

BEELINES

NEWSLETTER OF THE BEEKEEPERS CLUB INC

MAY 2019



Upcoming Events (see [website](#) for full details and registration)

Club Monthly Meeting

16th May 2019, 7:00 PM

NewHope,
3 Springfield Rd,
Blackburn North VIC 3130
(Cnr of Middleborough & Springfield Rd)



Rotten documentary—Lawyers, Guns & Honey

With demand for honey soaring just as bees are dying off in record numbers, hidden additives, hive thefts and other shady tactics are on the rise.

Victorian Beekeeping Clubs Conference

15 Jun 2019 8:30 AM

Hyatt Place Melbourne,
1 English St,
Essendon Fields VIC 3041

We encourage all members to attend for what is shaping up to be a bumper conference. Offering keynote speakers in plenary sessions. Take advantage of the discount offer sent to all members by the secretary.

See inside for more details.

For information and tickets:

<https://vicbeeclubs.com.au>

Club Apiary

Hive openings have finished for the season. Keep an eye on our website for upcoming autumn/winter apiary activities.

President's Report

By Mat Lumalasi

It is only 5 weeks until the 2019 Victorian Conference. Continual progress and enhancements to the event are being made weekly and the program for the day should be available this week with speaker topics and schedules.

The pre-dinner is shaping up to be well attended and looks to be a fun social event with a bee-centric comedian to compliment. I look forward to seeing everyone at the conference.

We are pleased to hear a lot of positive feedback about our decision to move to a new venue. As you could imagine it was a hard decision to make on behalf of all of the members as it is stressful to all when making such big changes. As a result of our move we are saving a substantial amount of money each month compared to our old venue.

One of the first tasks the committee discussed this year was the budget. We quickly discovered that the club wasn't financially able to run without the income from the beekeeping courses throughout the year, putting enormous pressure on the facilitators.

It became obvious that we needed to make changes to our ins and outs to get the club to a more self-sufficient model, based on memberships alone.

Our insurance was investigated and revised with a cheaper and more detailed policy and venue options was our other immediate task that we worked on. These two changes alone will make a huge impact on the financial sustainability of the club, allowing the committee to look at new ideas for the members.

It was noted that our library had not been updated in some time with new material. Our new lending system update means that we have easy ability to track assets and we can now focus on expanding our content for all members.

With beekeeping activities slowing down for Winter, we will have more time for other projects and preparation for next season.

Welcome Club Newbees

We extend a warm welcome to the following members who have recently joined the club:

Pauline & Don Collyer	Heathmont
Brad Hales	Watsonia
Tanya & Colin Marshall	Doncaster East
Matthew Ryan	Olinda
Lisa Sanders	Warrandyte
Bronwyn Woods	Watsons Creek

June Conference Speakers

By Vanessa Kwiatkowski, Secretary

The June Conference line up is looking fabulous. We have now confirmed 16 speakers for the day.

We encourage as many members to attend. There will be 14 trade/displays at the conference with books, gifts and gear. As well as raffles including a Flow hive 2 to give away. Valued at \$1200.

Hilary Kearny's brand new book Queen spotting will also be available with the bonus of having the lady herself there to sign copies! More news on how to pre order which is exclusive to members and attendees to follow.



Make sure you take advantage of the coupon which was sent to all members via email last month for \$125 (a \$30 discount).

Here is a sneak preview of 5 speakers and their topics:

Hilary Kearney (USA)*Broadcasting Your Beeswax, The Business of Storytelling*

Beekeeping entrepreneur Hilary Kearney (Girl Next Door Honey), shares her adventures and misadventures in both beekeeping and business. Learn how storytelling has shaped her success and how you can use it drive yours.

Stuart Anderson*Beekeepers as Environmental Advocates*

Stu Anderson, a second-generation beekeeper from New South Wales, Australia, is co-inventor of the revolutionary honey extraction system, the Flow® Frame. This invention was inspired by Stuart's son Cedar who said; "There must be a better way to get honey from a beehive". Together they took on what became a ten-year journey of designing and testing. When they proved they could gently harvest honey without opening the hive, they then brought it to market via one of the most

successful crowdfunding campaigns in history.



Since its launch in 2015, the Flow Hive has inspired tens of thousands of new beekeepers around the world with over 65,000 Flow Hives shipped to 130 countries. Stu is pleased that Flow-based beekeeping is encouraging people to have a stronger connection with their environment.

