

# Townsville and District Beekeepers Association (Inc.)

[www.beesnorth.com.au](http://www.beesnorth.com.au)



PO Box 1115, Aitkenvale QLD 4814

## Newsletter No 2 March 2016

### In this Issue:

- Do's and Don'ts of Beekeeping
- AFB information
- Moving hives
- Gold Coast bees
- Native bees with Steve and Carla K
- Flow Hive preparation
- Royal jelly is a hoax - apparently
- TDBA Shop items

**Next Meeting:**  
**2:00 pm Sunday, 20 March 2016**  
**Hermit Park State School**  
**5 Sussex St, Hermit Park**  
Look for the TDBA Inc banner in McKimmin St  
Bring a chair - and a plate of food if you can

## *Do's and Don'ts of Backyard Beekeeping - by Anonymous*

**Apithor traps** are sealed to keep the Fipronil insecticide away from bees and other sensitive creatures (humans, fish etc). Instructions on the website say - do not open, do not use with perforated bottom boards, do not get wet, and highly toxic to fish. In their zest to attack every SHB in their hive, the beekeeper eventually opened the trap and was very pleased to see some dead SHB, however, they then fed the dead'uns to the gold fish - no news on the condition of the fish yet - but do not open Apithor traps- just dispose of them in the garbage.



### It's a gas, gas , gas...!!!

The gas-charged blow torches are an ideal way to get a smoker going in short time, but it is a good idea to turn it off before putting it down and going off to work your hive. See photo below left.



### Looking after your new queens - how not to do it

One of our members took his new queens home, and decided to spray them with sugar-water. Unfortunately, of the two unlabelled containers, he selected the wrong one and dosed his bees with Honey-B-Gone. Realising his mistake he rinsed the containers, bees and all, under the tap, opened them and shook the bees onto a paper towel to dry off. It was too late for the workers and both queens were looking ill with their legs curled under them. An hour later one queen was walking around, - the other was missing. He felt something on his foot, and on looking down she was on his toe, having just missed being stepped on. Both queens were put into a container along with a number of workers co-opted from a nearby hive. All in together, after all the trauma these girls had been through this shouldn't make much

difference. Later in the day our intrepid beekeeper put each queen and her new entourage straight into hives. Having survived this start in life these girls will probably be the best and toughest queens ever.

We'll wait for an update on how these two tough ladies are performing.

## ***Elimination of American foulbrood - AFB***

Some clear and easily understood videos have been recently posted on You Tube that explain all about the dreaded AFB disease (we have had several outbreaks in the Townsville district in recent years). I strongly encourage all new members to spend some time familiarising yourselves with the early signs of this disease, and the required method of treatment. This might be especially galling to people who are getting into Flow Hives and who have spent several hundreds of dollars on honey supers, but the legal requirements are clear. If you get this disease you can either package the lot (all boxes, honey, wax, frames and bees included) to the radiation disinfection facility in Brisbane - or you can dig a hole, burn the lot and bury it under about 300mm of soil - and preferably not on your own property. Neither one is a very attractive choice. But it is a legal requirement, and I would add a moral obligation to your fellow beekeepers, to help keep this disease as contained as possible.

Check out the Plant Food Research site for more details of the NZ made videos.

<http://beeaware.org.au/videos/elimination-of-american-foulbrood/>

This video series was produced by Plant and Food Research NZ, on behalf of the The Management Agency, National American Foulbrood Pest Management Plan. Although specific to the AFB Elimination Program which is run in NZ, some videos are equally applicable to Australian beekeepers and their inspection and management of AFB.

They show you:

- How AFB can spread
- Inspecting a hive for AFB
- How to recognise AFB
- Collecting cell and bee samples
- How to burn a hive
- Lab testing for AFB



[https://en.wikipedia.org/wiki/American\\_foulbrood](https://en.wikipedia.org/wiki/American_foulbrood)

Our TDBA has the good fortune of having our very own Apiary Biosecurity Officer Club as a Club Member. Rob Stephens attends our meetings when he is in town, and has run workshops for us in the past. If you are in any doubt about what's going on under the lid - ask a Club Member or contact Rob at his new Office and phone no.

