

July 2013

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PO Box 1115, Aitkenvale, Q4814

Newsletter of the Townsville and District Beekeepers Association



Photo: www.healthybeeguide.com/vita_gallery

Bees North

www.beesnorth.org

Farewell Mannie!

As most of us are aware, Mannie passed away last month after his time with cancer. As a member of our Association he was an experienced beekeeper. He first became involved with bees in the early 1960's with his brother in law. They worked bees on the edge of the Simpson Desert and surrounding areas. As the years passed, other interests took over which he followed closely. His beekeeping took a back seat although his knowledge of the pastime came in useful once he had hives of his

This caused some hives to reject this constant attention and he lost a few bees through swarming in his first years. A rethink of practice and repositioning of some of the hives helped for a while but until he eventually placed the bees out on his daughter's property and had his grand-daughter become a member of the club did the bees settle and produce the quantities of honey we can expect from them.

As a member of our Club, Mannie was involved in our club with the printing and sending of the posted newsletters before he was taken ill. His interest and thoughtful comments will be missed at meetings. Our thoughts go to the rest of his family. His beekeeping legacy will live on through his grand-daughter and current member Casey and his son Ben who will continue the van Rijswijk beekeeping hobby.

Grant



Mannie van Rijswijk as we know him, ever enthusiastic at our bee meetings.

"Bee-Friendly" planting guide

This book is a planting guide for European honeybees and Australian native pollinators by Mark Leach and is published by the Rural Industry Research and Development Council (RIRDC). It is designed around Australian gardens and will be of great interest to all Australian beekeepers.

From the backyard to the bush, right across the nation, this book will assist with increasing the available food for bees. It is available free as a pdf at

<https://rirdc.infoservices.com.au/items/12-014>

It is \$60 to buy in hard copy or 320 pages to print yourself! (... almost worth paying the \$60!)



Special points of interest:

- **Mobile phones—are they killing our hives?**
- **Honeybee pest and disease workshop put on by AHBIC in Cairns Aug 17 and 18. Details p5**
- **"Bee Friendly" - A planting guide for European honeybees and Australian native pollinators available now. \$60 or free pdf download from RIRDC website**

Next meeting:

Sunday 21 July, 2013, 14:00 at Ayr Rifle Range, Cnr Ayr-Dalbeg Rd, & Brown Rd, Ayr.

own back here in the north.

A couple of years ago he rekindled his interest when he first came to take honey off at my place. It was not long before he had a hive of his own. Our experienced members helped him get started and as is always the case he loved them to bits.

Minutes of the last Meeting

Townsville and District Beekeepers Association meeting 16-June-2013.

Before the sit down meeting we had a look at one of Dennis's hives and saw how well the SHB mat was working. We had a look at his 2 extractors a geared 4 frame and a direct drive 2 frame one.

President Dennis A welcomed members and guests.

Present: as per signed book, over 26 members

Apologies: as per the book.

Minutes of Previous meeting read by Grant

Moved Dave M. sec: Vic N

Carried.

Matters arising:

Eco Fiesta - a big thank you for those who helped out.

Grahame's A. queens have been a success for those who bought them.

Correspondence: from Guy Ticket regarding holding a stall at the school fete on the Island. Not a lot of interest shown.

Moved Jacinta P. Sec Vic N.

Treasurer's report: Funds as of the 14th June \$2560.94. Today's payments will lessen that figure.

Moved Doug Mc. Sec. Mike James.

The Web site is going well and we have paid for another year. Doug spoke on the online payment needing tidying up. We rely on the new members giving details as of when and where they have paid. We have a sliding scale of club membership. August to Feb it is \$20 and March to June \$10. July to August, \$20 and carried through until the next August.

General Business.

The roll test. Please report any varroa test, particularly negative ones, let Rob Stevens know. He needs to collect data and we can help him here. It is easy so please try, it is our best interest.

There are no carpenter bees around Dennis's place at the moment so we couldn't see them.

Web club payments are difficult to control as we rely on the new members to inform us.

Dennis's phone has been out of action.

The Sept meeting is to be at Lenny and Leonies place. We are able to camp out there and some will attend the Drive in (me) on the Sat. night. It was a hoot last year.

