



Beetalk

Newsletter of The Blackburn and East Lancashire Branch of
The Lancashire & North West Beekeepers Association

September 2013

www.blackburnbeekeepers.com Registered Charity

COMMITTEE MEMBERS CONTACT DETAILS for 2013 SEASON

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MEMBERS SERVICES

Bayvoral - Apiguard - Oxalic Acid -
Thymol - Fumidi'B'

These Chemicals for treating bees can be obtained from:
David Bush Phone 01200 - 428152
Dave will have them available at beekeeper's meetings.

LIBRARY

There is an extensive range of books on all
aspects of beekeeping that can be borrowed from the
Association library.

Please contact

Brian Jackson on 01535 634503

MEMBERSHIP

REGISTERED MEMBER. Subscription for the 2013 season will be £30.00

PARTNER MEMBER. This is for partners of registered members living in the same household wishing to keep bees and includes full insurance cover. However they will not receive their own copy of BBKA news. Subscription will be £20.00

COUNTRY MEMBER. This is for people who do not keep bees, but wish to receive BBKA news and attend branch meetings etc. This class of member does not include any insurance cover. Subscription will be £12.00

IMPORTANT INSURANCE NOTICE

Under the new constitution, prompt payment is essential. Basically, payment will be required by the 31st December each year as insurance is now based on the current years membership. New and lapsed members insurance cover will not start until six weeks after paying their subscription.
For insurance purposes subs will need to be promptly, otherwise you will not have third party insurance
SUBS SHOULD BE PAID TO PHILIP AINSWORTH HON. TREASURER Phone 07713161480
Address ::::: Phil Ainsworth Riverside Cottage Potters :Lane Samlesbury Preston PR5 0UE

Association Swarm Catchers.
For the 2013 season

A small charge is made to collect swarms to cover expenses which is up to the discretion of the individual collector.

BLACKBURN, DARWEN, ACCRINGTON , MELLOR, PRESTON and
ROSSENDALE
AREAS

Karen Ramsbottom.
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CLITHEROE AND SURROUNDING AREAS

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BURNLEY, NELSON AND SURROUNDING AREAS

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Please feel free to ring any of the above in your area and they will do their best to sort out the problem.

Swarm collectors will not come out to Bumble Bees and Wasps
problems

Future Branch Meetings

October Meeting. **6th October 2013. Time to be confirmed**

Samlesbury Hall, Preston New Road, Samlesbury, PR5 0UP

Association Honey Show. Speaker ::::Yet to be arranged.

November Meeting. **Sunday November 17th 2013 @2pm**

**Salmsbury War Memorial Hall.Cuerdale Lane
Samlesbury, Preston PR5 0XD Annual General Meeting**

We will, where possible open hives so bring along your protective clothing just in case.

DISCLAIMER

The views expressed in any of the articles in 'Bee Talk' represent the personal opinions of the Contributors and in no way should they be regarded as the official opinions or views of the 'Lancashire & North West Beekeepers Association' nor of our local Branch of this association 'The Blackburn & East Lancashire Branch'

For Sale Protective Clothing

- 1.Cotton Bee Protective Boiler Suits all sizes a bargain at £20 each
- 2.Net Veils that need to be fitted onto a hat at £3 each
3. Box of thin but very strong gloves at £3 for a box of 50 pairs

**These are available by ringing Bob Fulton on
01254-772780**

3. Available from Early March 2012 Fitted Veil at £15.
- All in all if you buy the protective Suit, Veil and Gloves you will have yourself fully protected at a cost of £35 compared to something like £85 to £100 from other suppliers.

Sugar and Candy

20 kilo Buckets at £12

10 Kilo Buckets at £6

1 Kilo Bags at 60p

Candy Sticks at 30p per stick

These are available by ringing David Bush on

01200-428152

UK Honey Labelling Regulations

Below is our simple advice on honey labelling. For more detailed information - go to the website of the Food Standards Agency. www.food.gov.uk

- 1. The Word **HONEY** is required.*
 - 2. The weight must be on the label - we will ensure it is the legal size and format.*
 - 3. You can specify the area where the honey is produced. For example, Lincolnshire, Forest of Dean, Scottish Borders.*
 - 4. You can specify the type of honey. For example, Heather, Borage. The honey must be at least 75% of that particular type.*
 - 5. If you are selling the honey, you must have your name and address on the label. It does not need to be complete but you should be able to be found from the information.*
 - 6. If you are selling the honey through a third party, you must have a lot number.*
 - 7. New for 2003 You must have a best before date on the jar. We suggest 2-5 years from now.*
 - 8. New for 2003 You must have a country of origin on the jar. For example - Produce of England, Product of Scotland, Harvested in Wales. Adding the country to the end of your address is not acceptable.*
- E H Thorne (Beehives) Ltd disclaims all responsibility for all consequences of any person acting on, or refraining from acting in reliance on, information contained above.*
- From EH Thorne's online catalogue 2010 - other sources are available*



What's in the Honey Pot

A few snippets of news and information that may be of use to you

Editorial



Our membership secretary reports that several members' email addresses no longer work and emails are bounced straight back at him by the "mailer-daemon". If you've been feeling neglected by your Association lately, please check that we have your correct email address. You can rectify this problem, if it applies to you, by emailing

Hi all.

After the wettest summer and the longest winter came the hottest summer. Beekeeping just gets more challenging! I'm sure many of you are wishing you still had bees so they could be making honey for you in the hot weather. It's not quite that simple - if you still have bees do you go for honey production or for replacing lost stocks? There's not been many swarms around this year, at least not in May and June. The rhyme that includes '*a swarm in July isn't worth a fly*' is perhaps to be ignored this year. ANY honey bees, especially with a queen, are worth money this year. The hot weather means they may produce enough honey to get themselves through the winter, but little excess.