### **Rob Stephens**

Biosecurity Officer

Biosecurity Queensland

Department of Agriculture and Fisheries

T 07 3330 4543 M 0407 374 232 E [robert.stephens@daf.qld.gov.au](mailto:robert.stephens@daf.qld.gov.au) W [www.daf.qld.gov.au](http://www.daf.qld.gov.au)

9-15 Langton Street, Garbutt, Townsville QLD 4814

## ***Become a frontline Biosecurity Beekeeper***



Rob Stephens is keen for any Club Members to volunteer for the Bee Biosecurity Program undertaken by DAFF to detect incursions of bee pests like Varroa, and other mites and diseases. If you have a hive or know of a location within 3-5 km of the Townsville Port, or could lend a hand to the people already running these hives, just give Rob a call or ask a Club Member for details. A Biosecurity box (photo on left) will be loaned to you to fill with your own functioning hive. Rob and his team will visit every 2 months to sample the hive, and you do not have to be there for this to occur. You get to run the hive and harvest the honey as you would normally, with the satisfaction of assisting with our early warning system. But what a great feeling of security knowing your hive is inspected and cleared for diseases and pests every 2 months - bargain!!! Get in touch with Rob now if you are interested.

## ***How to move a hive a short distance - or not***

You hear it all the time: you can't move a hive a short distance because the field bees will return to the original location of the hive and become lost. The usual advice is that you must move the hive at least three km away, give the bees a few weeks to reorient themselves and have the older field bees die out, and then move the hive back to where you want it.

However, it is much easier than that. You can move a hive anywhere—a few cm, a metre, or many metres—by simply forcing the bees to reorient themselves.

Here are the steps:

- In the evening or early morning when nearly all the bees are in the hive, block the entrance and move the hive to its new location. (How you actually move the hive is a separate subject, but I like to strap it all together and move it with a furniture dolly.)
- Keep the bees locked-up in the hive the first 24 hours and up to three days, if possible. Keeping bees locked up will cause some of them to reorient themselves the next time they go out.
- In the meantime, place a leafy branch, a bead curtain, rags on a string, or something similar in front of the hive entrance. The object must be close enough to the hive entrance that the bees are forced to navigate around it as they leave the hive.
- After one-three days, open the hive entrance. The bees will be confused by the object in front of their hive, pause for a moment, and exclaim, "I've a feeling we're not in our old territory any more!" They will each take a short flight and reorient themselves to the new conditions and new area.
- Leave the distraction in place for two days or so, and then remove it.
- Your bees will have reoriented themselves to their new home.

This really does work. You can test it for yourself by placing distracting materials in front of any hive without moving it. Before the materials are in place the bees fly straight in and straight out. Within minutes after putting a distraction in place, you will see bees going through the process of reorienting themselves—circling around the entrance, hovering in front of the hive, and widening the exploratory area.

Be sure you don't have a second entrance unless it also has distracting materials. I think it's best to have just one entrance when doing this. Also, I like to have a distraction that is big enough and irritating enough that the bees really notice. In other words, don't use a skinny twig. I like to use a big leafy branch with lots of leaves within an inch of the entrance.

I have had good results by leaving the hive closed for as little as 24 hours, but some people have had better luck by leaving them locked up for a full three days. If your bees have plenty of ventilation so they don't get too hot, go for the three days.

Also, see the YouTube video by LDSPrepper.

Source: [Honeybeesuite.com](http://Honeybeesuite.com)

Ed's Note: Readers of a previous TDBA Newsletter will remember my article about how not to move 2 hives at the same time in wheelbarrows separated by that magical 1 m/night. The bees from the front hive thought their home reappeared each night in the hive coming up from the rear - needless to say there was complete pandemonium after 2 nights with bees fighting and setting up new comb on the outside of the rear hive - and then it rained - so the wheelbarrows filled up with water above the hive entrance level - doh!!!

