergia comptoniana* 🍯
- Cauliflower Hakea *Hakea corymbosa* 🍯🍯
- Honey Bush *Hakea lissocarpa* 🍯🍯
- Royal Hakea *Hakea victoria* 🍯🍯

### Urban

- Capeweed 🍯
- Cootamundra Wattle 🍯
- Coral Tree 🍯
- Dandelions 🍯
- Flinders Range Wattle 🍯
- Grevilleas 🍯
- Lavender 🍯🍯
- Paterson's Curse *Echium plantagineum* 🍯🍯
- Queensland Silver Wattle 🍯
- Red flowering Yellow Gum *Eucalyptus leucoxydon*
- Red Ironbark *Eucalyptus sideroxydon*
- Rosemary 🍯
- Weeping Bottlebrush *Callistemon viminalis*

🍯 Pollen Source

🍯 Nectar Source





# BEEKEEPING ACTIVITIES

## THE COLONY

The hive will have increased the amount of brood production.

It is also likely to be producing more drones. Bees will be very active bringing in nectar and pollen where they can find it. Depending on prevailing conditions you may even start to see queen cells or queen cups being built as conditions are perfect for their natural instinct to propagate the species.

## INSPECTION

Inspect during the warmest part of the day when the wind is light and the temperature is above 18°C. Inspections at this time usually have a focus on ensuring there is sufficient space to expand the brood nest. If there is insufficient space for brood expansion and the early nectar and pollen sources the colony may swarm., Be particularly diligent in assessing whether there are any queen cups or cells formed.

## NUTRITION

How are the hive stores going? Do they have sufficient for the next month or two? If not consider feeding sugar syrup or a dry feed (fondant, dry white sugar, etc). With the increased brood production one of the limiting factors can be bee bread produced from pollen. It is important to assess these stores and if needed consider feeding a supplement.

## PESTS & DISEASES

Continue to monitor your hives for impacts from chalk brood, wax moth and mice.

## POPULATION MANAGEMENT

August is typically when the population of the bees starts to expand. It is also the time when beekeepers need to start watching for and managing swarming in their hives. The prevention of swarming is a high priority for beekeepers not only because it can impact on colony health and production but also because cast swarms can become a nuisance to others. No one would like to think a swarm issued from their apiary ends up in a neighbours roof space, letter box or retic box. If a swarm does issue from your hives you should endeavour to collect it as soon as possible after it has formed into a cluster.



## EQUIPMENT

Make sure you have your supers and frames ready to go for when they are needed. It is time to start thinking about adding them if the hive population is large enough and there are sufficient nectar sources.

## HARVEST

If you have canola, harvest early and often as it becomes capped. There may be an opportunity to take a comb or two for personal use as cut comb or honey.

## APIARY MAINTENANCE

With a little more time on your hands it may be time to tidy the apiary site and make sure all hives are secure and lids and hives won't be knocked over.

## EDUCATION

Renew your annual membership to the Western Australian Apiarists' Society. Look out for the training calendar to open up and book quickly, they fill up fast!

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Edith Cowan University  
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Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
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Information Bulletin No. 187  
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Seeley, Morse and Nowogrodzki (1989)  
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Honeybee Democracy. Seeley (2010)



Western Australian Apiarists' Society  
**Greater Bunbury Region**

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Jodi Wildy

## SWARM CONTROL

Swarming remains one of the greatest bee management problems in the production of honey or the provision of pollination services. Swarming represents the natural method of increase of the honey bee colony.

The triggers for swarming - biologically the means by which the colony recognises when it is a good time to swarm - are multi-factorial and a mixture of

internal conditions (eg. brood congestion, space to lay, age of queen, size of colony) and external conditions (seasonal nectar flow, temperature and day length).

From the point of view of practical management, swarm control can be divided into two distinct parts with a clear (biological) threshold between them - which is when the colony starts creating queen cells.

### PRE-EMPTIVE SWARM CONTROL

This type of management can be used before queen cells are present in the hive (to prevent their initiation).

Transfer some brood frames from the brood box to the super above. This will reduce congestion by drawing up some of the nurse bees from the brood box. Replace the missing brood box frames with worker cell drawn combs or foundation. This gives the queen more room to lay.

Removing surplus frames of honey in the brood nest, extracting them, then replacing them with drawn worker combs or foundation.

Swap the position of strong and weaker hives. The field bees from the strong hive will strengthen the weaker one. The bee's won't fight as they will be delivering pollen and nectar.

Remove bees from the brood frames and either add them to a weak hive on another site, or make up more colonies on another site, so they don't return to the original hive

Just adding a super of comb foundation or drawn comb will not relieve congestion in a brood box during swarming season. It may make it worse as more bees will be required to maintain the 35°C brood temperature.

Ensure your brood combs are mainly all worker cells to reduce the number of drone cells available for the queen to lay in. Drones congest the brood box, creating the risk of colony swarming.

Keep queens young and of a strain that is less likely to want to swarm by requeening colonies every year or two. If bees are keen to swarm it is not a good idea to requeen. Wait until conditions change, when swarming is not an issue, then requeen. In Western Australia that can quite often mean requeening just prior to winter which is at the end, or just after, the Marri flow

### RE-ACTIVE SWARM CONTROL

This type of management can be used when queen cells are produced (to prevent the issue of swarms).

The general principle of many swarm control methods at this stage is to divide the colony into two viable parts:

The queen and flying bees - replicating, though not entirely, the swarm. We'll call this the artificial swarm.

The developing brood and nurse bees. This component must contain eggs and/or very young larvae from which a new queen can be reared. We'll call this the artificially swarmed colony.

Determine what method of swarm control you will use and have that equipment at hand during the season. Methods to consider include the Damaree, Wakeford, Artificial Swarming, and Horsley Method with many approaches in between.

With the best intentions and management even experienced beekeepers will have swarming issues occasionally. Consider having a swarm box or queen castle installed near your apiary in case a swarm issues from your hives. It is also useful to have the means to catch a swarm that has issued easily accessible and ready to go. This can be an additional super and frames, to just a cardboard box.