Tune into the seasons, and tune into this talk for inspiration as Stu shares stories about the important role beekeepers play as environmental advocates, from supporting a healthy environment for pollinators, to the success of using beekeeping as a calming experience, helping to grow healthy beekeeping clubs, the benefits of generosity, to finding your own innovation, and becoming a better beekeeper.

Dr Julia Grassl*Are drones the missing link in colony losses?*

Declines in native insect pollinator populations and substantial losses in managed honey bees have been reported worldwide and become a widespread concern. Several causes have been investigated, such as honey bee genet-

ics, parasites & pathogens, exposure to agricultural pesticides, habitat loss and/or climate change. More recently, a combination of potential factors have been studied as possible causes of declining pollinator health.



Dr Amy-Marie Gilpin

The effect of climate change on pollination and pollinators and implications for beekeepers

Here we focussed on the involvement of drones in honey bee losses. Pesticide as well as Nosema infections affect drones differently than workers and the combinations of these stressors have devastating effects on drone survival. This does not only reduce the reproductive success of individual colonies, but can also impact gene flow and genetic diversity at the population level, which are both known as key components of honey bee health.

Professor Ben Oldroyd

Bee mating biology: Where, when and why so often?

Ben will discuss the timing of mating flights, the characteristics of Drone Congregation Areas, how we can use (DCAs) to assess the density of colonies at landscape scale. What's going on in north Queensland with interspecific matings between the Asian honey bee and the European honey bee. He'll also be exploring why queens mate so often, and whether the queens available for sale in Australia are adequately mated.



Amy will discuss what effects of climate change we are likely to see and what this mean in terms of changes in weather patterns such as increases in temperature and shifts in rainfall. How these climatic changes will affect plants such as changes in timing of flowering, duration of flowering, etc. and how this can have flow on effects on pollinators. Covering mismatches in pollinators and pollination to an

Australian context and showcase her research in this area. How this could affect bees and the beekeeping industry in regards to important floral resources such as eucalypts and other important weed species such as clover as well as the direct consequences on honeybees.

<https://vicbeeclubs.com.au>

2019 Club Honey Competition



By Vanessa Kwiatkowski

A great turn out, there were some delicious tasting honey entries. Some had hints of mint, citrus, anise, caramel to name only a few. There was a large proportion of honey in the medium category, some brilliant poly floral honey harvest from around the suburbs, with the trifecta taken out by John Treloar in the Medium Category with his hives around the SE suburbs.

Gratitude to Helmut Huber, Cameron Smith & David Moyle for their tasting efforts to get through the 47 entries we received. Thanks to the steward Nicole Owens who helped me a bunch by chipping in to get density scores judged in time. Cheers to Mat Lumalasi for making a new and improved polariscope. There is no hiding anything with the polarised lenses! Even tiny hairs can be picked up.

We had some lovely baked goods for the judges to taste. Bev Drummond really impressed the chefs with her Honey, Banana & Apricot loaf. Jennifer McInnes really gave Bev some hot baking competition! Those of you who went to the Christmas party would have

already sampled her deliciously buttery shortbread.

Young Samuel Davies took some great photos and dad Paul had one of the most perfect frames of honeycomb which we all wished we had our bees make every time.

Categories:

- Light Honey:** 1st John Treloar
2nd Brett Campbell
3rd Mike Hall
- Medium Honey:** Trifecta win for John Treloar
- Dark Honey:** Family win to:
1st Dianna Kefaloukos
2nd Dianna Kefaloukos
3rd Suzelle Kefaloukos
- Creamed Honey:** 1st Jorg Kemper
2nd Jennifer McInnes
- Comb Honey:** 1st Paul Davies
2nd Jorg Kemper
- Photo:** 1st Samuel Davies
2nd Samuel Davies
- Baked Goods:** 1st Bev Drummond
2nd Jennifer McInnes
3rd Jennifer McInnes
- Wax & Candles:** 1st Vanessa Kwiatkowski



Notre Dame cathedral's rooftop bees and hives survive fire



By Gabriella Marchant, ABC News.

French beekeepers are declaring a minor "miracle" after a rooftop colony of the insects was found to have survived the Notre Dame cathedral inferno.

The fire in the central Paris cathedral blazed for several hours on Tuesday, damaging the roof and causing the spire to collapse.

Following the fire, there were concerns that a colony of bees had perished in the inferno, despite drone photos appearing to show intact beehives on the cathedral's roof.