Note the DPI Biosecurity hive in the front barrow.



## ***Native bee adventures with Steve and Carla K***

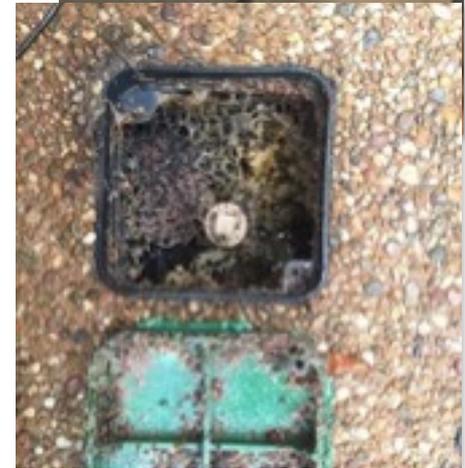
Native stingless bees (*T hockingsi*) had made a hive in a small compartment that stores the fill tube for the barrier termite protection at our rental property (Greenwood, Kirwan). The compartment is plastic and approximately 10 x 10 x 15 cm and probably contains the residue of the insecticide poison that controls the termites (Bifenthrin).

We decided to remove it about a month ago, so we scooped out the majority of the brood in two chunks (one the size of a tennis ball and the other about golf ball size), as well as a small portion of pollen sacks and honey. The remnants were mainly pollen and honey sacks, more difficult to remove due to the ribs within the compartment. There were also a number of bees lining the compartment, but I couldn't think of a practical way of transferring them into my hive, without leaving the new hive at the site. So we left the scant remains as it was and relocated the hive to our home in Kelso.

After about one week I opened the hive quickly to check the progress. They had established themselves well, having built supporting structure around the brood and the pollen (see the hive photo). They continue to do well, looking busy, coming and going. I'd heard that in the right conditions, a hive could establish itself from as little as a golf ball size of brood (thanks Jon).

So, on the weekend we were back at the rental property and We decided to check the original hive site. The bees were coming and going in good numbers and to my surprise once opened, they were well established, having replaced about two-thirds of the brood that I had removed (see the compartment photo). There was barely any brood remaining when I removed it a month prior. As you'll see in the photo there is about 1 cm of water in the bottom, due to our much welcomed rain (not so good for the bees). We were also lucky enough to see the Queen spend some time on the top of the brood. I was happy to see this elusive creature for the first time and didn't think to take a photo before she ducked away.

Steve and Carla K.



## ***Getting ready for a Flow Hive***

New Club Member Cristi M from North Ward has been preparing well for the arrival of her FlowHive in March by getting an already established full hive during the limited honey flow season we had last year. The hive has developed well, and she has managed to get a few standard frames drawn out in a partially blanked off super. She will place these drawn out frames (some already with honey) in the Flow Hive, along with some of the Flow Hive blank foundations (washed, rinsed and pre waxed with her own bees wax). This will reduce the shock of presenting an empty set of blank foundations to the bees in March/April when the honey flow is usually slowing down - but who knows what's happening this year.

Unfortunately for Cristi, as well as being busy and productive, her hive has become very aggressive and she has received several warning shots from the guard bees and a few of her aggro friends (see swarms of bees in photos) so she may also need to re-Queen before the whole rigmarole of the Flow Hive box gets placed on top of the hive.

More news when the Flow Hive goes on.

PS: Photos provided by Cristi's curious neighbours - there goes another jar of honey to help smooth the relationship.



## ***Educational bees on the Gold Coast***

Driving past the Genesis Christian School in Bray Park, a north Brisbane suburb, it is hard not to be impressed with the architecture of their buildings – very modern and you get the feeling that this is a progressive school. But a closer look reveals that the progressive nature of this school is deeper than just the building façades. There are sheep in the school grounds, goats, chickens, fish.... and, of course, bees!!