Grant is to sort out food etc for the next meeting at the Rifle club at Mona Park, this side of Clare. Meeting



Photo: http://healthybeeguide.com/vita_gallery

Bee photos don't get much better than this - nose down, bum up - that's the way we work!

from 11am until 3 odd with lunch provided by the club. We will cook and serve it ourselves. Don't bring any equipment to this meeting only your suits and veil.

Mike James mentioned that Doug Summerville will be happy to sell us the AFB book to our club for the members.

Grant to follow up on renewing the club membership to the QBA.

Ray B. has copies of the newsletters if needed.

Ryan and Collette spoke about boxing up the bees nest from next door to them and have done a very good job and they are pleased with the effort.

Elle and Mike spoke on removing hives from a dangerous place on the side of the road with the help of Grant. (they are doing very well in their new home.)

Questions were asked about wintering over hives. If the cool winds come, ensure that your bees have enough food to be healthy when the flush comes in the spring.

The members interested in the native bee side of things have begun to network and collect information and are thinking about having a stall at the next Eco Fiesta. Ryan spoke about maybe having the prisoner making native bee hives for a fund raiser for them. A discussion was held about the hover fly and native bees and their likeness.

Consider the AGM in August. If you are keen to take on more responsibility let someone know.

Next Meeting

- July the 21st at Dave and Virginia's at the rifle club Mona Park near Clare.

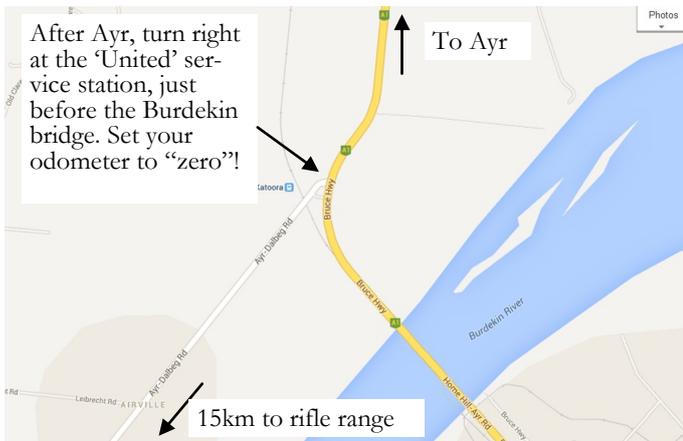
Minutes of the last meeting (cont)

- August the 18th at Ron and Rose’s, the AGM, Mundingburra.
- September the 15th meeting at Len and Leonie’s place outside of Charters Towers. (overnight camping available with a trip to the Drive-in thrown in)

Grant

Directions to the Ayr rifle Club

For a GoogleMaps link to the July meeting site at the Rifle Club: <http://goo.gl/maps/clUfw>



February swarming: ‘planned’ or ‘unplanned’?

Most people will remember the blistering heat wave in late January and early February this year. Some club members were getting several calls a week around that time to come and collect swarms. I had two of my own hives swarm at that time. As far as my hives were concerned, both were strong at the time. So the question that arose in my mind was: Were these hives due to swarm anyway because of hive density or limited brood or honey space?

Or, were these swarms ‘unplanned’, in the sense that the bees were not going through a natural swarm-cell building phase in readiness for a natural colony division?

The following information may shed some light on this. By now many might expect, I had temperature loggers my hives at the time to monitor the conditions. The temperature data show that prior to 25 January it was relatively cool inside the hive (measured under the lid). However on 29 January after four days in the high 30’s, ‘Hive 4’ swarmed. Thankfully I managed to catch this one with Lindsay’s help who ultimately was the recipient of the swarm. Five days later on 3 February, ‘Hive 2’ swarmed. This was after five days with temperatures in the low 40’s! Interestingly, ‘Hive 4’ was the cooler of the two hives as it is under a palm tree, yet swarmed first. ‘Hive 2’ was more in the open and consistently warmer (up to 6°C warmer during the hottest days) but didn’t swarm until quite a few days later and not until temperatures exceeded 43°C inside the hive. This hive was consistently warmer during the previous 2 months and maybe it was the sudden deviation from what they were used to that caused the hives to swarm rather than the hives crossing a fixed threshold?