## SPRING

### 'Djilba' Noongar Season

Djilba is a transitional time of the year, with some very cold and clear days combining with warmer, rainy and windy days mixing with the occasional sunny day or two. This is the start of the massive flowering explosion that happens in the South West. Beginning with the yellow flowering plants such as the acacias. Wattles have little nectar but are a good pollen resource.

8.4°C

Low

18.6°C

High

79.1mm

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Prickly Moses *Acacia pulchella* 🍯
- Peppermint *Agonis flexuosa* 🍯
- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Prickly Dryandra *Banksia armata* 🍯🍯
- Bull Banksia *Banksia grandis* 🍯🍯
- Holly-leaved Banksia *Banksia ilicifolia*
- Parrot Bush *Banksia sessilis* 🍯🍯
- Water bush *Bossiaea aquifolium* 🍯
- Broad-leaved Brown Pea *Bossiaea ornata* 🍯
- One-sided bottlebrush *Calothamnus quadrifidus* 🍯🍯
- Old man's beard *Clematis pubescens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Salmon White Gum *Eucalyptus lane-poolei* 🍯🍯
- York Gum *Eucalyptus loxophleba* 🍯
- Jarraah *Eucalyptus marginata* 🍯🍯
- Honey Bush *Hakea lissocarpha* 🍯🍯
- Two-leaf Hakea *Hakea trifurcata* 🍯
- Native Wisteria *Hardenbergia comptoniana* 🍯
- White Myrtle *Hypocalymma angustifolium* 🍯🍯
- Tassel Bush *Leucopogon verticillatus*
- Rock Thryptomene *Thryptomene saxicola* 🍯

### South Coast Heath

- Peppermint *Agonis flexuosa* 🍯
- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Firestick Banksia *Banksia menziesii* 🍯🍯
- Parrot Bush *Banksia sessilis* 🍯🍯
- Brown Mallet *Eucalyptus astringens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Yate *Eucalyptus occidentalis* 🍯🍯
- Peaked Crown Top Mallee *Eucalyptus phenax (ex anceps)* 🍯🍯
- Bell Mallee *Eucalyptus preissiana*
- Bacon & egg plants eg. *Eutaxia myrtifolia* 🍯
- Native Wisteria *Hardenbergia comptoniana* 🍯
- Cauliflower hakea *Hakea corymbosa* 🍯🍯
- Honey Bush *Hakea lissocarpha* 🍯🍯
- Royal Hakea *Hakea victoria* 🍯🍯
- Rock Thryptomene *Thryptomene Saxicola* 🍯

### Urban

- Capeweed 🍯
- Cootamundra wattle 🍯
- Coral Tree 🍯
- Dandelions 🍯
- Flinders Range Wattle 🍯
- Grevilleas 🍯
- Lavender 🍯🍯
- Paterson's curse *Echium plantagineum* 🍯🍯
- Queensland Silver Wattle 🍯
- Red flowering Yellow Gum *Eucalyptus leucoxylon*
- Red Ironbark *Eucalyptus sideroxylon*
- Spotted Gum *Corymbia maculata*
- Strawberries
- Rosemary 🍯
- Weeping Bottlebrush *Callistemon viminalis*
- Wild radish 🍯🍯

🍯 Pollen Source

🍯 Nectar Source



# BEEKEEPING ACTIVITIES

## THE COLONY

The hive will be in full swing producing more brood and building numbers.

The activity at the landing board of the hive will be busy with bees foraging and bringing in nectar and pollen from many sources. It is also a time of year when the colony will be looking to reproduce and the chances of queen cell formation is high.

This is the month that the first of the new season queens and nucleus colonies will become available.

## INSPECTION

Inspections should start to occur every 10 days to ensure that any swarm management can be put in place. When inspecting ensure that there is sufficient space for the brood and that honey supers have sufficient space for any nectar being brought in.

## NUTRITION

Nectar and honey stores should now be sufficient based on surrounding forage. Continue to assess the amount of bee bread to ensure optimum nutrition for brood.

## PESTS & DISEASES

It is an important time of year to be vigilant for American Foul Brood. Make sure you are aware of the signs of infection and actions required as a registered beekeeper. Continue to monitor your hives for impacts from chalk brood and wax moth.



## POPULATION MANAGEMENT

The population of the bees will expand rapidly and is a time when swarming is a high likelihood. It is also the start of when you will see a larger amount of drone brood. The prevention of swarming is a high priority for beekeepers not only because it can impact on colony health and production but also because cast swarms can become a nuisance to others. It is time to start thinking about moving capped brood frames above the queen excluder so that new frames are available for the queen to lay in.





## EQUIPMENT

It is likely time to start adding supers if the hive population is large enough and there are sufficient nectar sources. Ensure you also have sufficient equipment ready for undertaking reactive swarm management if you see queen cells in your hives. It is also a good time of year to ensure you have a swarm catching "kit" ready if you intend to respond to reports of a swarm to expand your apiary.

## HARVEST

If there is a surplus of honey following winter or foraging has been productive as the weather warms there may be the opportunity to harvest. Be aware that some nectar sources such as Capeweed and Dandelions tend to lead to honey crystallising more quickly than others and should be harvested sooner than later.

## APIARY MAINTENANCE

Be aware of maintaining the safe working space around your hives. As the temperature increases and the rain decreases it is an important time of year to ensure that your water sources for your bees are right to go. They should be within 10m of your hive, permanent, and have something for the bees to land on without drowning.

## EDUCATION

September is also a good month for new beekeepers to start their journey. The Western Australian Apiarist Society training calendar will be out so have a look at what is on offer and enrol in a course. Also have a look at the WAAS Best-Practice Guideline for Urban Beekeepers (2020) to get a fuller understanding of being a responsible nuisance free beekeeper. It is available from the website [www.waas.org.au](http://www.waas.org.au)

## REFERENCES

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# A BUYER'S GUIDE

## WHAT TO EXPECT IN A NUC

One of the most common ways to purchase bees is as a 'nuc' (pronounced "nuke"), or nucleus hive. These can vary in price, quality and content. This page will assist you in making informed decisions about purchasing bees this way.