Lots of our members lost bees over the winter and it may be worth noting that all the feeding in the world will most certainly help but will not always solve the problem of losses. Why you may ask !! What the bees need if the weather is wet or cold where the bees cannot bring in any pollen is some kind of pollen substitute, this in autumn will stimulate the queen to lay as there is no way she will lay if there is no pollen coming in to feed the young. What you then end up with going into the winter is lots of young winter bees, instead of what as happened where there have been only old bees that will die off over the winter and so cause your colony to die out. You cannot expect bees that have more or less worked themselves to death to survive and then start up in spring, it's like having a hive full of old folks starting out on a 20 year old couples life. Maybe one of the talks could be about this, as I feel it would be worthwhile.

A bit of good news. A few years ago Steve Ganner applied for a £1000 grant for the club which bought the 5 hives for Sam Hall along with 10 supers. He applied again earlier this year for £1500 to help with the training stuff and a cheque has arrived from the grant board for £1500. Phil has the cheque and will be by now in the account.

On the education side, our Education officer Janet is doing a wonderful job. Details can be found below in the article [Samlesbury Hall apiary Update](#) Great Job Janet and behalf of everyone, a big thank you.

The AGM is coming up soon and a few important vacancies need filling. The Chairman and Secretary, John and Vici are stepping down, plus some other members of the committee Thanks to all of you for taking the club through exciting times and best wishes to all of you.

Michael

Meet some of the Committee for 2013



John Zamorski (Chairman)



Brian Jackson (Vice Chairman)



Vici Winstanley (Hon Secretary)



**Phil Ainsworth
(Hon Treasurer)**



**Caroline Coughlin
(Honey Show Secretary)**



**Janet Murray
Education Officer**



Bob Fulton. Committee Member



David Bush. Committee Member



Alistair McLean. Committee Member



**Helen Howarth Committee
Member**



Juli Scott. Programme Secretary



**Michael Birt.
(Webmaster and Beetalk Editor)**

Message from the Chairman.

I write this as my final piece as Chairman of Blackburn Branch. I feel that I cannot continue because I have so many other commitments and cannot devote the time needed to carry on with the job. It is about time the Branch had some fresh ideas anyway. I have only been Chairman for a couple of years and prior to that I was Secretary, Programme Secretary and Librarian. I always gave my best in all these positions and because I can't keep this up as Chairman, I thought it best to stand down. I have told the committee that I do not want to take an active part as a committee member at the moment although I intend to help Janet on the Education front.

Hopefully the future of the Branch Apiary at Samlesbury Hall is now secure and the membership will benefit from lots of practical sessions and on site education. Please support Steve in his position as Apiary Manager. Steve works very hard to make this available to you all. The committee also work hard to ensure you can come to meetings and have a good day. Someone has to be working in the background to ensure everything runs smoothly.

I have to say I have had fantastic support from the committee in all the positions I have held with the Branch and I would like to offer my sincere thanks to them all for this. It has been a pleasure working with such a lovely bunch of people.

To finish, I would like to ask you all to step forward and help your committee. The branch will only be a success if you, the members, take an active part. I know a lot of you just come along to listen and hopefully learn, but we need your ideas and input to keep moving forward. Go on. Have a go. When I started I offered to have a go as librarian after Ken Preedy died and the Branch needed people to help out. Look where it got me!!

Thank you all for your kind support when I have been speaker and I hope you have learned something when I have spoken on a subject. I am still at the end of a telephone if you need to speak to me.

Here's to a fantastic honey crop next year.

John

Who says only one Queen to one hive?

I actually managed to get to one of my bigger hives (been struggling due to a foot operation) It is a double brood box with Queen excluder on and I put 4 supers on knowing that I may not be able to visit it for some time. My records showed that the Queen was clipped and marked. I lifted the supers off 2 at a time because of their weight. After lifting the top 2 supers off, I noticed a bee with pollen. Alarm bells. Why would a bee with pollen be strolling around between 4 supers?

I lifted a frame from one of the 2 supers left on and there was a large circle of brood. Upon further inspection I found both supers with the equivalent of 5 frames of brood. I put the Queen in the catcher and then lifted off the 3rd and 4th supers. Under the Queen excluder in the double brood boxes were the equivalent of 8 full brood frames and my clipped marked Queen.

I have my assumption as to what happened but has anyone any views on what could have led to having 2 happy queens in the 2 colonies obviously happy to use the same bottom entrance. What did I do and what would you do if you were faced with the same situation? Send your thoughts to Beetalk and in the next issue it will be printed, along with what I decided, rightly or wrongly!!! Oh, and I didn't ring John Zam up for suggestions because I'd left my phone in the car.

It's only ever happened to me once before when mother and daughter were in the hive together and I concluded that the weather had held the swarm back. Even then, I suspected that there was only one queen laying at any one time and not as in this case, 2 Queens laying with full frames of brood at all stages.

Steve Ganner.



Tell me again, how big is a swarm.

I caught her as she landed. Put her in the queen catcher and this is where they settled after 10 minutes.

GUARD & ROBBER BEES

It's nearly Autumn again.

When you are feeding your bees in the autumn, after any honey flow has ended, it is a prime time for robbing to start, so you must be on the lookout for the tell-tale signs as weaker colonies can be wiped out.

Bees fighting outside a hive is an early sign of robbing and can be confirmed by the flight of the robber bees on approach – it is nervous and erratic and in a characteristic ‘zig zag’ pattern. Guard bees will recognize this flight pattern and will be on high alert!

If you watch the entrance to the hive carefully you will observe the behaviour of the guard bees. They challenge and examine all entrants for a period of about 1-3 seconds by antennal contact, the time it takes to determine a nest mate from an intruder - the nest mate will have the same colony odour, recognizable to the guards. If an intruder it is usually mauled by the guard clamping onto a leg or a wing, and curling the abdomen into a position enabling it to sting the intruder. A fight ensues, and the robber is marked with 2 heptanone from the mandibular glands. Other guard bees

recognize the alarm and raise their abdomen and sting chamber, releasing a further alarm pheromone, isopentyl acetate that smells of bananas. The robber struggles and may escape but sometimes is stung and dies.