The hives have been on the roof since 2013 as part of a Parisian biodiversity project that placed bee colonies around the city, in parks and on iconic landmarks.



French urban apiculture company Beeopic, which maintains the hives, has confirmed the insects' survival on its Instagram page, accompanied by the message: #miracle.

"Notre Dame's bees are still alive!" the post buzzed.

Earlier, the company expressed cautious optimism about the bees' fate.

"An ounce of hope! The pictures taken by different drones show that the three hives are still in place ... and obviously intact!" a translation of the post said.

Notre Dame beekeeper Nicolas Géant described the fire as a "great sadness".

"There are about 60,000 bees per hive, and we have three of them," he said.

"There has been a great relationship between church and bees for centuries.

"Many churchmen influenced modern beekeeping like Brother Adam of Buckfast Abbey in England."



Notre Dame beekeeper Nicolas Géant at another hive site in Paris (Supplied: Beeopic)

Notre Dame's official website said the hives were part of push to support the local environment.

"Their role is indispensable in nature. The presence of bees is a sign of the good health of our environment and their preservation is also saving the planet," a translation said.

Bees may have hidden in hives
French apiarist Vanessa Hoo (aka Mademoiselle Bee), who lives in Adelaide, has been keenly following the project from afar.

"If it was very cold that day, maybe they decided to stay inside of the hive," she said.

"At a fire in Victoria during summer, the

house burned down, and the hive itself survived.

"You could see the clear lines of the ashes all around it, and the bees survived. "The bees were there, and the flames would have been 50 centimetres away." However, she said prolonged heat often impacted hives as the wax softened. "It really all depends on the hive and the colony, and how strong they are, and the environment they were in," she said.

Back to basics

Winter Management

By John Treloar

Hopefully by now you've packed down your hives and ensured they are well fed to survive winter. While a worker bee lives for about 6 weeks in spring and summer, winter bees have higher levels of vitellogenin deposited in their fat bodies so they can survive for months.

Honey bees do not hibernate over winter but cluster to keep warm. It is important during winter not to break this cluster or brood may die. Hives in most areas around Australia will have some brood throughout winter and bees will continue to fly on most days. You shouldn't need to break the propolis seal and go into the hive until a warm, sunny, calm day in August.

'Hefting' a hive (carefully lifting the handle of the lower box at the back of the hive, taking its weight) is a good way to get an idea of how the honey stores are going without having to open the hive or disturb the bees. It's a useful skill for new beekeepers to develop what 'heavy' or 'light' feels like and this only comes with practice.

Take the opportunity now, while beekeeping is quiet, to assemble and maintain equipment for the coming season. All beekeepers should have some spare equipment on hand to have a swarm or perform a split (for increase or to prevent swarming). A wooden or polystyrene nucleus hive ('nuc') is also a useful resource to have for the same purpose. As it is better insulated and can maintain a colony for longer than a corflute nuc.

After a couple of years of beekeeping, when frames of old, dark brood comb develop, several of these frames from each hive should be refreshed or replaced every year. Old combs can harbour pests and diseases.

As each new bee pupates and moults, the cocoons are left behind, embedded in the wax walls, making the cells progressively smaller. These cells actually produce smaller adult bees! I also like to redo poorly drawn frames and frames of 'drone comb'.



Old comb can be carefully cut out with a knife. With care you won't break or stretch the wire (be particularly careful with stainless steel wire).



A crimping tool does an excellent job of tightening loose wire. Another option is to pull the wire to one side on the side bar and nail it to tension it.

If you wax in your foundation into the top bar, a frame cleaning tool comes in handy, but an old screwdriver will do the job.

Old comb can be melted down, cleaned and reused.

Winter is a good time to catch up on reading, find a beekeeping podcast or try your hand at making beeswax wraps. What are your aims for the coming season - Raise your own queen? Make a split?

Flora, May 2019

By Mat Lumalasi

Did anyone get onto the **Grey Box** this season?
(*Eucalyptus macrocarpa*) (à la, Littlefinger, Game of Thrones).

Beekeepers are reporting some areas had extensive and abundant flowering of 2 months and huge yields. Well done if you were lucky to be in one of these areas.

Commercial operators are heard to be moving bees to the Mallee district of the state for Wintering with the **turnip weed** and **Blue Mallee (*Eucalyptus polybractea*)** to keep bees built up until almond pollination starts.

South of the dividing range we expect to see less eucalypt flowering until late Winter/Early Spring.