### WHAT IS A NUC?

A nuc, or nucleus colony, is a small honey bee colony created from a larger colony.

The term refers both to the smaller size box and the colony of honeybees within it. The name is derived from the fact that a **nucleus** hive is centered on a queen, the nucleus of the honey bee colony. A 'nuc', or nucleus colony of bees, is the most common way to start a new hive of honey bees.

A nuc generally consists of a queen, 2 or more frames of brood (cells where the eggs, larvae and pupae develop), a frame of feed and an empty frame or frame of foundation that gives the bees space to cluster. A nuc can vary in the total number of frames (brood, feed and empty), the age of the queen and the type of shipping box. Western Australian nucs are most often sold with 4 or 5 frames in an enclosed, easily transportable box - usually constructed of wood or coreflute.

### A 4 FRAME NUC SHOULD CONTAIN...

- A Queen bee
- 2 frames of brood,  $\frac{1}{2}$  to  $\frac{2}{3}$  capped, with adhering bees
- 1 frame of feed with adhering bees
- 1 frame of foundation/empty comb
- Extra bees to ensure the brood will be kept warm

Many beekeepers adhere to this definition of a nuc but there is still wide variation. So ask questions!

### WHAT TO LOOK FOR IN A NUC

#### 1. Are the brood frames capped?

Two frames of mostly capped brood, versus two frames of eggs and larvae will make a huge difference to how fast your nuc takes off. A good nuc, when made up by the producer with approximately  $\frac{1}{2}$  to  $\frac{2}{3}$  of the brood capped, should produce surplus honey in an average year if it is established on drawn comb. Be aware that if there is a delay in pick-up or installation, the capped brood may begin to hatch.

#### 2. Queen Characteristics?

A nuc will have a mated queen; ideally the daughter of a queen selected for beneficial traits such as gentle, hygienic behaviour and honey production. Ask your nuc producer whether they have a formal breeding program established and what traits they select for.



## ... WHAT TO LOOK FOR IN A NUC

### 3. Is it a spring nuc or a summer nuc?

A spring nuc is available throughout the month of August into early September and will consist of an overwintered queen on her own brood. In this respect, the queen has already proven to be a good layer. A summer nuc is one sold mid September and after and will generally have a newly mated queen, possibly boosted with brood from other hives. Many nuc producers will mark their queens with the colour of the year, in order to date the queen and allow for easy queen identification.

### 4. Is it a swarm nuc?

During natural swarming season some sellers will capture and place swarms in nuc boxes for on-selling. This comes with some risks as the age and genetics of the queen is unknown and they can present a biosecurity risk. If being sold as a nuc these queens should be replaced by young, newly mated queens of a known age and characteristics.

### 5. Is it a cutout nuc?

Nucs can also be created by beekeepers using comb and bees that have been removed from undesirable locations. This comes with some risks as the age and genetics of the queen is unknown and they can present a biosecurity risk. If being sold as a nuc these queens should be replaced by young,

newly mated queens of a known age and characteristics. Also, if the comb from the cut out has been incorporated into the frames of the nuc it can lead to non-uniform drawn comb and only partially filled frames with comb.

### 6. What is the cost? Does it include the shipping box? Does it include support?

The cost of nucs varies however try to gauge what is a fair market price by talking to established beekeepers. An over wintered nuc will often cost slightly more than a summer nuc as it has taken more resources for the producer to establish and maintain. Also find out whether the cost of the nucleus box is included in the price as some nuc producers have returnable wooden boxes. Some nuc suppliers provide information sheets and phone support to assist with the early care of the nuc and ongoing colony expansion.

### 7. What is the condition of the frames?

You want to receive a nuc with comb that isn't too old and dark and it is drawn out fully and fills most of the frame. Ideally the comb will be not more than 2-3 years of age. These frames will range from a light to slightly orange colour. Comb that is older becomes darker as it contains more cocoons from previous brood.

## WHAT DO THE COLOURS ON THE QUEEN MEAN?

**Some beekeepers mark queens to improve their ability to find them and/or indicate an age. If marked for age in Western Australia then either of the following conventions is used:**

The calendar year end (ie 2021) colour convention suits northern hemisphere beekeepers very well because their queen breeding season falls within a calendar year. In the southern hemisphere our queen breeding season runs over the spring, summer and autumn period which corresponds to a financial year.

Season or Financial Year Ending in...	Colour	Calendar Year Ending in...
1 or 6	White	1 or 6
2 or 7	Yellow	2 or 7
3 or 8	Red	3 or 8
4 or 9	Green	4 or 9
5 or 0	Blue	5 or 0

Season or Financial Year	Colour	Calendar Year
2020/2021	White	2021
2021/2022	Yellow	2022
2022/2023	Red	2023
2023/2024	Green	2024
2024/2025	Blue	2025
2025/2026	White	2026
2026/2027	Yellow	2027
2027/2028	Red	2028
2028/2029	Green	2029
2029/2030	Blue	2030





## SPRING

### 'Kambarang' Noongar Season

The Noongar Season 'Kambarang' is represented by the colour yellow as it symbolises the return of the hot weather. During Kambarang season, we see an abundance of colours and flowers exploding all around us. The yellows of many of the acacias continue to abound, along with some of the banksias and many other smaller delicate flowering plants including the kangaroo paw and orchids.