If the intruder has tried to enter the hive by accident, when challenged, it often offers food and begs its way into the hive.

By the way, if your sense of smell is good you will be able to smell the alarm pheromone ‘banana scent’ released by the bees, and if you smell this when examining the hive, be prepared for an attack, or close up the hive till a later date.

When a robbed colony succumbs and silent robbing ensues, the robbed colony continues to work normally, while at the same time robbers also enter and leave the hive. The only tell tale sign now is the flight of the bees returning directly to another hive. Also, robber bees leaving the robbed hive, laden, will have the rear legs forward as opposed to a bee leaving the hive on a forage flight, unladen, when the rear legs will be trailing askew. Eventually, the robbed colony will be devoid of stores, may abandon the nest or even die off.

When robbing starts in an apiary it is difficult to stop it so it is important for the beekeeper to know how to prevent it and what to do if robbing has started. Robbing is more often than not brought on by the actions of the beekeeper. This can be due to spilling sugar syrup on the floor when feeding the bees, leaving brace comb in the apiary or leaving hives open longer than is absolutely necessary. So make sure you don't do any of these things. Also, make sure every hive or nucleus is bee proof, the only way in being via the entrance. Also important, when making up nuclei to remain in the same apiary, don't feed the nuc for 4 or 5 days as any of the flying bees returning to the parent hive could recruit nest mates to return to the nuc for a feed and it could be robbed out while in this vulnerable state.

Feed your bees at dusk when flying has ceased as this will reduce any excitement and the darkness will prevent the flying bees from leaving the hive and searching for the source of food. Feed all your colonies at the same time. With the brood nest getting smaller in late summer, the colony will also be shrinking in size and there will be fewer guard bees on duty so reduce the size of the entrance hole down to about ‘four bees wide’ or 10 mm. You can do this by inserting a reduced entrance block, easily made at home, which is pushed into the hive entrance.

Steve Ganner

Some members Piccies



This is a pic of a queen from a swarm we collected from a dustbin that must of been there for a few weeks as they had made themselves right at home



From a budding Beekeeper

Pictures from a Beekeeping Fun Day at Oswaldtwistle Mills





Bee stings

I was asked by a few people at the Samlesbury Hall event day Sunday 28th why some people were affected by bee stings and others weren't. I attempted my usual layman's answer but below is a more detailed attempt;

When the bee stings, the amount of venom that actually makes it through the skin is important. The venom contains protein and other substances which cause the sharp paining sensation that lasts for about half a minute from the time of stinging. The body reacts to an invasion of any allergen (bee sting venom in this case) by producing antibodies to neutralize the invasion and remove it from circulation.

The two antibodies produced to cope with bee venom are Immunoglobulin G (IgG) and Immunoglobulin E (IgE). The IgG level in the body increases with each sting to a certain level; this antibody gives the body protection by binding or blocking the venom, but it has a relatively short "memory" and the level falls off during the inactive season- although it will gradually build up over a number of years. The other antibody, IgE, can be more troublesome when produced in the body since its reaction with bee venom results in the production of histamine. This histamine acts to isolate the poison; the tissues are flooded with a liquid buffer which causes swelling and subsequent itching. This response by the body is intended to be protective, but in certain people (perhaps about 1% of the population at large and about 5% of beekeepers-who can become sensitized to bee venom) it leads to shortage of breath, swelling of the bronchial tubes, a fall in blood pressure and a general slowing down of the body functions to stop the venom spreading; the result? the victim goes into shock.

If the IgG is present in greater concentrations than IgE, the venom is blocked and little or no swelling will result; but in people having a high IgE level, the IgG has a minimal effect and a sting will produce a large histamine reaction, i.e. allergy to bee stings. As already stated, some people have a very high IgE level or low IgG, and in others the IgE component can build up to an abnormally high level and stay there- for reasons not yet well understood; such persons will react allergically to being stung, and even individuals who were not previously allergic to bee stings may start to become so. In such circumstances chuck the idea of beekeeping in! apparently, there is a treatment available designed to increase the activity of the blocking antibody IgG. The answer is NOT to get stung.

Steve Ganner

Reusing honey jars, info in **September 2012 BBKA** magazine

According to the food standards agency

Commercial food producer's have to comply with Article 3 of Regs 1935/2004 regarding packaging.

Apparently this sets out an assumption that originally jars met the criteria for food following manufacturer, but once food had been consumed from them that initial chain has had break in it and it would be up to the user to show that the jars were initially manufactured to be reused in a 'closed loop distribution system, presumably this being an approved cleaning system.

At this point someone stood back and said 'This is a nonsense',
So the next bit of advice is in **BBKA November 2012**

"New Purpose made equipment from a reputable supplier is ideal.....Food Standards legislation does not require it to be new ... but ...that it is in sound conditioneasy to clean.....suitable for the intended use,..... and ultimately the courts would decide if a producer had used the due diligence defence..." for the use of his second had equipment.

Therefore look at the hazards and how they can be controlledbacterial, chemical, physical contaminations. Looking at the jars, and the closed loop distribution referred to above, you could demonstrate that you know the source of your second hand honey jars, eg by only reusing your own jars, visual checks to make sure not chipped or got dried - on pickle caught under the rim, washing thoroughly eg in a dishwasher and not with that mornings bacon and egg breakfast plates, and air drying, ensuring all labels are removed before washing so that they do not end up inside the jar,that come what may those jars by definition were as clean as when they had first been delivered. Indeed you could probably argue that having inspected every jar before putting it in the dishwasher, that they were in fact cleaner than the original jars that they had come out of the cardboard box... and I would suggest that the closed loop argument above as suggested by the Food Standards Agency has been breached if you take out of the cardboard box, place in the dishwasher before using for bottling your honey

If you can show that your methods of preparation produce a glass jar that is as clean, if not cleaner, than the brand new jar, then I personally would be surprised at any Court, saying that the you have breached the regulations as a domestic hobbyist producer of honey. At the en of the day it comes down to Riskdocument your Risk Assessment and follow it.