Gorse (*Ulex europaeus*) often acknowledged as an invasive weed and a pest is expected to start flowering soon and can flower all the way through until October in some places. Beekeepers love Gorse for its pollen production and the ability to breed colonies, describing it as incredibly important.



Gorse is a prickly, perennial, evergreen legume which, if left undisturbed, will grow to a height of more than 3 m. It produces deep and extensive roots. All its stems and leaves are prickly, ending in a sharp spine. The plant produces huge numbers of brown to black seeds in grey hairy pods, each pod holding three or four seeds. The seeds have a hard, water-resistant coating which allows them to remain dormant in the soil for up to 30 years.

Coastal Banksia (*Banksia integrifolia*)

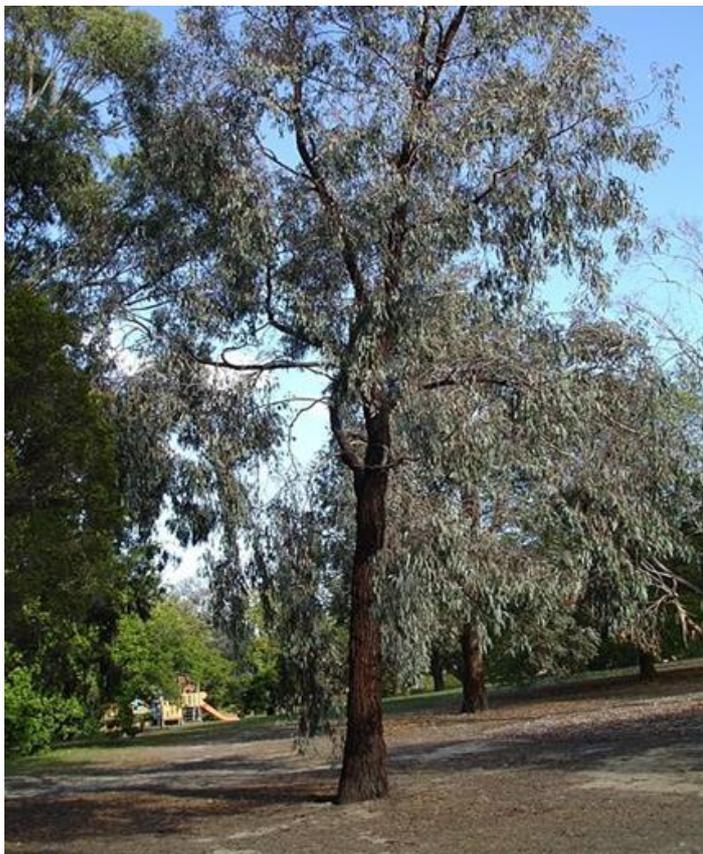
A hardy and versatile garden plant, *B. integrifolia* is widely planted in Australian gardens. It is a popular choice for parks and streetscapes, and has been used for bush revegetation and stabilisation of dunes.



Also noted is to keep an eye out for Ironbark in various locations.

Red Ironbark (*Eucalyptus sideroxy-lon* subsp. *Rosea*)

The bark of this tree is deep brown to black, hard, and furrowed, which is typical of Ironbark's. This particular form has red flowers. It's a medium to large tree not suited to small gardens.



Happy nectar hunting.

In the hive

By Mat Lumalasi, President

Did I just hear 5°C on the radio? Yes, I did.

We wondered and speculated about what was going to happen with the season and I recall even me saying that we are expecting a long, extended summer. Wishful thinking.

A lack of rainfall and ground moisture showed us a tougher than usual season with less nectar and pollen available to bees and production down on last year leaving us with the tough decisions about harvesting honey. If you took honey, did you leave enough for the bees? It is common to take in the middle of the season without giving a thought to the ability to refill stores before the end of the season, sometimes good seasons even enabling us to have a small harvest at the end during pack down.

We generally run a rule that was told to us in our early days of beekeeping,

“The bees own the bottom two boxes”, meaning that we only take from the third box or above, ensuring there is always enough for the colony below.

So, when we see a tough season and we see bees not building up as usual and not getting out of one or two boxes what do we do? Only take a little bit of honey and treat them like a small hive? Leave them to themselves and wait for next season? Move them to somewhere more productive?

This is just one of the questions that beekeepers are faced with every time we open our hives and it's up to the individual beekeeper to decide how to keep their bees. Ultimately our goal is to keep the bees healthy and happy (and alive) and generally if we do well, we are rewarded with a share of the honey that they hopefully make.

