BEEBIZ JUNE 2020

The Newsletter of the Northern Rivers Amateur Beekeeping Association Inc.

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President Report

Full merrily the humble-bee doth sing,

Till he hath lost his honey and his sting.

William Shakespeare (1602)

Hi Folks!
As isolation eases, it is time to get out and about to do some bee work, but the weather has not been very cooperative. When I came to the North Coast 30 odd years ago, one could bet on the days being warm and sunny and nights being cool through May-June-July. Now we get periods of cloud and drizzle with the odd fine day in between. Then, bees not only survived the winter but thrived. Now days, if they have not got a good store of honey they are likely to perish.
As if there are not enough problems in the bee industry, the media have reported yet another virus that is detrimental to honey bees – "Chronic Bee Paralysis Virus" or CBPV. Present in 39 countries- I can't wait! Still waiting for the green light for our next field day. July looks good if Dr. Norman Swan's warning of a second wave of COVID -19 doesn't eventuate . What else can go wrong?
KEEP CALM AND CARRY ON.

Cheers Kevin Virgen

Secretary Report

Progress in managing the COVID -19 outbreak has been exceptionally good. However, the executive have decided that we will not hold any meetings until the coast is clear. Older people are being protected, even cossetted, throughout the community, and we should do the same. Much of the volunteering labour before COVID-19 came from the older members of the community as they had the time. But now, most organisations will not accept volunteers over a certain age such as 65, just in case the volunteers are put in danger eg older blood donors have been told not to donate, older drivers are not needed. The younger people have to take up the volunteering slack.
Helping other beekeepers, particularly beginners, does not involve a large gathering, and members are reminded that is what the club is for. So if anyone needs help or advice, contact one of the committee members listed at the start of the newsletter. That is why the contact details are given.
Perhaps a little good news to finish off. First, a very poor response was received to the Steritech trip invitation, so maybe this disease will be less of a problem in future. Second, with the help of John Bull, a small two frame manual stainless steel extractor owned by the club has been modified to improve its operation, and is available to loan out to members.
Brian Window

Flowering Report

I will kick off by reminding people I don't get about looking around for prospects as I used to do. Although I still talk to some bods who are more active. There is some Fireweed showing in places that had been hard grazed. Fireweed as with many plants needs short or no grass to get away as the seed is to small to have enough energy to get the first leaves up to photosynthesise. The patches I have seen are fairly small, as the rain got things moving fairly quickly so there is not enough short cover for a big flowering. Whilst not particularly good pollen, it is handy at this time of year.

No matter though as the Red gum is starting to show out nicely between Bentley and Lismore and beyond. Grey Ironbark has started at least around my Emoh Ruo. It should on normal expectations be flowering around Bungawalbin and such places as well. But as this is Australia, the flora does not obey regular rules, so one would need to have a good look-with binoculars! Remember beekeepers need three tools- hive tool, smoker (that stays alight) and a pair of binoculars.

As I have said many times Red Gum and Grey Ironbark make a great pair. Red Gum has great pollen and seldom any nectar, and Grey Ironbark has no pollen but is a major honey tree. Both these trees are quite variable as to flowering time, starting any time from May until August. They both last about three months, tend to grow together, and are wide spread.

For whatever reason the Red Soil country, once known as Scrub Country, has been hard on bees recently, giving some pollen but very little to no nectar. Hopefully people living or having bees on that country will have left enough stores. The rule of thumb is to leave one super of honey on at all times.

Bees near or on the heath can expect to start getting some useful pollen and nectar as the wonderful winter flowering flora starts to do its thing.
Geoff Manning

Banksia Integrifolia or Coast Banksia

Weather Forecasting

Mr. J. A. Payne, author of Bee-keeper's Guide, says :

I am not aware that bees have eyer been placed in the list of those creatures which are said to foretell the changes of the weather, as many animals of the feathered and insect tribes are; but in my opinion they stand foremost of the weather-wise. A nice observer, by looking at them in the early morning, during the working season, will very soon be able to form an opinion as to what the day will be, and that almost to a certainty; for they will sometimes appear sluggish and inactive, although the morning is very bright, and showing every appearance for a fine day; but the sun soon becomes clouded, and the rain follows. And again, the morning may be dull and cloudy, and sometimes rain may be falling, when they may be observed going out in considerable numbers; and as sure as this is seen, the day becomes bright and fair.

Cottage Gardener and Country Gentleman's Companion, Volume 2 (1849)

(Geoff Comment --Or it could be that there is, or is not a flow on.)
From Geoff Manning

Finding Queens Part Three

This covers the two techniques foreshadowed earlier, namely Straining and Shake out (Last Resort).
Both these techniques involve shaking all the bees off frames into a box or on the ground. Important points to note when shaking are

- Shaking frames of bees is a major disturbance for a hive, and can allow SHB to lay eggs on brood while unprotected. Keep all brood together as much as possible.
- If the bees are on a honey flow, the brood box will have a lot of nectar in spare cells, and shaking could drown quite a lot of bees. Maybe use a brush then.
- When shaking bees on to the ground, care must be taken to make sure that the bees are not killed by excess temperatures. Bee brood nests are maintained at about 35C, and 45C (hot shower) is enough to kill bees; the bare ground in New South Wales in Summer would be far above that. So if shaking on to bare ground or even grass, choose a shady spot or use a cloth or tarpaulin.