Helen Howarth



Picture showing why it's important to check everywhere for Queen cells (on the excluder). And not for the first time I have just seen one on the side wall of a hive
Steve

Dat Rosa Mel Apibus: "The rose gives the bees honey"
after engraving thought to have been done by Johann Theodore deBry (d. 1598) on parchment.



Some pictures of the branch open day at Samlesbury Hall on Sunday 23rd June





Who says honey bees prefer to be high up?

Here are 2 photos of a swarm some years ago on the road out towards Clifton. The police had had a report that bees were coming out from a hole in the road. One half of the road was coned off and having lifted the **HEAVY** duty drain cover, this is what I found; a swarm of bees already started drawing out comb. After I'd got the queen into the queen catcher and placed her in the adjacent hive, the other bees went in apart from 50 or so. I was a bit surprised they were keen to go into the hive, even with the queen in, because there were already eggs in the new wax which can just be seen in the photo.

Steve Ganner

Proposed new craft center at Samlesbury Hall near the club apiary site



These are 4 photos of the proposed new craft center at Samlesbury Hall near the club apiary site. Although it will be a craft center for the Hall, Sharon, the manager, has allowed us to have part of the building (the square area behind the glass screens) for a bee exhibition center. The 4 eight feet high glass panel screens have been put in to allow the public to watch as the hives are being inspected and an intercom from the beekeepers headset to the speaker inside the craft center will allow the public to listen to a running commentary of what's going on inside the hive. Due to open next spring I think. If anyone has any interesting equipment, old or new, or any article that they think may be of use, to either donate or lend for displaying in the center, can they please contact me

Steve Ganner

Samlesbury Hall apiary Update

All 4 hives are looking well going into winter. The feeders are on at the moment

17 members have taken and hopefully passed their "Basic Assessment" which has been a complete success from what I hear from those who have been on the course. Janet Murray has proven herself to be the perfect volunteer for the teaching of the course and she is now inviting anyone else who wishes to progress with learning more about the hobby of beekeeping to contact her. Details for Janet are on our website.

The next "Beginners" course is fully booked with 11 members. We have had a few enquiries already so anyone interested in joining next spring's course needs to put their name down asap. Contact Julie Scott who is running the beginners for details.

Once members have completed the Beginners course of 6 Sunday morning sessions beginning 8th September (This is not a written exam) the club will endeavor to sort out a nucleus of bees for them in the spring at a reasonable cost, and far less than most suppliers. This is obviously not guaranteed because we have no idea of the numbers wanting colonies at this stage.

It was recommended at the August meeting that once members have completed the beginners course, they continue to the "Basic Assessment" course, again, 6 sessions. (This too, does not involve taking an exam)

And the good news about these courses is that you get to have your name in our famous Beetalk mag.

Helen Howarth always seems to be in the news regarding exam passes and this time is no exception. She has successfully passed her Module 8

Sandra Johnson has passed Module 6

Janet Murray has completed Module 3

and never to be outdone, John Zamorski Modules 1 and 3 (always one better)

Well done to all of the above

At the August meeting, volunteers were asked for, to be put on a Rota to help with hive openings at Samlesbury Hall on a regular weekly basis throughout the season. Weather permitting, the openings will take place on Saturday mornings. However, because some members are unable to make Saturdays due to work commitments, other arrangements can be made to suit by ringing me on 07954585019.

If anyone would still like to offer their help, but is not too keen on doing the hive openings, there are still other jobs to be done. (An hour or so, once a month)

Brian Jackson has already kindly offered to keep on top of the grassed area in front of the hives. The Head gardener, Ed (very helpful guy) said at times the bees were p*****g him off when he fired up the strimmer, although he said the running helps keep him fit.

The proposed permanent bee museum / exhibition at Samlesbury Hall, to be completed hopefully by spring 2014 is coming along nicely and somewhere in this issue there are photos of the ongoing building works. If anyone can help with any ideas for the centre, please contact Steve Ganner 07954585019. The club are asking for volunteers to form a sub committee to co ordinate with the manager of Samlesbury Hall, Sharon Jones. Any beekeeping stuff , especially vintage would be appreciated for the displays, whether donated or simply on loan. Where can I get a Mannequin? Any old skeps ? Where can I buy or have made 3D life size replicas of honey bees? Need 20 or so.

We have had 2 offers of design help from Universities, London and Uclan so far. Uclan students from the Art and Design may be able to help with the decorating of the walls, murals, waggle dance sketches on the floors etc. Any budding artists are welcome.

Tel Steve Ganner 07954585019 or e mail cathcook@blueyonder.co.uk

What Exactly IS Bee Propolis?

Propolis is known as the cement of the beehive. It's sticky and usually darkish brown, and unlike builder's cement, (well, a good builder's cement anyway) it does not set completely hard but retains some of its stickiness. Even when dry, it is sticky, so sticky in fact that it can be a pain in the neck for your average beekeeper, because the frames that contain the honey get stuck to the inside of the beehive. As you can imagine, with all those bees around, hammering away at the beehive to loosen the frames is not something you want to be doing unless you're after one big dose of bee venom therapy!

Ready for a little Ancient Greek? No? OK, I'll keep it short: The word "propolis" comes from the Greek "pro", which can be translated as "in front of" and "polis", the word for "city".

I mentioned the similarity between propolis and cement. Truth is, propolis is much more than that. Composition varies a lot depending on the season and the locality, but give or take, the main components are as follows:

Resin 50%
Wax and fatty acids 30%
Essential oils 10%
Pollen 5%
Other compounds 5%

Now listen up – that final 5% is what makes things really interesting. Propolis is a very complex substance. A 1998 study by A H Banskota of Toyama Medical and Pharmaceutical University in Japan found an amazing 300 components. Some of these components are what make propolis such a great natural antibiotic and anti-fungal agent. Later we'll find out why this property of propolis is so important.