I know a few of our senior club members got into bees thanks to a bee program at school. However with centralised curriculum-setting and a general risk aversion by public agencies, including schools, finding any schools who run a bee program is pretty rare nowadays. So how did this school defy the trend?



I contacted the school and put this question to the course coordinator, Amy Burgin. She said being a private school helps and that the school places a high importance on promoting nature. The school has had bees for > 6 years, longer than she has been there, and that bees and other animals form a core part of the science program. She mentioned that Year 8's have had a bee program running for the last three years which includes a science experiment on small hive beetle (SHB). Students had to test the efficacy of 5 different SHB traps. One group even designed and tested their own trap! Year 12's have their own bee-related science program. The school has ordered a Flow Hive and will incorporate this into their bee programs.

From Ray B. (researching the Gold Coast for Newsletter items while finding time to build his new house).

## ***Gold Coast Beekeepers eradicate diseased hives***

In early January a club member noticed some vandalised hives in an apiary near where she swims her dogs in a local creek, the hives were over 30 years old and belonged to a former club member who is now in his late eighties. After tracking down the owner we met on site to assess the hives, 7 out of 20 were active, with the remainder either slimed out by Small hive beetle or empty. The old gentleman said that he was not able to maintain the hives and on behalf of the club I offered to contact the Gold Coast City Council and Tallebudgera Rural Fire Service to assist with the co-ordination and cleanup of the site.

On Tuesday 12th January at 10am representatives from the Club, GCCC and RFS met on site to assess the situation, with members suited up carrying out the inspection of all hives, the result was not pretty, all active hives were contaminated by AFB, SHB and chalk brood, with many other hives slimed out by SHB. The decision was made immediately to bag in heavy duty plastic bags the slimed out and non-active hives and to place them in a cleared area for incineration, the active hives were to be closed down after dark by club members and euthanised by council pest control experts. The Tallebudgera RFS then took over the task and incinerated the contaminated hives, a BBQ that lasted until after midnight with the GCCC returning the next morning to fog the stray bees and ashes before having the remains buried by an excavator that night. The support that was received from both the GCCC and RFS was excellent and the club has now established a great working relationship with these 2 groups.



From the Gold Coast Amateur Beekeeper Society Inc Newsletter "The Buzz" February 2016 - passed on by Ray B.

Ed's Note: Let the Club know if you see vandalised or abandoned hives anywhere as they are a source of disease - as shown here in this article. We can help arrange for disposal if required.

# Royal Jelly - it ain't what you thought it was

<http://www.wired.com/2015/09/royal-jelly-isnt-makes-queen-bee-queen-bee/>

For decades scientists thought an excess of royal jelly elevated a regular honey bee larva to a queen. New research suggests we had it backwards: It's what future queens aren't fed that matters. Royal jelly, which also is called "bee milk," looks like white snot. More than half of it is water, the rest is a combination of proteins and sugars. Special glands in the heads of worker bees secrete the stuff, which gets fed to baby bees.

A developing queen bee is fed royal jelly exclusively—not pollen and honey like her proletarian sisters. These bees don't get the special "Food of the Gods, or perhaps, food of genetic monarchies. And so, we thought, their ovaries shrivel, and they don't become a queen. It turns out, it's the other way around. Not feeding an immature queen pollen and honey is what makes her royal, not her exclusive access to royal jelly.

## Queens and Genes

Queen larvae are surrounded by royal jelly; they float on a sea of sugary bee gland snot in enlarged cells. Worker bees eat beebread (a type of fermented pollen) and honey. Nurse bees mash this into a "worker jelly" and add glandular secretions as a garnish. Workers don't get the special stuff in queen jelly, and their ovaries shrivel. That's the conventional explanation. But new research contradicts this belief.