‘Hive 2’ the week before it swarmed. It was a strong colony but the beard out the front indicates it was uncomfortably warm inside.

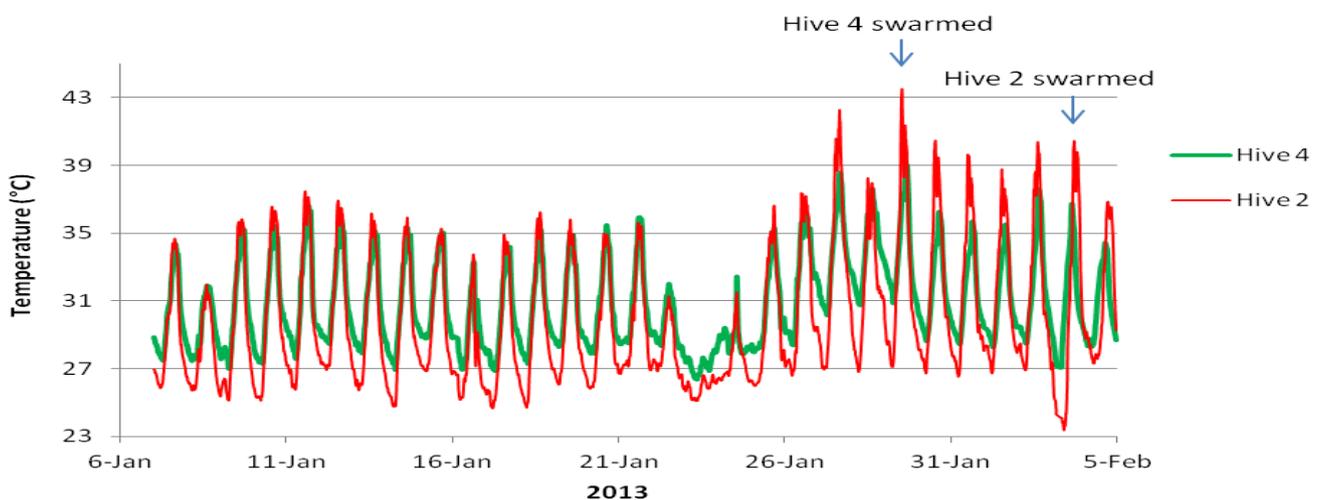
February swarming: 'planned' or 'unplanned'? (cont)

Anyway, at the time, what was more important to me was whether the hives would make a new queen and how long this would take. I opened both hives on 12 February, two weeks after the first swarm and found capped queen cells in both hives and no uncapped worker brood but ample capped worker brood. That was a bit disappointing as I was expecting a new queen to have hatched within a week or so of a 'planned' swarm, been mated and to be seeing uncapped brood by about now. If this was a 'planned' swarm, the book tells us that this would have been the case!

I let another two weeks go by before another inspection. This time there was no brood at all visible, neither queen nor worker! I figured the queen hatched and just failed to return after one of her mating flights. So, I ordered a new queen and within another week (now 32 days, or nearly 5 weeks, after swarming) was ready to install her. On opening the brood box I was surprised to find uncapped brood everywhere! Where did they come from? On reflection, the pieces started to come together. The swarming I experienced was almost certainly 'unplanned' as the bees had not actually started making any swarm cells when the old queen abandoned the hive with all able-winged underlings in tow. The remaining bees would have had to start making an emergency queen shortly after the swarm. This would explain why I had unhatched swarm cells two weeks after the swarm. Four weeks later there was no sign of queen or capped brood. All the remaining worker brood had hatched and