9.6°C

Low

21.1°C

High

33.1mm

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Prickly Moses *Acacia pulchella* 🍯
- Peppermint *Agonis flexuosa* 🍯
- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Prickly Dryandra *Banksia armata* 🍯🍯
- Slender Banksia *Banksia attenuata* 🍯🍯
- Bull Banksia *Banksia grandis* 🍯🍯
- Holly-leaved Banksia *Banksia ilicifolia*
- Parrot Bush *Banksia sessilis* 🍯🍯
- Water Bush *Bossiaea aquifolium* 🍯
- Broad-Leaved Brown Pea *Bossiaea ornata* 🍯
- One-sided Bottlebrush *Calothamnus quadrifidus* 🍯🍯
- Old Man's Beard *Clematis pubescens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Salmon White Gum *Eucalyptus lane-poolei* 🍯🍯
- York Gum *Eucalyptus loxophleba* 🍯
- Jarrah *Eucalyptus marginata* 🍯🍯
- Two-leaf Hakea *Hakea trifurcata* 🍯
- Native Wisteria *Hardenbergia comptoniana* 🍯
- White Myrtle *Hypocalymma angustifolium* 🍯🍯
- Tassel Bush *Leucopogon verticillatus*
- WA Christmas Tree *Nuytsia floribunda* 🍯🍯
- Mohan *Melaleuca viminea* 🍯
- Swamp Paperbark *Melaleuca raphiophylla* 🍯
- Rock Thryptomene *Thryptomene saxicola* 🍯

### South Coast Heath

- Peppermint *Agonis flexuosa* 🍯
- Forest Sheoak *Allocasuarina fraseriana* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Dwarf Sheoak *Allocasuarina humilis* 🍯
- Firestick Banksia *Banksia menziesii* 🍯🍯
- Parrot Bush *Banksia sessilis* 🍯🍯
- Brown Mallet *Eucalyptus astringens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Yate *Eucalyptus occidentalis* 🍯🍯
- Peaked Crown Top Mallee *Eucalyptus phenax (ex anceps)* 🍯🍯
- Bell Mallee *Eucalyptus preissiana*
- Bacon & egg plants eg. *Eutaxia myrtifolia* 🍯
- Native Wisteria *Hardenbergia comptoniana* 🍯
- Cauliflower hakea *Hakea corymbosa* 🍯🍯
- Royal Hakea *Hakea victoria* 🍯🍯
- WA Christmas Tree *Nuytsia floribunda* 🍯🍯
- Mohan *Melaleuca viminea* 🍯
- Swamp Paperbark *Melaleuca raphiophylla* 🍯
- Rock Thryptomene *Thryptomene saxicola* 🍯

### Urban

- Alyssum
- Bottlebrush species eg *Callistemon viminalis* 🍯🍯
- Calendula 🍯
- Capeweed 🍯🍯
- Dandelions 🍯
- Grevilleas 🍯
- Lavender 🍯🍯
- Oregano
- Paterson's curse *Echium plantagineum* 🍯🍯
- Stone Fruit and Citrus Trees 🍯🍯
- Strawberries
- Rosemary 🍯
- Roses
- Sage
- Wild radish 🍯🍯
- Wisteria 🍯

🍯 Pollen Source

🍯 Nectar Source





# BEEKEEPING ACTIVITIES

## THE COLONY

**The hive will be in full swing producing more brood and building numbers.**

The activity at the landing board of the hive will be busy with bees foraging and bringing in nectar and pollen from many sources. It is also a time of year when the colony will be looking to reproduce and the chances of queen cell formation is high.

During October the balgas will continue to flower, especially if they've been burnt in the past year or closely shaved. One of the most striking displays of flowers to be seen during this season will be the moojar, or Australian Christmas Tree (*Nuytsia floribunda*). The bright orange-yellow flowers serve to signal the heat is on its way.

October is also the most likely time of the year that you'll encounter a snake as the reptiles start to awaken from their hibernation and look to make the most of the warm to assist them in getting enough energy to look for food.

Many things are undergoing transformation with the warm change in the weather and longer dry periods accompany a definite warming trend.

## INSPECTION

Inspections should start to occur every 10 days to ensure that any swarm management can be put in place. When inspecting ensure that there is sufficient space for the brood and that honey supers have sufficient space for any nectar being brought in.

## NUTRITION

Nectar and honey stores should now be sufficient based on surrounding forage. Continue to assess the amount of bee bread to ensure optimum nutrition for brood.

## PESTS & DISEASES

Ants will start to be on the move and it is important you monitor and manage their presence around and in your hives. Continue to monitor for the other pests and diseases.

## POPULATION MANAGEMENT

The population of the bees will now be large and now is a time when swarming is a high likelihood in the greater Bunbury region. The prevention of swarming is a high priority for beekeepers not only because it can impact on colony health and production but also because cast swarms can become a nuisance to others. It is time to start thinking about moving capped brood frames above the queen excluder so that new frames are available for the queen to lay in.



## EQUIPMENT

It is likely time to start adding suppers if the hive population is large enough and there are sufficient nectar sources. Ensure you also have sufficient equipment ready for undertaking reactive swarm management if you see queen cells in your hives. It is also a good time of year to ensure you have a swarm catching "kit" ready if you intend to respond to reports of a swarm to expand your apiary.

## HARVEST

If there is a surplus of honey there may be the opportunity to harvest. Be aware that some nectar sources such as Capeweed and Dandelions tend to lead to honey crystallising more quickly than others. Honey from peppermint trees *Agonis flexuosa* has a very distinctive flavour - you either tolerate, or hate, it. Stay on top of harvesting honey from this source so that you can separate it from the more prized wildflower and eucalypt honeys.

## APIARY MAINTENANCE

Be aware of maintaining the safe working space around your hives. As the temperature increases and the rain decreases it is an important time of year to ensure that your water sources for your bees are right to go. They should be within 10m of your hive, permanent and have something for the bees to land on without drowning.

## EDUCATION

The Western Australian Apiarist Society training calendar is out so have a look at what is on offer and enrol in a course. Also have a look at the WAAS Best-Practice Guideline for Urban Beekeepers(2020) to get a fuller understanding of being a responsible nuisance free beekeeper. It is available from the website [www.waas.org.au](http://www.waas.org.au)

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University  
[Noongar Six Seasons](#)

Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
[An Apiary Guide to Swarm Control](#)

Beekeeping Certificate III  
[RTE3153A Manage Honey Bee Swarms \(2008\)](#)

The Apiarist Blog (2020)  
[Principles of swarm control](#)

Information Bulletin No. 187  
A Cornell Extension Publication  
Seeley, Morse and Nowogrodzki (1989)  
[Bait hives for honey bees.](#)

Honeybee Democracy. Seeley (2010)

WAAS  
[Best-Practice Guideline for Urban Beekeepers](#)



Western Australian Apiarists' Society  
**Greater Bunbury Region**

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# WHY HAVE MORE THAN ONE HIVE?