Beebread and honey are derived from plant materials, and like many plant materials, they contain a variety of phenolic chemicals. We eat them all the time; flavonoids are the plant chemicals that give plants their unique flavours (and help plants discourage plant-eating insects, among other functions). Royal jelly, however, has no detectable phenolic acids. None. From previous research, the researchers knew that flavonoids increase immune responses of adult worker bees. That's a good thing; it has the side effect of helping bees detoxify pesticides faster. But some of these flavonoids can switch off gene expression that creates queens.

## The Silencing of the Genes

Dr. Ryszard Maleszka from ANU says "This research is a wonderful example of an evolutionary invention whereby common plant chemicals have been recruited to be crucial elements of gene regulation. By using environmental ingredients, honey bees found a clever solution to a challenging problem: How to generate two contrasting organisms, long-lived reproductive queens and short-lived functionally sterile workers, using the same genetic hardware."

Maleszka has delivered a stinging rebuke to the idea that a single compound in royal jelly is the "switch" that makes a queen, though. In 2008, his lab was able to create queen bees without any royal jelly consumption, by turning off (silencing) a set of genes. Other bee researchers have questioned the "one molecule to rule them all" idea of queen development. The reality is likely that, like everything else in biology, it's complex and many factors are involved.

The real power of this new research may be in explaining why worker bees don't become queens. Instead of chemical castration by denying workers royal jelly, this elaborate feeding process provides chemical protection for the queen's ovaries. She is sheltered from the potential toxic or metabolic effects of plant chemicals.

## Postscript: Um, Why Are Humans Eating Royal Jelly?

When we thought royal jelly was magic queen stuff, stealing and eating phlegm produced in insect heads made a kind of warped sense. Royal jelly proponents claim the stuff cures all sorts of human problems, infertility in particular. By deduction, the stuff that makes queen bees baby machines, laying up to 2,000 eggs a day, should increase human fertility. I am compelled to say this is not how scientists deduce cause and effect.

Royal jelly also is sold as an aphrodisiac, and like most erotic insect products, it's applied with "vigorous rubbing." That makes it hard to say just how firm evidence for this erectile remedy really is. Also, actual honey bee reproduction involves penis detachment and death, which doesn't sound like a good time to me, if we are sticking with that whole "what works for a bee will work for humans" analogy.

Royal jelly does have antibacterial and antifungal properties, since it's the gunk developing bees float in until they metamorphose. It's marketed in many cosmetics as an anti-aging ingredient; queen bees live 40 times longer than worker bees. So far, there isn't much evidence of royal jelly having medical significance in humans. It's probably a good moisturiser, though. Especially if you don't think about where it comes from.

My best guess is that about 600 tons of royal jelly is produced and sold yearly; East Asia is the main producer. Prices vary widely, but based on a trip to my local health food store, seems to run about \$1 per gram. The market value of royal jelly is based on what we thought we knew about its magical properties; that doesn't seem likely to change in the foreseeable future.

But now you can have a lot of fun telling people where their royal bee goobers came from.

Wenfu Mao, Mary A. Schuler, and May R. Berenbaum. 2015. A dietary phytochemical alters caste-associated gene expression in honey bees. *Science Advances* 1(7).

## ***TDBA Inc. minutes for February 21/2/2016***

**Welcome:** President Ron Rapson welcomed 60 new and current members. We had 4 apologies as per attendance book.

**Minutes:** Minutes from previous meeting moved by Ron Rapson and seconded by Frana McKinstry.

**Business:** from previous meeting: Frana McKinstry and Dave Bowtell have had meetings with the principal and the teachers of Hermit Park State School about their upcoming beekeeping classes. The school has 2 Flowhives. Jon McKinstry has done research on the trailer and Dave Bowtell and Connie Navarro are going to work together to submit for grants. Also Bunnings has \$500 community grants we shall apply for.

**Correspondence:** We had a letter from Barry Madsen asking to join the club and emails from Elise Whittaker in regards to the upcoming QBA annual general meeting to be held in Townsville.