Straining

Straining uses an excluder to sieve the bees, selecting out the drones and the queen from the workers. There are a few variations. This one uses an excluder on top of the hive, with the bees shaken on to the excluder.

Top straining

- Follow the searching procedure until all frames have been gone through once and are in the spare box. Search the brood box and the base.
- A plain excluder can be used placed on top of a super, but some beekeepers keep a straining rig of an excluder screwed to the bottom of a half or full box; some articles recommend lining the box with Alfoil, and spraying the sides with cooking oil to discourage the bees from climbing out. If using a full width strainer, it would usually be placed on top of a honey super, and the worker bees go into this super.

Picture Top Strainer from John Bull

- Some beekeepers have straining rig of a half width box and excluder, and then the strainer rig can be placed on top of the old brood box, and the shaken frames put back into the old brood box. (see picture; here the sides of the strainer box are only 50 mm high). The following assumes that this strainer is being used..
- Replace the base and empty brood box in the original position, and place the strainer box on top at one side.
- Shake a frame of brood into the strainer box after looking for the queen. Put the frame in the brood box under the strainer.
- Smoke the bees gently so they go through the excluder down into the brood box. Look for the queen on the excluder.
- Repeat for the other brood frames one at a time, sliding the strainer box over where required.
- Remove the queen when found and reform the hive, introducing the new queen.

Bottom Straining

This uses an excluder on the base under the empty brood box, with the bees shaken on to a cloth or board in front of the hive. Some hive designs use small risers eg 8 mm, leaving little room between the excluder and the base. Hive designs with large risers eg 25 mm may need the wax lumps on the bottom of the frames removed.

- Follow the searching procedure until all frames have been gone through once and are in the spare box. Search the brood box and the base.
- With the base back in the original position, put an excluder on top and put the empty brood box on top of that.
- If the hive is on a stand, some form of ramp will be required; luckily, bees prefer to go up rather than down. Spread out a cloth or tarpaulin in front of the hive, set up the ramp from the cloth to the entrance.
- Remove the frames one at a time from the spare box, search for the queen, and shake the bees on to the cloth. Try to get some of the bees in the first shake landing on the doorstep so that the fanning out of pheronomes commences.
- The bees will march into the hive, and the queen may be seen in the advancing horde.
- If not picked up earlier, the queen will be found under the excluder when all the bees are in.

Another variation on this is to shake the bees off the brood frames into a box rather than on the ground. It is good for hives on stands.

Bottom Straining with Spare Box

- Follow the searching procedure until all frames have been gone through once and are in the spare box. Search the brood box and the base.
- Half fill the empty brood box with spare combs, and shake all the bees off the brood frames into the gap. Replace the brood frames in the spare box after shaking.
- When all the brood frames are shaken and back in the spare box, put an excluder on top of the brood box, and put the box of brood frames on top.
- The bees will move up through the excluder to cover the brood, and the queen should be found on the frames in the bottom box.

Shake Out (Last Resort)

This is an extremely useful procedure which can be used in a lot of situations eg beekeeper cannot find queen and new queen must go in, small queens, non-laying queens, uncertain queen status and even laying workers. It relies on the queen or laying workers not being able to find the way back to the hive (not able to fly well, and not having the hive location imprinted by regular flights). It will arouse the apiary, as there will be strange bees trying to get into the wrong hive.

- Follow the searching procedure until all frames have been gone through once and are in the spare box.
- Place a cloth on the ground preferably in the shade about 5m away, carry the spare brood box with all the brood frames to near the cloth.
- Remove the frames one at a time from the spare box, search for the queen, and shake the bees on to the cloth.
- Return the frames to the original brood box on the original site. Dump any bees left in the spare box on the cloth

- The queen may be found on the cloth later if required.
- Re-queen the hive.