We have all heard from other beekeepers it is better to keep more than one hive. Well there is real value in having more than one hive that we'll explore below.

## REDUCING YOUR RISK

With a single hive your whole beekeeping experience is at risk. There's always risk that a bad event could wipe out your hive and put you out of business as a hobbyist beekeeper. With two hives you reduce that risk considerably.

Bees themselves are extremely effective at identifying and resolving problems themselves and it all adds up to a good chance they will be just fine, all things being equal. In reality though, it is more complicated. There are so many variables associated with the health of a colony that no beekeeper can be assured of success. A new beekeeper might experience success, whereas the experienced one might suffer some losses.

## MANAGING YOUR RISK

Perhaps the most important benefit of having two hives is that if you see one in trouble, you may be able to assist it.

It's not uncommon - in fact it's very likely - that two hives evolve at different paces. If the weaker one starts looking like its in trouble, you may have the option to get help from the stronger one. This can come in a number of ways.

### Queenlessness

If, for whatever reason, a hive loses its queen you have a challenge on your hands. Having access to a strong second hive can help here. You can provide eggs, young larvae and nurse bees so the weak hive can make a new queen. Or you may choose to add capped brood to ensure the population is maintained while you hastily order and install a new queen.

### Strengthening a weak hive

At a more fundamental level, one hive may simply be struggling to establish itself. Moving frames from the stronger one can give the weaker hive the boost it needs.

In both cases, you are benefiting considerably from the existence of the second hive, to the point of potentially saving one of your hives.





# WHY HAVE MORE THAN ONE HIVE...

## MORE EXPERIENCE

A nuc, or nucleus colony, is a small honey bee colony created from a larger colony.

It's not just the reduction of risk - it's also the growth of your experience with bees. No two hives are the same. You might have two Langstroth hives both with two deep boxes, 10 frames in each box and start them at the same time. You might think that you couldn't possibly create two hives as similar to your two.

But neither your bees or Mother Nature care! There are always differences between hives. This can primarily be attributed to subtle differences in the queens and how each colony responds to environmental cues and the environment they experience. Maybe one colony gets off to a poor start and you need to manage robbers. Perhaps one hive has bees that are more gentle than the other. Maybe one gets a half hour of additional morning sun that the other doesn't. The end result is two quite different colonies.

This all adds to your experience and experience is valuable. Whether experiences of good or bad events, it all adds up and helps you mature as a beekeeper at a more rapid pace.

## LEARNING MORE

The beekeeper with two or more hives can methodologically implement change in some, but not all, hives and assess the results. In essence, this is a high-level application of the scientific method.

With more than one hive you might try a particular treatment in one, against another that doesn't have that same treatment applied. The results can be enlightening and the additional hives provide you to assess the real effectiveness of the change you made.

## IT DOES NOT COST A LOT

Finally, there is indeed the issue of cost. It is a real concern for most of us and shouldn't be taken lightly. But the calculation doesn't simply boil down to doubling up on costs.

First, there are the common tools that you use across all your hives - your hive tool, smoker, bee brush and more. These are one-off expenses and not related to the number of hives.

Of course, two hives will cost more than one! But there are options even here to keep costs under control.

Your second hive doesn't need to be a full size one, it could be a nucleus hive. A nucleus hive has all the characteristics of a full hive but in a smaller form factor. It has resources that can be made available to your other hives, whether that be the queen, brood or stores.

In summary, there are many benefits to having more than one hive and, as budget allows, all beekeepers should consider starting - or at least building towards - that status.





## SPRING

### 'Kambarang' Noongar Season

The Noongar Season 'Kambarang' is represented by the colour yellow as it symbolises the return of the hot weather. During Kambarang season, we see an abundance of colours and flowers exploding all around us. The yellows of many of the acacias continue to abound, along with some of the banksias and many other smaller delicate flowering plants including the kangaroo paw and orchids.

**12.1°C**  
Low

**24.5°C**  
High

**21.9mm**

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Peppermint *Agonis flexuosa* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Candlestick Banksia *Banksia attenuata* 🍯🍯
- Bull Banksia *Banksia grandis* 🍯🍯
- Parrot Bush *Banksia sessilis* 🍯🍯
- Swamp Sheoak *Casuarina obesa* 🍯
- Brown Mallet *Eucalyptus astringens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Drummond's Gum *Eucalyptus drummondii*
- River Red Gum *Eucalyptus camaldulensis* 🍯🍯
- Flooded Gum *Eucalyptus rudis* 🍯🍯
- Jarrah *Eucalyptus marginata* 🍯🍯
- Bullich *Eucalyptus megacarpa*
- Blackbutt *Eucalyptus patens* 🍯🍯
- Wandoo/White Gum *Eucalyptus wandoo* 🍯🍯
- Grass Tree (Balga) *Xanthorrhoea preissii*
- Swamp paperbark *Melaleuca rhapsiophylla* 🍯
- Mohan *Melaleuca viminea* 🍯
- Christmas Tree (Moojar) *Nuytsia floribunda* 🍯🍯
- Karri Hazel *Trymalium odoratissimum* 🍯🍯
- Feather Flowers *Verticordia* species

### South Coast Heath

- Peppermint *Agonis flexuosa* 🍯
- Rock Sheoak *Allocasuarina huegeliana* 🍯
- Candlestick Banksia *Banksia attenuata* 🍯🍯
- Bull Banksia *Banksia grandis* 🍯🍯
- Scarlet Banksia *Banksia coccinea*
- Brown Mallet *Eucalyptus astringens* 🍯🍯
- Red Heart *Eucalyptus decipiens* 🍯🍯
- Silver Mallet *Eucalyptus falcata* 🍯🍯
- Yellow Tingle *Eucalyptus guilfoylei* 🍯🍯
- Moort *Eucalyptus platypus* 🍯🍯
- Bell Mallee *Eucalyptus preissiana*
- Flooded Gum *Eucalyptus rudis* 🍯🍯
- Bacon & egg plants eg. *Eutaxia myrtifolia* 🍯
- WA Christmas Tree *Nuytsia floribunda* 🍯🍯
- Mohan *Melaleuca viminea* 🍯
- Swamp Paperbark *Melaleuca rhapsiophylla* 🍯
- Karri Hazel *Trymalium odoratissimum* 🍯🍯
- Rock Thryptomene *Thryptomene saxicola* 🍯

### Urban

- Alyssum
- Bottlebrush species eg *Callistemon viminalis* 🍯🍯
- Calendula 🍯
- Dandelions 🍯🍯
- Grevilleas 🍯
- Jacaranda 🍯🍯
- Lavender 🍯🍯
- Cape Lilac *Melia azedarach* 🍯
- Oregano
- Strawberries
- Rosemary 🍯
- Roses
- Sage
- Wild Radish 🍯🍯

🍯 Pollen Source

🍯 Nectar Source



# BEEKEEPING ACTIVITIES

## THE COLONY

The hive activity will have increased with the landing boards being busy with bees foraging and bringing in nectar and pollen from many sources.