**Treasurer's report:** We have had incomings of \$2400 and outgoings of \$1400. Moved by Dave Bowtell and seconded by Paul Payne.

**Shop report:** The shop has plastic jars for sale of various sizes. We still have The Australian Native Bee Book for \$25 and the Australian Beekeeping Manual for \$35 for club members. We also have a new range of veils.

**Librarian report:** Connie Navarro donated Fat Bees, Skinny Bees to the library, this book is about bee nutrition

**Newsletter report:** Lindsay would still like people to submit stories, he is happy to go to people's places to help with stories

**General business:** Rob Stephens from Biosecurity QLD had some information, there is no longer any movement restrictions for the Asian honey bee. More information can be obtained from the web site [www.daf.qld.gov.au](http://www.daf.qld.gov.au). There was a swarm in Douglas that had AFB. When the new bio act starts the brand number will no longer be called a brand but a hive identification number, your number will remain the same. Rob is still looking for members to participate in the Verora mite testing sites, if you live near the port and want to participate contact Rob Stephens 0407 374 232.

We have a Flowhives workshop coming up dates to be confirmed.

I would like to thank Connie Navarro for taking over from me as secretary at short notice. I'm sure she will do a wonderful job.

**Next meeting:** Hermit Park State School, 5 Sussex Street, Hyde Park, 5 Sussex St, but use the McKimmin St entrance - Sunday 20 March, 2:00 pm

### ***Native bee hive education success - by Frana and Jon M***

We decided to try 'education' or 'soft split' of a native bee hive, as an alternative to splitting. This is a process where we placed a new hive in front of an existing hive, joined by a tube. The bees (hopefully) start a new colony in the new box; the whole process is described in Tim Heard's new book "The Australian Native Bee Book". We set the hives up mid-December, and last week were able to separate the two colonies as the new box had been filled with honey and pollen pots, with a small clump of brood also present. We were surprised just how quickly they established in the new box as this process can take up to a year.

Ed's Note: I have tried this and I am still waiting for any brood chamber inside the 'involucrum' sheath (this is made up of multiple layers of cerumen - a mixture of wax and resin). They just seem to walk in and out of the front box like it's a grand entrance hallway. Native bees require patience!!!



## ***TDBA Inc does not carry public liability insurance.***

Beekeeping is not an unusually hazardous activity, but there are certain risks that individuals should consider.

Some people may be allergic to bee stings, or to pollen, or there may be lifting strains when lifting heavy hives. There are certain risks we take for granted every day without considering them very much - as is the case with most common activities like driving a car on a busy highway, or riding a pushbike, or crossing at pedestrian crossings. However, the TDBA Inc takes all reasonable steps to reduce the reasonable risks associated with our beekeeping activities, and members and visitors take part in our activities at their own risk.

If this presents an issue for any TDBA Club members, please feel free to discuss or raise the topic with any of our Committee, or by email.

### ***New Club Secretary***

Carla Kernovske has relinquished her role as Secretary and Connie Navarro has accepted the duties without too much of a fight. Thanks to Carla for her work, and for keeping the Club up to date with the Secretarial duties - and welcome Connie

### ***National Conferences in Townsville July 2016***

Put these dates in your diary - this is a fantastic opportunity to be smothered in bee and honey related information, new developments, research and face-to face contact with both small and big wheels in the bee business.

Annual National Conferences of:

Queensland Beekeepers Association on Wednesday 13<sup>th</sup> and Thursday 14<sup>th</sup> July at the Mercure Inn, Townsville.  
Australian Honey Bee Industry Council Friday 15<sup>th</sup> July, at the Mercure Inn, Townsville, followed by their AGM.