If you are in a position where you need to feed, you should have been doing so already. To ensure the feeding process is successful, you need some mild days for the bees to concentrate the syrup further for storage. Feeding too late in the season can mean that the

syrup can ferment and cause harm to the bees.

Dry feeding, the process of pouring 1-2 kg of DRY white sugar on top of the hive mat is an emergency option for your bees to keep them alive and not a recommended management strategy but may be useful if it saves the hive.

By now, most of us should have packed our hives down and are thinking about somewhere tropical to wait out Winter.

Discovery of RNA transfer through royal jelly could aid development of honey bee vaccines

May 2, 2019, University of Cambridge



An artistic view of transmissible RNA in honey bees. Honey bees share bioactive RNA between individuals and across generations through secretion and ingestion of worker and royal jellies. Credit: Claudia Flandoli

Researchers have discovered that honey bees are able to share immunity with other bees and to their offspring in a hive by transmitting RNA 'vaccines' through royal jelly and worker jelly. The jelly is the bee equivalent of mother's milk: a secretion used to provide nutrition to worker and queen bee larvae.

The findings suggest new ways to protect bees against viruses and the deadly Varroa mite that have been responsible for the recent dramatic decline in honey bee populations. Since around one third of the human diet globally is dependent on honey bee pollination, we need solutions urgently to help maintain flourishing bee colonies, for our food security and sustainability.

Dr. Eyal Maori from the Wellcome Trust/Cancer Research UK Gurdon Institute, University of Cambridge, and his collaborators in Israel and the USA had been trialling a new type of antiviral therapy for bees when they got a hint that the bees were able to transmit biologically-active RNA molecules between colony members. The scientists today publish the evidence for such a bee-to-bee RNA transfer phenomenon in the journal *Cell Reports*.

These transmissible RNA molecules are produced by the honey bee's genes and by disease agents such as viruses. Unlike other RNA in the body, these RNA molecules do not code for protein. Instead, they play a direct role in immunity, gene regulation and other biological mechanisms.

In previous studies, Dr. Maori and colleagues fed bees with RNA fragments that included a segment of an RNA virus. They found that similar to how vaccines work, the dietary RNA activated an immune response that prevented disease and death when hives were later exposed to the live virus. Intriguingly, the colony maintained a healthy performance for several months after treatment had finished, suggesting that it was still immune to infection—even though the original treated bees would have died off and been replaced by new generations. This suggested that the immunising RNA fragments were being passed among colony members as well as across generations.

In the study released today, the researchers demonstrated that dietary RNA is taken up from the ingestion system into the bee's circulatory fluid and spread to the jelly-secreting glands. The dietary RNA is then secreted with the jelly and taken-up by larvae fed on the jelly.

While scientists have previously shown in plants and animals that movement of RNA between cells within an organism is possible, these findings identify a molecular mechanism for transmission of RNA molecules between organisms.

"We found that RNA spreads beyond individual honey bees, being transferred not just

between parents and their progeny, but also among individuals in the hive," says Dr. Maori.

Further experiments showed that transmissible RNA was able to activate a mechanism called 'RNA interference' to block the activity of some genes and reduce the production of certain honey bee proteins. Importantly, RNA interference is known to provide defence against viral infection in honey bees and other organisms. In other words, these RNA molecules are likely acting to immunise the bees against infections.

The researchers next analysed the worker and royal jellies and revealed diverse types of naturally occurring RNA, some derived from bee genes and some from pathogens such as fungi and infectious viruses, suggesting that over time the bees had developed—and shared—immunity to these pathogens.

"Our findings demonstrate that bees share 'transmissible RNA' among members of the colony, likely as a way of sharing immunity among members and generations in the hive and to enable other bees to adapt to different environmental conditions," commented Dr. Maori.

In a second study, published last month in the journal *Molecular Cell*, Dr. Maori, working with Professor Eric Miska's lab at the Gurdon Institute, investigated how RNA, which is an unstable molecule, is transferred through the jelly diet. They found that an abundant jelly ingredient, Major Royal Jelly Protein-3 (MRJP-3), binds the RNA to form granules that concentrate and protect it from environmental damage. This is the first identification of RNA granules with functions outside cells and organisms.

Dr. Maori added: "Honey bees have evolved a type of 'glue' that binds RNA into granules, making it more stable and so able to be shared with other bees. If we can harness this technology, we might be able to use it to develop new 'vaccines' that could be used in agricultural settings, in particular to help immunise bees against the devastating losses being suffered by their colonies.