Where does Propolis Come From?

Glad you asked. Weirdly, making propolis is a habit that honey bees in Asia haven't taken up. It's only honey bees in the Western world that do it! The bees look for sticky resins such as sap – they have been seen collecting it from those big sticky buds you get on some plants and trees. They carry the resin back to the hive in the same way as they carry pollen – on the hairs of their back legs. The resin gets mixed with a little beeswax and hey presto, you have propolis ready for use. In a healthy hive, up to a pound of this bee cement is stored as building supplies over the season, in case there is some unexpected damage to be repaired; a bit like that tub of wood filler in the garage. (You know the one – sits there for two years then when you're desperate to use it, you find it's turned into a brick!)

What do Bees use Propolis For?

Bees use it as a sort of filler, to plug gaps. It also strengthens the beehive, acting a bit like lacquer does when it's painted onto tissue paper; you know, like people used to do when they made model airplanes, makes everything stiffer and stronger. Bees also use propolis mixed with beeswax to make lids to fit over the so-called brood cells; the chambers where the young bees are raised. This helps to stop the youngsters from catching infections because of the antibacterial properties of propolis. Bees also use this handy substance to remodel the hive a little. In the wild, ideal beehive sites are in short supply, and sometimes the queen will find a plot that maybe isn't quite ideal. The natural contours of the site can make the construction work a little tricky, and propolis can be used to sort of smooth over the cracks – for example if the opening into the hive ends up just too big for safety, propolis is used to remodel the entrance hall, making it more cosy so bigger intruders can't get in. Talking of intruders, if a little mouse decides one day to nibble a hole in that beehive so he can push his way in to get a mouthful of that heavenly raw honey, well, it's going to be the Last Supper for Mr Mouse! The bees will sting him and four or five stings are enough to kill him. The bees then have a problem. They're not strong enough to carry the body of the dead mouse out of the hive, so having immobilized the mouse right there in their living room, they're stuck with their dead visitor, forever! Because of the warmth of the hive, you can imagine that this could get nasty very quickly. Luckily, propolis comes to the rescue. The bees cover the body in a complete layer of propolis, using it to literally mummify the corpse and because of its antibiotic and anti-fungal properties, the layer of propolis stops the body from contaminating the hive. The ancient Egyptians are known to have used propolis just like this in their embalming process.

Collecting Propolis

Humans collect propolis by using special frames or a grille that replaces the inner cover of the hive. The bees don't like all the holes in the grille and proceed to "repair" these windy gaps. After a while the grille is removed and placed in a refrigerator or freezer for a while to make the propolis more brittle, then the grille can be flexed a little and the propolis cracks and falls off. You can also just scrape it off.

What do Humans use Propolis For?

Propolis, like other bee products, has been used by mankind since ancient times. The Egyptians used it for healing. Aristotle recommended it for treating wounds, and Roman Centurions carried it in their first-aid kits for the same purpose. Even today it is used in Africa, as it always has been, as a medicine and an adhesive. It is widely acknowledged that propolis can kill a wide range of microorganisms such as bacteria, viruses and fungi, and is therefore an accepted treatment for wounds.

Since the mid-1980s there has been a growing revival in the use of propolis as people have turned more towards complementary medicines. The biggest importer of propolis is Japan. It may be this revival in propolis and the resultant increase in its commercial value that has prompted more research into its effects on health, and we have recently uncovered some new and interesting benefits. For example, a study by Duarte S and others in 2006 (one of many) showed that propolis could be useful in preventing tooth decay. Even more recently, scientists have started to uncover tentative evidence for some of the more dramatic claims that are made for this substance. For example, a 2009 study by M Demestre and others at the UKE (Universitaets Klinikum Eppendorf) in Hamburg, Germany, reported that propolis had been used successfully to kill certain types of human cancer cells that had been introduced into mice.

I have to say to you that despite all of this research we still have nowhere near a complete understanding of this product and its benefits. The research is of varying quality, and the conclusions about health benefits, although positive, can only be viewed as preliminary. But if you are with the Egyptians, Greeks and Romans, and you want to give bee propolis a try, please read on for some buying tips:

Buying Propolis

Before we start, you need to know that as with other honey and bee products, propolis can cause an allergic reaction in some people – and it could be serious. So if you are concerned about this, seek the advice of your physician before you take or use propolis.

Although it is possible to chew on raw propolis, I don't recommend this at all because it can lead to an upset stomach. There is a whole range of products out there specially designed to give you the benefits of propolis without you having to get down and dirty with the raw material! Here is a selection:

Liquid Extract – this usually comes in a bottle with a dropper and can be used on cuts, ear infections and as a mouth rinse.

Capsules – these contain a dose of propolis extract and are probably the closest you should get to taking the raw thing.

Toothpaste – packaged in a tube just like regular toothpaste, this is a natural alternative to fluoride-based toothpastes.

Throat sprays – these often combine other herbal extracts with propolis and are used as an alternative treatment for sore throats.

Lip balm – this takes advantage of the healing properties of propolis for cracked and dry lips.

Lozenges – these are often a mix of honey and propolis and are used for their possible antibacterial properties – and because they taste good!

Please remember what I said about possible allergic reaction, and please only buy the above products from established, reputable retailers. As with other honey and bee products, there are a lot of sharks out there and you need to be as sure as you can that you are getting the real thing and not a worthless cheap imitation.

Thanks for reading.

Infected bumblebees endanger British honeybees

Bumblebees imported from Europe carry pathogens that pose a threat to native honeybees and bumblebees in the UK, According to scientists. Between 40,000 and 50,000 bumblebee colonies are imported into England each year to assist with crop pollination.