the queen was either out being mated or had returned but not quite started laying as yet. However another week later and she was in full swing! Meanwhile I had a spare queen on my hands which I didn't need and Grant was kind enough to buy her off me. To me, the take home message is clear: two strong hives and stifling warm conditions and the bees had had enough – they were taking off in search of somewhere more comfortable! Both hives were single-supersed at the time. I wonder if I could have prevented one or both of the hives from swarming if I had double-supersed the hives? I also wonder if I could have prevented both swarms if I had been more attentive to the overheating problem by giving the sunny hive more shade and by installing a fan in both hives as I had done experimentally the previous summer? I didn't get around to it this summer, at least not in time. Next summer I'll be a bit better prepared! Meanwhile I think the message for all of us is clear, bees do get heat stressed in our tropical summer. How can they not be stressed with temperatures of $>47^{\circ}\text{C}$ under a rusty lid as I reported in Oct 2011, or $>52^{\circ}\text{C}$ in a silver-painted box as Lindsay reported in Feb 2013? Last month, Dave showed that his bees experienced $>38^{\circ}\text{C}$ even in a well-insulated plastic hive in April. As beekeepers in the tropics, I believe that we need to be extra vigilant to hive overheating and to make sure we do what we can to make life a bit more comfortable for bees during those critically warm periods!

Ray



Hive temperatures leading up to the critically warm period in late January/early February prior to swarming

T.K.'s Beetle Frame

The June meeting at Dennis' place was a chance to see the T.K.'s Beetle Frame in action. This is another non-chemical way of controlling the small hive beetle. It is essentially a very thin frame (2mm wide) which resembles a filing cabinet hanger. It is designed to fit between the last frame in the super and the edge of the box. The side facing the last frame is smooth while the other side is furry. The idea is that bees chase the beetles around the sides and through two small holes in the centre and once around the other side, the beetles get caught in the soft fur with the hooks on their legs.

It is important that the beetle frame is hung straight and very close to the side wall of the box. This means that all burr comb and wax bits have to be cleaned off the wall. Beetles can be cleaned off with a stiff nylon brush. This will also fluff up the soft side and make it effective for the next deployment.

T.K.'s Beetle Trap is available from our club for \$6 each. We also stock oil traps, diatomaceous earth

traps and Apithor traps. Please see Doug our treasurer if you want any of the above.



Photo: http://healthybeeguide.com/vital_gallery

Bee-to-bee

Pest and Disease Workshop

The Cairns Bee Club will be hosting a pest and disease seminar next month on the weekend of the 17th and 18th of August. The event will take place in Gordonvale at Mulgrave Mill on Gordon Street and is being funded by the Australian Honey Bee Industry Council (AHBIC). The event will have no cost for attendance; however participants will have to cover the costs for their own travel and accommodation arrangements if they stay for the entire weekend. The seminar will have key speakers from several fields including Dr Denis Anderson from the CSIRO and Professor Ben Oldroyd from the University of Sydney. Spaces are limited and filling very quickly and unfortunately this also falls on the same weekend as the Townsville bee club's AGM. However it will definitely be a worth while event and I encourage members from our region to attend. If anyone would like to RSVP please contact Maurie Damon from the Cairns bee Club ASAP on 0412 163 666.

Rob Stephens



Dan models the PK Beetle Frame as an alternative non-chemical method of small-hive beetle control. This frames was cleaned only 2 weeks earlier and is full of trapped beetles!

Too much moisture in the hive

Observation of the hive and the hive equipment seems to be a fundamental of beekeeping. When we started in beekeeping, we inherited a lot of home-made equipment. The lids were covered in coated sheet metal and so I was surprised to note signs of water damage to the inner cover of the top.

Part of this problem is due to the weather – although we didn't have a 'wet', wet season this year, there have been years when it has bucketed down for months. At first I thought this was the reason but further observation indicated the metal cover should have excluded rainwater from entering inside the lid.



Inside of lid off right hive in the next picture. The large brown patch is discoloured and swollen MDF fibre

The answer came one morning when we worked the hives – condensation. Lots of bees mean lots of nectar collection and also lots of respiration. Everything, it seems, gives off moisture. Moisture in the hive is not a good thing. Disease organisms, fungi, and moulds thrive in moist environments and, in cold weather, water droplets can drip down on the bees and chill the brood.

To overcome this, I sandwiched a sheet of corflute

(similar to corrugated cardboard but made of plastic) under the metal top of the lid and the inner sheet. This provided an air gap between the hive and the outer environment.

As a second barrier, I put removable sun/rain shade on top of the lid. This minimises the external exposure and helps to keep the hive shaded. These measures appear to have eliminated condensation.