It is also a time of year when the colony will be looking to reproduce and the chances of queen cell formation is still high. On the warm days you will start to see the bees bearding or wash boarding at the entrance to assist with temperature and humidity control within the hive.

## INSPECTION

You should be in a routine now with inspections every 10 - 14 days to ensure that any swarm management can be put in place. When inspecting ensure that there is sufficient space for the brood and that honey supers have sufficient space for any nectar being brought in.

## NUTRITION

Nectar and honey stores should now be sufficient based on surrounding forage. Continue to assess the amount of bee bread (pollen) to ensure optimum nutrition for brood.

## PESTS & DISEASES

Ants will start to be on the move and it is important you monitor and manage their presence around and in your hives. Continue to monitor for the other pests and diseases. Be aware that snakes and other reptiles may be using the space under your hives to rest.



## POPULATION MANAGEMENT

The population of the bees will now be large and is still a time when swarming is a high likelihood in the greater Bunbury region. The amount of drone brood is likely to have reached almost 10% of the brood numbers. The prevention of swarming remains a high priority for beekeepers not only because it can impact on colony health and production but also because cast swarms can become a nuisance to others. Continue to proactively manage the brood space to reduce swarm likelihood. With high brood numbers also comes larger orientation or cleansing flights in the early to mid-afternoon. In larger hives they can last for as long as an hour.





## EQUIPMENT

Ensure you have sufficient equipment ready for undertaking reactive swarm management if you see queen cells in your hives. It is also a good time of year to ensure you have a swarm catching "kit" ready if you intend to respond to reports of a swarm to expand your apiary.

## HARVEST

It is likely your honey supers, normal or flow, will be filled or filling with nectar. If there is a surplus of honey there may be the opportunity to harvest. Remember there is likely to be a dearth in December/January until the gums flower again.

## APIARY MAINTENANCE

As the temperature increases and the rain decreases it is an important time of year to ensure that your water sources for your bees are right to go. They should be within 10m of your hive, permanent, and have something for the bees to land on without drowning. Be aware of maintaining the safe working space around your hives.

## REFERENCES

Smith, F G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University  
[Noongar Six Seasons](#)

Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
[An Apiary Guide to Swarm Control](#)

Beekeeping Certificate III  
[RTE3153A Manage Honey Bee Swarms \(2008\)](#)

The Apiarist Blog (2020)  
[Principles of swarm control](#)

Information Bulletin No. 187  
A Cornell Extension Publication  
Seeley, Morse and Nowogrodzki (1989)  
[Bait hives for honey bees.](#)

Honeybee Democracy. Seeley (2010)

WAAS  
[Best-Practice Guideline for Urban Beekeepers](#)  
[Vermont Beekeepers Association Mentor Program](#)



Western Australian Apiarists' Society  
**Greater Bunbury Region**

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# BEE MENTORING

**When you become a beekeeper you make a commitment to yourself and others to be a responsible one and learn as much as you can about bees and their management. Also at some point we feel comfortable sharing or knowledge and experience. We all learn differently but one of the most important ways we all learn is through watching and discussing with others. Having, or being, a mentor brings with it many benefits.**

## BENEFITS OF HAVING A MENTOR

**They have experience.** This is vital. The experience they have in knowing how to handle situations that arise can be the difference between a lost hive and a thriving one.

**They know your area.** Finding a mentor in your area makes a big difference as well. It's easy to read articles or watch YouTube and gain a whole lot of information that wouldn't work in your area because of the climate and seasonal differences.

**They are close by.** They are close enough and probably care enough to stop by and look at your hive with you if you have a pressing question or you really feel like second pair of experienced eyes would be beneficial.

**They have connections** to other beekeepers and suppliers of beekeeping equipment and stuff.

**They can recommend products and services.** They know the best places to buy the items you need on a regular basis.

**You can split or buy products together.** Splitting the cost of freight and the products you will need can help save a lot of money.

**They answer questions.** We all have questions and a Mentor will be able to provide answers or places to research. Why is there a big glob of bees outside my hive? Why are my bees "kissing"? What does this mean? Are they OK? What do I do now? That's why you need someone to turn to.

**They are a second set of hands** to help you safely inspect, catch a swarm or deal with an aggressive hive. Their experience can give you the hands needed to get the job done.