For a study in the Journal of Applied Ecology, scientists bought 48 colonies—hives containing up to 100 bees each - from three producers in Europe. They found 77% had parasites that could infect native bees. Lead researcher Prof William Hughes, of the University of Sussex, said commercial production and importation of bumblebees had been "going on for decades". "We couldn't grow tomatoes in this country without these bumblebees," he said. And with the decline in pollinating insects in recent years, food producers are increasingly reliant upon imported bees. "Over a million colonies are imported globally - it's a huge trade," said Prof Hughes. "And a surprisingly large number of these are produced in factories, mainly in Eastern Europe. "We sought to answer the big question of whether colonies that are being produced now have parasites and, if so, whether those parasites are actually infectious or harmful."

Undercover science

With his colleagues from the universities of Leeds and Stirling, the researcher set out to buy colonies "in exactly the same way a farmer would". The team then screened the bees for parasite DNA. "We found quite a number of parasites within the bees," Prof Hughes said. **The imported bumblebee colonies carried a range of parasites including the three main bumblebee parasites (*Crithidia bombi*, *Nosema bombi* and *Apicystis bombi*, three honeybee parasites *Nosema apis*, *Ascosphaera apis* (chalkbrood) and *Paenibacillus larvae* (American foulbrood), and two parasites that infect both bumblebees and honeybees (*Nosema ceranae* and deformed wing virus).** The team also found parasites in the

pollen food supplied with the bees and say that current regulations governing bumblebee imports are ineffective. In England, for example, the non-departmental public body responsible for the protection of the environment, Natural England, issues license's for the release of non-native bumblebee subspecies. But this study found parasites in both native and non-native subspecies that were commercially reared in Europe, and no licenses are required to release native subspecies into the environment.

Natural England said under current regulations it was "not possible to impose disease control conditions or environmental safeguards on the release of imported bumblebees which originally descended from British bumblebees". "It is therefore of particular concern that this research has revealed that imported bees - descended from British stock - have been found to be carrying disease," its statement added. "Our licensing regime stipulates that where non-native bumblebees are used, they must be disease free, only used within poly tunnels or greenhouses, using hives from which queens cannot escape, and that all hives and surviving bees must be destroyed at the end of their use." But the researchers say that regulatory authorities need to strengthen measures to prevent importation of parasite-carrying bumblebee colonies, including checking bees on arrival in the UK and extending regulations to cover imported colonies of the native subspecies.

Prof Hughes said: "If we don't act, then the risk is that potentially tens of thousands of parasite-carrying bumblebee colonies may be imported into the UK each year, and hundreds of thousands worldwide. "Many bee species are already showing significant population declines," he said. "The introduction of more or new parasite infections will at a minimum exacerbate this, and could quite possibly directly drive declines."

The British Beekeepers' Association said in a statement: "Defra (the UK Department for the Environment, Food and Rural Affairs) must take urgent steps to tighten regulations together with practical steps to ensure that imported bumblebee colonies are not heavily laden with pathogens. It continued: "[Regulations must ensure] that these bees are not released into the environment at the end of the season putting our native pollinators at enhanced risk."

A Defra representative responded to the study, saying: "Imported colonies of non-native bees are required to be screened for parasites and disease. "We will continue to work with Natural England to ensure that growers who break the rules are punished."

From BBC news 17th July 2013

CLIPPING QUEENS Glyn Flowerdew. Nottinghamshire BKA

The subject of clipping the wings of queens has been briefly aired at a couple of this winter's meetings of the Nottingham Region and a mention of it was made in the April edition of BEEMASTER (p.667). The matter really deserves a more in-depth appraisal than it received on those occasions.

With regard to the technique, it is only the forewings of a queen which are clipped. Ted Hooper clipped his queens' forewings at the level of the petiole, which is the waist-like narrowing between the thorax and the abdomen (ie. the wings were clipped quite short). Bob Manley clipped about a third from both the forewings of each queen. The aim of clipping is to prevent the queen effectively flying and provided that at least a third of one or both forewings is removed the queen will be unable to fly. There is no exception to this rule!

A clipped queen which attempts to leave a hive with a swarm or absconding colony will either stay on the hive, even re-entering it, or in attempting to fly away will spiral uncontrollably a short distance and get lost. The swarming or absconding workers and drones will mill around in the air near to the hive but will quickly return to their hive, whether the queen is there or not. It is the workers near to the hive entrance and fanning pheromone from their Nasonov glands which attract the flying bees back to the hive. A swarm of bees will not leave their original nest/hive and go to a new nest-site without an accompanying queen.

There are a couple of cautionary points to make.

It is a fact that clipping an established queen's wings will not prevent the swarming urge developing in the queen's colony if conditions are right for that to happen. If conditions are met for swarming to occur then queen cells will be formed and virgin queens will subsequently emerge. Clipping the queens' wings is just one part of a beekeeper's swarm prevention and control strategy. Clipping does not mean that all the other necessary aspects of that strategy can be ignored. Most importantly regular inspections remain essential, even if required less frequently when the queens are clipped. Once queen cells are found the appropriate swarm control procedure must be implemented if the loss of secondary swarms (also called casts and after-swarms) is to be prevented.

It is most important that queens are not clipped until they have been inseminated and have established good egg-laying patterns. Virgin queens must be able to fly on orientation flights and get to and from drone congregation areas during the first two or three weeks or so of their lives. Personally I usually clip and mark my new queens in their first summer when they have become established in three or five frame nuclei and when the colonies are still of a size making it easy to find the queens. Any queen not marked at that time will be clipped and marked in the early spring of the following year when again the colonies are still relatively small and the queens easily found.

So, what are the advantages of clipping queens?