Jon



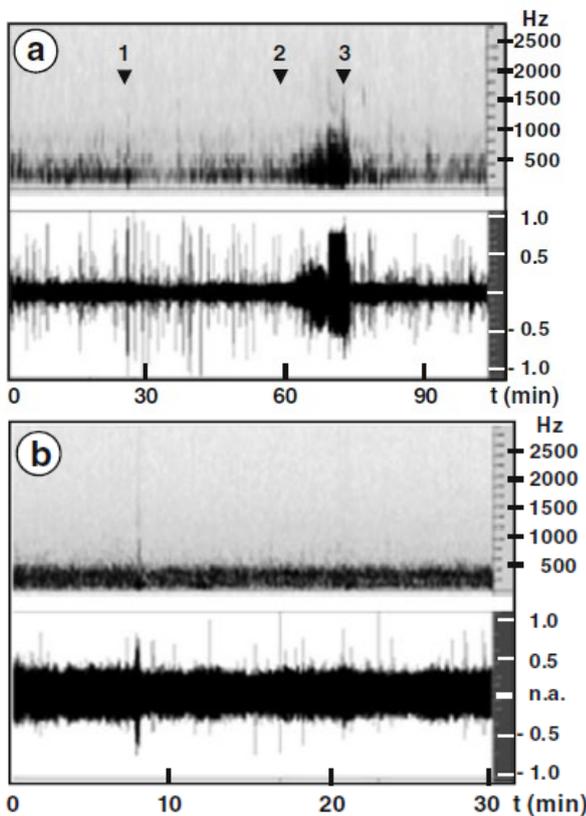
Our 'final solution' to the moisture problem consisted of a roof over the hive to keep the rain off and a sheet of corflute between the metal cover over the lid and the lid itself.

Phone 'app' for bee health

Do you want to have instant access to bee disease info at your finger tips? Do you feel like pushing the envelope a little bit with respect to the effects of mobile phones on bees (see next page)? Then why not install the first ever beehive health 'app'? It is suitable for nearly all smart phones and tablet devices, can be downloaded free from www.healthybeeguide.com. It certainly has some very good diagnostic photos of diseases like AFB!

Are mobile phones killing our hives?

A number of studies on the effects of mobile phones on beehives and bee behaviour have been conducted in recent years. The journal *Apidologie* published a paper by Daniel Favre (Swiss Federal Institute of Technology) in 2011 where mobile phones were placed inside hives and the piping response of bees were monitored. Piping is a well-known stress response of bees and is often associated with swarming. The results clearly show that that handsets in active communication mode caused a dramatic increase in worker piping 25-40 minutes after the onset of



- A. Spectrogram (upper panel) and audiogram (lower panel) of worker bees piping. At arrow 1, the phone is turned from standby to active communication. At arrow 2, the bees begin to pipe 35 min later and become increasingly agitated until active communication ceases at arrow 3 when piping settles down almost immediately.
- B. As above but with the mobile phone remaining in standby mode. Little or no bee piping observed.

communication. However when the phones were in standby mode, the bees were not disturbed. These

results were highly repeatable and show that electromagnetic radiation at a combined level of below 2W (i.e. the international 'safe' level) can have a dramatic effect on bees. Having said that, the overall conclusion we can draw is that you would have to have your head well and truly in the hive and be talking on the phone non-stop for over 25 minutes before you start to upset the bees.

There are a few salient points that the author makes however. Namely, that electromagnetic radiation from mobile phone towers has increased ten-fold in the last 20 years in Switzerland (and likely most western countries) and even though they remain well below the levels tested here, there is a concern that there may come a time when they will start to impact on bees through continued chronic exposure. It is also well known that bees have magnetite crystals which play a vital role in bee electromagnetic 'sight' which is an essential part of the bee environmental sensory apparatus. Bees have been shown to respond to very small changes in electromagnetic fields. So, by itself this study may not signify any immediate threat in the short-term. However in the long-term and in association with additional impacts on their fitness from pests, diseases and pesticides, it could be adding to the general bee malaise.

Ray

Ideas department!

It doesn't necessarily take a boiler and elaborate gear to run a steam de-capping knife. At the June meeting, Dennis showed his setup where he runs his hot knife from a household pressure cooker, proving that even small to medium-sized beekeeping operations can enjoy the efficiencies of a steam de-capping knife.



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