## BENEFITS OF BEING A MENTOR

**You can share and pass on your experiences.**

**You can keep important skills alive.**

**You can significantly impact another person's life.**

**Teaching helps you have better understanding.**

**You'll have someone who can help you.**

**You learn new things.**

**Become re-energised as a beekeeper.**

**You can give back to others and WAAS.**

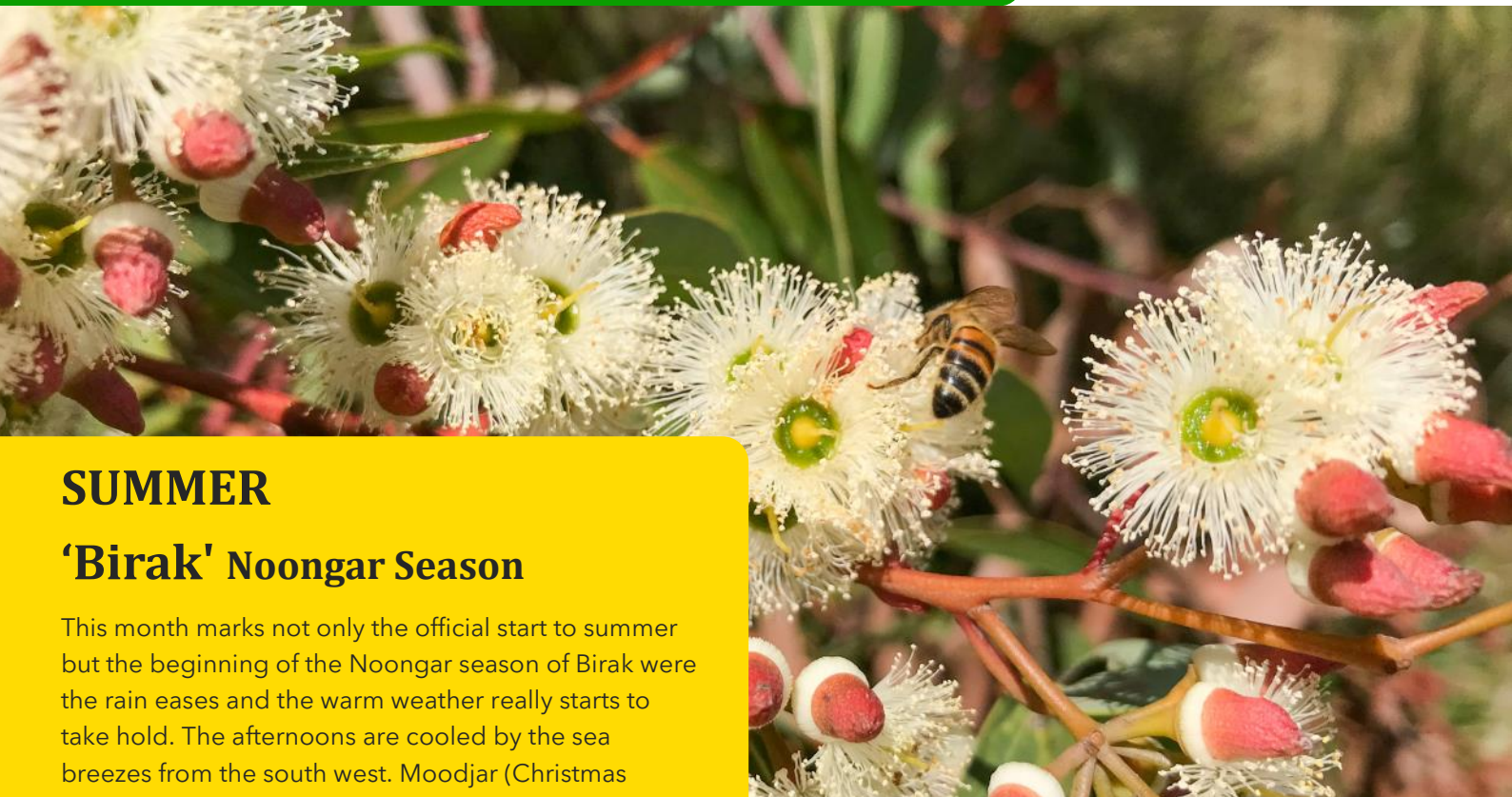
It can be difficult to find any mentors at all. However, it is important that both parties vet each other to ensure the experience and knowledge of the mentor is relevant and to determine the compatibility. It may also be important for both parties to establish a clear agreement to ensure what is being sought and offered matches up as best as possible. As part of this it is important to ensure your expectations are discussed to ensure the learning meets your requirements and also how long the arrangement will last.

## OTHER WAYS TO ACCESS AND SHARE KNOWLEDGE

Not everyone wants a mentor or to be a mentor and that is ok as this approach does not suit everyone. For those of us with 4 or more years of experience it can be daunting to think about being a mentor and is something that not everyone chooses to do. However we would encourage you to test the water: offer to have a new beekeeper assist with your normal hive inspection or offer to assist a new beekeeper with a specific one-off task like a routine inspection, catching a swarm or making a split.

There are other ways in which information can be accessed or shared. These include through the WAAS Meetings, Chapters and Bee Buddy Groups, as well as the training program. The Bunbury Greater Region Chapter also maintain a training apiary. There are regular inspections and activities to assist beekeepers of all levels share and access information.





## SUMMER

### 'Birak' Noongar Season

This month marks not only the official start to summer but the beginning of the Noongar season of Birak were the rain eases and the warm weather really starts to take hold. The afternoons are cooled by the sea breezes from the south west. Moodjar (Christmas Trees) are in bloom as are the tree like candlestick banksia (*Banksia attenuata*) and bull banksia (*Banksia grandis*), as well as various Eucalypts. Birak is an excellent time for birds and honey possums, as nectar is being produced by many plants.

**11.0°C**    **27.4°C**  
Low            High

**17.0mm**

Average Temperature

Average Rainfall

## BLOOMING

### South West Forests

- Blackbutt *Eucalyptus patens*
- Bull Banksia *Banksia grandis*
- Candlestick Banksia *Banksia attenuata*
- Chenille Honey Myrtle *Melaleuca huegelii*
- Compacted Feather Flower *Verticordia densiflora*
- Drummond's Gum *Eucalyptus drummondii*
- Grass Tree 'Balga' *Xanthorrhoea preissii*
- Grey Stinkwood *Jacksonia furcellata*
- Holly-Leaved Banksia *Banksia ilicifolia*
- Jarrah *Eucalyptus marginata*
- Karri Hazel *Trymalium odoratissimum*  
Moonah *Melaleuca preissiana*
- Peppermint *Agonis flexuosa*
- Powderbark Wandoo *Eucalyptus accedens*
- Red Heart *Eucalyptus decipiens*
- Rock Sheoak *Allocasuarina huegeliana*
- Sandplain Woody Pear *Xylomelum angustifolium*
- Stinkwood *Jacksonia sternbergiana*
- Swamp Paperbark *Melaleuca rhapsiophylla*
- Swamp Sheoak *Casuarina obesa*
- WA Christmas Tree 'Moodjar'; *Nuytsia floribunda*
- Wandoo/White Gum *Eucalyptus wandoo*
- Wonnich/Native Willow *Callistachys lanceolata*
- Woody Pear *Xylomelum occidentale*