The prime swarm is effectively controlled and will not leave the hive for a new nest site. A beekeeper gets much more time to recognize when swarming is imminent and to implement swarm control measures to prevent loss of the after-swarms. This is particularly important if artificial swarming is a beekeeper's preferred method of a queen replacement Programme and if the beekeeper wants to do his or her best not to lose £200-worth of bees. The time when the first after-swarm with a new queen will leave the hive will be at least three days after the first virgin emerges and 11 to 12 days after the first queen cell is sealed (Winston). Clipping gets rid of the tedious situation of losing a prime swarm when only unsealed queen cells are found in the colony. It is frequently stated that the prime swarm leaves when the first queen cell is sealed. Any beekeeper with a few years experience knows that is not true.

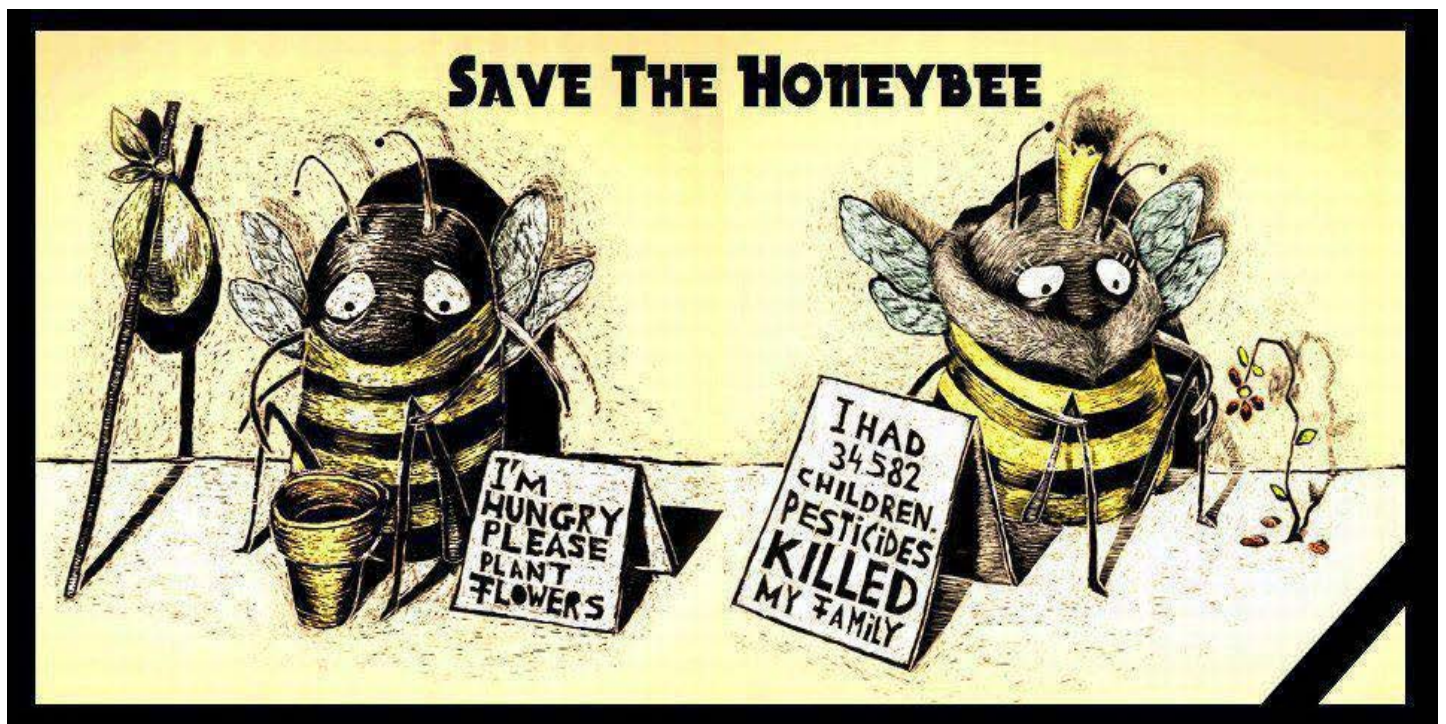
The queen must be clipped if a beekeeper chooses to use a Taranov Board to artificially swarm a colony of bees. It was at the February meeting of the Nottingham Region that Gerry Collins eloquently described this method of artificial swarming as being more like the normal swarming process than that obtained by Pagden's or Demaree's methods because more younger bees are "selected" into the artificial swarm containing the old queen.

Colonies in which the queens are clipped will not abscond

Last year I treated my bees with Apilife-VAR®. They all had one treatment with no problems occurring, and I gave them the second dose just before going to France for a short holiday. This holiday coincided with the remarkable heat wave which occurred in September. When we returned I found that three of my colonies had vacated their hives and had built extensive comb underneath the hives in the hive stand spaces. There was hardly a bee to be found in any of the three hives, but there was brood and stores in the new comb. However, the queens were clipped and at least I did not lose any bees. It could be argued that even if the queens had not been clipped they would have behaved in the same manner and not flown to a new nest site, but there are plenty of examples of colonies absconding in these circumstances. Newcomers to beekeeping will find it easier not to clip queens until they have developed confidence in handling bees. However, there is no reason why these newcomers should not ask the suppliers of their bees to clip the queens for them. Maybe the suppliers will be happy to show the beginner how clipping is done. The clipping of queens' wings is a long established practice used by very many highly respected beekeepers.

From amongst the real elite I have mentioned Ted Hooper and Bob Manley. Brother Adam was also obsessive about the clipping of the wings of his queens. As a final point, it says in the BBKA Advisory Leaflet B1 –Bees and Neighbors - "Keep all queens clipped".