"It is possible that this honey bee protein may

even have applications, too, for new vaccines and medicines for humans."

More information: Eyal Maori et al, A Transmissible RNA Pathway in Honey Bees, *Cell Reports* (2019). DOI: 10.1016/j.celrep.2019.04.073

Eyal Maori et al. A Secreted RNA Binding Protein Forms RNA-Stabilizing Granules in the Honeybee Royal Jelly, *Molecular Cell* (2019). DOI: 10.1016/j.molcel.2019.03.010

Consultation Outcomes



Agriculture Victoria

Department of Jobs, Precincts and Regions

In February & March 2019, Agriculture Victoria consulted on proposed key changes to the Livestock Disease Control Regulations 2017 to adopt the Australian Honey Bee Industry Biosecurity Code of Practice.

They received 161 submissions, 93% from individuals. There were two common concerns expressed throughout the submissions, which have been addressed by modifying the amendment legislation.

Concern was expressed with:

1. The proposal for hives to have only one entrance per colony. This requirement was aimed at increasing a bee colony's ability to guard the hive to prevent robbing and the potential spread of diseases. In consideration of hives produced and sold with varying designs and entrances, it was accepted that this requirement would be too burdensome to comply with. Agriculture Victoria agreed to revise this proposed amendment to allow multiple entrances to hives.

2. The proposed wording that "a beekeeper must not allow their hive to become infected with pests or disease or attract robber bees".

This requirement has been re-drafted to contain the same intent but make it clearer and easier to comply with.

Once the new Regulations are finalised, a link to the updated Regulations will be distributed to industry and other stakeholders and made available on the Agriculture Victoria website. This is expected to occur in late May 2019. The extension of the consultation period as requested by industry and seeking approval of the final wording by Parliamentary Counsel has revised expected timelines.

Communications materials will be provided to affected stakeholders, through various fora and means, to coincide with the commencement of the amendments. If you require additional information, please contact Agriculture Victoria

via honeybee.biosecurity@ecodev.vic.gov.au.

Beekeeping Biosecurity News

Updating your details with the Beekeeper Registrar including cancelling your registration as a beekeeper.

It is vitally important to keep your details as a beekeeper up-to-date with Agriculture Victoria including providing an email address, so that you can receive biosecurity news and be contacted in the event of an exotic disease incursion. You must also let us know if you no longer keep bees and wish to be removed from our beekeeper database.

To update your details or cancel your registration as a beekeeper, please contact the Beekeeper Registrar by;

Phone: 1800 356 761, fax: 03 5430 4505,

Email: nlis@ecodev.vic.gov.au or by

Mail: PO Box 2500,
Bendigo Delivery Centre,
Victoria, 3554

In my apiary

By John Treloar

Melbourne has just experienced the second driest April on record with just 7mm of rain and this has impacted the autumn nectar flow in my area. But beekeeping is local and I know of other beekeepers in the state that have had an unexpected flood of nectar (probably grey box) filling up honey supers when they were looking to pack down hives.

My hives steadily lost weight from late January through to mid April but in the last 4 weeks this has turned around somewhat and weights have been stable. I'm lucky to have some banksia, iron bark and *Corymbia ficifolia* flowering near my apiary.

Lemon scented gum (*Corymbia citriodora*) is budding up and showing good promise. Sedum, rosemary and some lavenders should also be flowering soon, providing forage for a couple of months.

I was contemplating leaving some of my hives in 3 boxes over winter, as I've heard some do. However, after seeing the reduced bee numbers and unprotected comb I've reduced them to 2 deeps (with brood in the bottom box and honey filling the upper box).

Be aware that sometimes it is the bottom box of a 3 box hive that is empty, ready for you to take it away for pack down. In other hives the brood was in the bottom box, honey in the second and very little in the top honey super.

I've never had an issue with mice in my hives so don't put mouse guards on the entrances. It's good to see them tucked up, ready to face another winter. I won't open them again till that next fine day in August. Just watching them come and go at the entrance, seeing pollen coming in and hefting the hive will tell me all I need to know. ■

Disclaimer: Material and information published in any publication, training course, leaflet or web site of the Beekeepers Club Inc, Doncaster is produced for general information only. Although published in good faith, the Club and/or any officer of the club will not be liable for any loss suffered by any person for action taken on the basis of such information.