#### ***TDBA Inc Office Holders for 2015/2016***

<u>President:</u>	Ron Rapson	<a href="mailto:ronald.i.rapson@team.telstra.com">ronald.i.rapson@team.telstra.com</a>
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<u>Secretary:</u>	Connie Navarro	<a href="mailto:navarroc@bigpond.com">navarroc@bigpond.com</a>
<u>Treasurer:</u>	Frana McKinstry	<a href="mailto:franajon@gmail.com">franajon@gmail.com</a>
<u>Newsletter Editor:</u>	Lindsay Trott	<a href="mailto:trott Lindsay@gmail.com">trott Lindsay@gmail.com</a>
<u>Librarian:</u>	Jon McKinstry	<a href="mailto:franajon@gmail.com">franajon@gmail.com</a>
<u>Equipment Steward:</u>	Frana McKinstry	<a href="mailto:franajon@gmail.com">franajon@gmail.com</a>
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<u>Committee Members:</u>	Dave Bowtell	<a href="mailto:spanner1969@gmail.com">spanner1969@gmail.com</a>
	Dave Turnbull	<a href="mailto:turnbuld@bigpond.net.au">turnbuld@bigpond.net.au</a>

#### ***Honorary Members of the TDBA Inc***

In recognition of their long term service and support of our Association.

Dennis ANGER

Graeme & Adele ARMSTRONG

Ken & Marcia CALEO

Dave HOEY

Mike & Jill JAMES

Doug & Sonya MCBRIDE

# Club Shop Items- 2016 Price List

These prices are only available to current financial members

<u>Item</u>	<u>Price \$</u>	<u>Comment</u>
Veil - Native bee	10.00	
Veil - cotton	15.00	
Veil - ventilated	20.00	
Jacket / Round hat	55.00	
Ventilated jacket	70.00	
Gloves	20.00	
Super — Rebated	25.00	Full depth, unassembled
Super - Dove tail	26.00	Full depth, unassembled
Super - Treated Ply	35.00	Full depth, unassembled
Hive Lids	25.00	
Hive Bases	20.00	
Lifting Cleats (Handles)	5.00 pair	
Spring clips	5.00	
Hive tool (S/S)	15.00	
Hive tool (Yellow)	8.00	
Smoker	35.00	
Queen Excluder - Wire	20.00	
Queen Excluder - Plastic	6.00	
Frames - Full depth	1.50	
Foundation - Plastic	2.00	
Foundation - Wax	1.60	
Eyelets pkt 500	10.00	
Bee Brush - Natural bristle	10.00	
Bee Brush - Synthetic bristle	8.00	
Queen Catcher	3.00	
Frame Gripper	10.00	
Bee Feeder	1.50	
Gate valve	10.00	
Capping knife, serrated	15.00	
Comb scratcher	8.00	
Honey jars 250gm square	0.65	
Honey jars 500gm square	0.75	
Honey jars 500gm round	0.75	new
Honey jars 500gm squeeze	0.80	new
Honey jars 1 kg round	1.00	new
Honey Pails 1kg	1.25	
Strainers (fit bucket)	80.00	new
<b>TRAPS</b>		
Apithor trap	6.00	
Silver Bullet trap	7.00	
BeetlTra bottom trap	20.00	
TK Beetle mat	6.00	
Booklet - Managing AFB	6.00	

## ***TDBA Starter Kit - \$95***

***The Perfect Gift for a budding Beekeeper***

***All available in Townsville:***

***Club Members Price Only!***

Bee Jackets \$55      Hive tool \$8      Gloves \$20

Smoker \$35      Bee Brush \$8,

All five items sold as a Beginners Kit \$95

***Contact: Frana: Ph. 0401 014 948***



***TDBA is proudly supported by:***

### **THE AUSTRALIAN BEE-KEEPER MAGAZINE (ABK)**

Published monthly Subscriptions \$84 per year.

Available from: Pender Beegoods,

PMB 19, MAITLAND NSW 2320

### **LOTS-A-STINGS**

Honey, wax, boxes, frames, plastic foundation and much more. Pollination services. Will help new members get started with bees

**.Dan Donovan: Ph 0428 218 816**