### South Coast Heath

- Bull Banksia *Banksia grandis*
- Candlestick Banksia *Banksia attenuata*
- Grass Tree 'Balga' *Xanthorrhoea preissii*
- Jarrah *Eucalyptus marginata*
- Karri Hazel *Trymalium odoratissimum*  
Moonah *Melaleuca preissiana*
- Moort *Eucalyptus platypus*
- Peppermint *Agonis flexuosa*
- Rock Sheoak *Allocasuarina huegeliana*  
Scarlet Banksia *Banksia coccinea*
- Silver Mallet *Eucalyptus falcata*
- Swamp Paperbark *Melaleuca rhapsiophylla*
- WA Christmas Tree 'Moodjar' *Nuytsia floribunda*
- Woody Pear *Xylomelum occidentale*
- Yellow Tingle *Eucalyptus guilfoylei*

### Urban

- Alyssum
- Bottlebrush species eg *Callistemon viminalis*
- Cape Lilac *Melia azedarach*
- Dandelions
- Grevilleas
- Honey Myrtle *Melaleuca nesophila*
- Jacaranda
- Lavender
- Marigolds
- Oregano
- River Red Gum *Eucalyptus camaldulensis*
- Rosemary
- Roses
- Sage
- Salvias
- Strawberries

○ Pollen Source    ○ Nectar Source    ● Pollen & Nectar Source





# BEEKEEPING ACTIVITIES

## THE COLONY

The hive will be near full strength at this time of year. The landing board will be busy with bees coming and going looking for forage or water.

Orientation and cleansing flights can become large and last for a longer period of time as the bee numbers increase. On the warm days it will be common for bees to beard and/or be wash boarding at the entrance to assist with temperature and humidity control within the hive. After dark on warm nights bees will also begin to stay outside the hive for a few hours until the temperature cools.

Traditionally this was the fire season. An almost clockwork style of easterly winds in the morning and sea breezes in the afternoon meant that this was burning time of the year for Noongar people and they would burn the country in mosaic patterns.

There are several reasons for this, including fuel reduction, increasing the grazing pastures for animals, to aid seed germination and to make it easier to move across the country.

## INSPECTION

You should be in a routine now with inspections every 10 - 14 days to ensure that any swarm management can be put in place. When inspecting ensure that there is sufficient space for the brood and that honey supers have sufficient space for any nectar being brought in. Remember that newly split colonies will not need to be inspected as frequently, their low populations decreases the likelihood of swarming and inspections delay their development.

Visually you will also be starting to see bearding and wash boarding on the outside of your hives as the temperature increases into the early evening.

## NUTRITION

Nectar and honey stores should now be sufficient based on surrounding forage to sustain the colony. Continue to assess the amount of bee bread (pollen) to ensure optimum nutrition for brood. Nectar sources may decrease on the coastal plain towards the end of December until other major sources increase in late January. This is less likely in an urban area or in areas with good stands of Jarrah.



## PESTS & DISEASES

Ants will start to be on the move and it is important you monitor and manage their presence around and in your hives. Have a plan ready for managing ant incursions. This can be oil filled feet, grease on legs or an appropriate baiting program. Continue to monitor for the other pests and diseases. Be aware that snakes and other reptiles may be using the space under your hives to rest.



## POPULATION MANAGEMENT

The population of bees will now be large and is still a time when swarming is possible. The amount of drone brood is likely to have reached almost 10% of the brood numbers. The prevention of swarming remains a high priority for beekeepers not only because it can impact on colony health and production but also because cast swarms can become a nuisance to others. Continue to proactively manage the brood space to reduce swarm likelihood.

## EQUIPMENT

With the likelihood of low nectar supplies it is important to have thought through how to protect your weaker hives from robbing. Do you need to reduce the entrance slightly, having robbing screens installed or sheets to place over hives ready if required.? With weaker hives it may be an opportunity to proactively install robbing screens.

## HARVEST

It is likely your honey super(s) will be filled or filling with nectar. If there is a surplus of honey there may be the opportunity to harvest. Remember there is likely to be a dearth in some areas in December/January until the gums flower again. Harvest based on your knowledge of local floral sources.

## APIARY MAINTENANCE

Be aware of maintaining the safe working space around your hives. As the temperature increases and the rain decreases it is an important time of year to ensure that your water sources for your bees are set up. They should be within 10m of your hive, permanent, have something for the bees to land on without drowning and not under flight paths to and from your hive(s). Be aware of whether you need to have artificial shade to provide cooling for a hive in the afternoon on hot days.

## EDUCATION

Do you have a bee buddy? A bee buddy is someone you work well with and you support each other on your beekeeping journey. Finding the right bee buddy for you can be a challenge. Ideally, your bee buddy will live close by so you can help each other with hive inspections or catch-up to share your beekeeping challenges and solutions. Finding a WAAS bee buddy is probably best done by attending a Bee Buddy, Chapter or Perth event in your local area so you can meet other beekeepers and find someone you feel comfortable working with.

## REFERENCES

Smith, F. G. (1969), Honey plants in Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 3618.

Flora Base  
[www.florabase.dpaw.wa.gov.au](http://www.florabase.dpaw.wa.gov.au)

Edith Cowan University  
[Noongar Six Seasons](#)

Wally Shaw  
[There are queen cells in my hive - what should I do?](#)  
[An Apiary Guide to Swarm Control](#)

Beekeeping Certificate III  
[RTE3153A Manage Honey Bee Swarms \(2008\)](#)

The Apiarist Blog (2020)  
[Principles of swarm control](#)

Information Bulletin No. 187  
A Cornell Extension Publication  
Seeley, Morse and Nowogrodzki (1989)  
[Bait hives for honey bees.](#)

Honeybee Democracy. Seeley (2010)

WAAS  
[Best-Practice Guideline for Urban Beekeepers](#)  
[Vermont Beekeepers Association Mentor Program](#)



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