General Comments

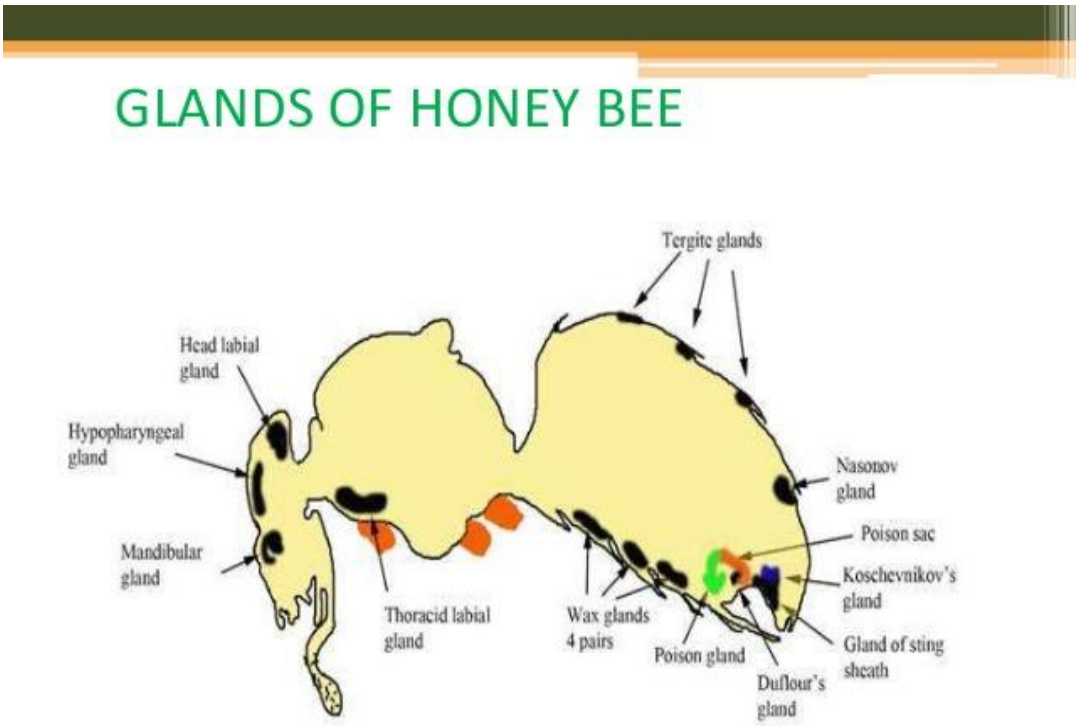
All distances listed are somewhat arbitrary. Some say that shakeout works by creating confusion and can be done near the hive.
Much of this comes from South Gippsland Beekeepers

From the Hives June 2020

The good flowering of tea tree in late May, as well as a flowering of grey ironbark near the apiary at Coraki has given the hives good stores, so much so that some honey has been extracted. More will be available later when the hives are reduced to two boxes ready to move on to the red soil country.
Winter is when gear is being prepared for Spring. Frames are being cleaned, wired, and foundation inserted. Boxes are being touched up and painted. Experiments have shown that the use of colours and patterns on the front of brood boxes of hives does help returning queens find the correct hive in an apiary after mating. Though limited, experience with this apiary supports that belief.
Brian

Bee Communications via Chemicals

Modern instrumentation has made it possible to sample and identify small amounts of chemical substances, as well as to measure the responses of olfactory sense organs. Nevertheless, chemical communication in honeybees remains largely unexplored. About 20 pheromones have been identified, but a similar number probably remain to be discovered. The effects of the pheromones on the receiving bees vary from strong physiological responses to minor modifications of behavior.



Glands of honey bee. Tarsal glands on feet not shown

Most pheromones are volatile, but the main queen pheromones are probably transported from bee to bee during antennal contacts. Examples of volatile pheromones are the orientation odors from the Nasonov gland (at the tip of the abdomen), which workers disperse by fanning when they attract bees to the entrance of a new nest, during swarming, and when marking a source of water (which itself is relatively odorless).

Nasonov gland (white) exposed at tip of abdomen of fanning bee

Another example is the alarm odors released from the sting, which remains in the skin when mammals are stung. These substances alert the workers to danger, release the attack reaction, and guide the workers to the previously stung spot (when stung, it is therefore wise for mammals, including humans, to remove the sting as soon as possible).

The pheromones produced by the mandibular glands of queens inhibit ovary development in workers (who are females), inhibit the rearing of new queens (and thus swarming), and also seem to calm the workers in the colony and improve their cooperation. Some of these effects are also caused by the footprint pheromone from the queen's tarsal glands. A release of inhibition occurs after the death of the queen, and the workers begin to treat some young larvae as queen larvae. After some weeks without the queen, some of the workers begin to lay eggs (which develop into drones because the workers have not mated). These 'drone mothers' may produce so much queen pheromone that the doomed colony returns to almost normal behavior before the last workers die.

Bee antennae, eyes and part of mouth

In passing, it should be mentioned that the sense of olfaction is located in the pore plates on the antennae. The antennae are mobile and often far apart, and bees are therefore able to detect the direction to sources of odor by comparing the responses from the two antennae.

Text from *A. Michelsen, in Encyclopedia of Neuroscience, 2009*

(I think the sense of smell through these small antennae is amazing. cf dog or cow Ed.)

Services Directory

Summary of available products and services

NRABA Members
Paul Davey (hive care)(Mullumbimby) 0491 608 272
David Fairhall (queen cells, mated queens, nuclei) (Lismore) 0444 513 771
Leland Eglington (Steel beehive stands) (Alstonville) 0455 555 136
Brian Window (nuclei) (Lismore) 0466 790 736
Ross Wood (mated queens, nuclei)(Grafton) 0421 817 710

Not NRABA Members
Stephen Fowler (nuclei, hives, all sorts of bee equipment, buys wax) (Alstonville) 0418 412 621
Merv McDonald (nuclei, hives, hive care)(Alstonville) 0439 166 016
Rob Stone (mated queens, nuclei)(Casino) 0487 598 105

Corrections and additions welcome

June Field Day June 28th

The field days are cancelled until further notice.