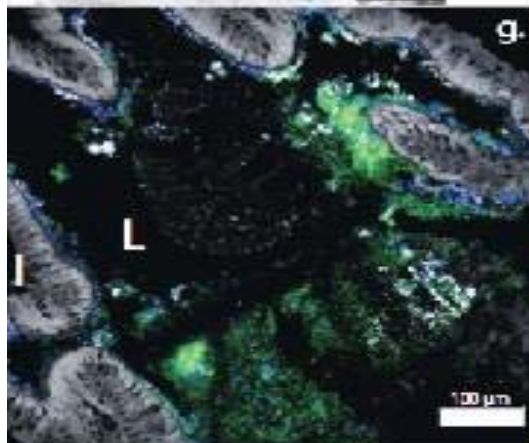
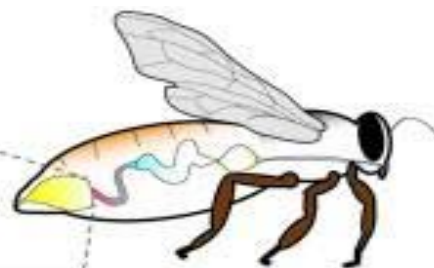
N.B. Colonies in mini-nucs are notorious for absconding but obviously this is not a situation where queens can



Save the Honey bee. Plant flowers. Help the next generation of bees by not using harmful pesticides. Helping bees, means helping solitary bees too, which do not have as many children as a queen bee, but are hard working single mothers.

This cartoon is not a joke.

Bees have unique symbiotic gut microbiota that are thought to aid immune response/pathogen defense, digestion, and more. Different strains of gut-biota can be passed down from older bees to younger bees. And yes, they are affected by anti-biotic treatments. But, do they help bees dance? Well, one of them is named after Karl von Frisch, a scientist known for his documentation and description of honey bee 'waggle dancing': the recently discovered *Frischella perrara*. I suspect that some of the other bee gut microbiota are also named after honey bee scientists: Agricultural Research Service microbiologist Martha A. Gilliam (who has studied helpful hive microbes) and 'Anatomy of the Honey Bee' author Richard E. Snodgrass may have inspired the names for *Gilliamella apicola* and *Snodgrassella alvi*.



Bees have unique gut microbiota which likely act symbiotically to aid digestion, pathogen defense, and immunity!

Images from http://www.yale.edu/moran/bees_research_2012.html

Gum Hive



I was listening to a beekeeper yesterday telling me about a bee colony he had recently helped remove from a tree and it prompted me to root out an old photo of a **gum hive** or **log gum** that I used to have. The rotting remains of it is in the woods at the back of my house. I am off out to take a photo of it now. The photos of the rotten tree are not too good but the top view shows the cavity and I've shoved a piece of foam in the old bottom entrance for comparison with the original.

The bees can be seen around the hole (a little upset after the tree had been chain sawed and dropped from 20 feet) The hessian sacking can be seen at the base where I dropped it and ran.

What is a **log gum** or **gum hive**?

A **bee tree** is a tree in which a colony of honey bees makes its home. A colony of bees may live in a bee tree for many years.

Most bee trees have a large inner hollow, often with an upper and lower entrance.

Colonies in trees have fixed comb, so inspection and management is impossible, as is most harvesting without destroying the colony. A beekeeper can perform a cut-out on a gum hive. The trunk is cut open to expose the cavity, and the comb is carefully removed and strapped into standard frames by using elastic bands. The frames are then put to a conventional hive, such as a National. The bees soon wax around the cut edges fixing permanently to the wooden frames. The bees will follow into the new hive especially if the queen and brood can be transferred.

If the tree is cut down and the trunk section containing the colony is removed, the result is a **log gum** or **gum hive**. A log gum is essentially a bee tree cut into a short section that contained a colony of honey bees. It got its name from the fact that when gum trees die they rot from the inside out, thereby creating a large cavity in which bees would commonly nest.

Shown here is one I had in use for ten years although I blocked the bottom entrance off. I used to get a super and a half from it each season. In spring I put a feeder on top. A crown board was placed on the top of the log with a 6 inch diameter hole in it. Then the queen excluder and supers were put on.

Early in April a piece of queen excluder was fixed to the top entrance so any swarms were prevented from escaping. The bottom entrance had a tube leading from it into a hole in the top of another hive placed alongside the log which had a queen excluder fixed to its ordinary entrance to prevent the swarm going straight through the hive and away. As it was at my home address, I could check every day to see if the log colony had swarmed and every year it did. Every day, to keep the drones happy, I removed the excluder for an hour or so to let them out of the bait hive and also the log . The drones went back into the log through an adapted porter escape.

The only reason for having to discontinue its use was the arrival of Varroa on 1992 in my area. It spent the next 3 years as a strawberry planter before being dumped in the woods.

With Thanks to Steve Ganner

Scientists discover what's killing the bees and it's worse than you thought

As we've written before, the mysterious mass die-off of honey bees that pollinate \$30 billion worth of crops in the US has so decimated America's *apis mellifera* population that one bad winter could leave fields fallow. Now, a new study has pinpointed some of the probable causes of bee deaths and the rather scary results show that averting bee mageddon will be much more difficult than previously thought.

Scientists had struggled to find the trigger for so-called Colony Collapse Disorder (CCD) that has wiped out an estimated 10 million beehives, worth \$2 billion, over the past six years. Suspects have included pesticides, disease-bearing parasites and poor nutrition. But in a first-of-its-kind study published today in the journal PLOS ONE, scientists at the University of Maryland and the US Department of Agriculture have identified a witch's brew of pesticides and fungicides contaminating pollen that bees collect to feed their hives.

The findings break new ground on why large numbers of bees are dying though they do not identify the specific cause of CCD, where an entire beehive dies at once. When researchers collected pollen from hives on the east coast pollinating cranberry, watermelon and other crops and fed it to healthy bees, those bees showed a significant decline in their ability to resist infection by a parasite called *Nosema ceranae*. The parasite has been implicated in Colony Collapse Disorder though scientists took pains to point out that their findings do not directly link the pesticides to CCD. The pollen was contaminated on average with nine different pesticides and fungicides though scientists discovered 21 agricultural chemicals in one sample. Scientists identified eight chemicals associated with increased risk of infection by the parasite.

Most disturbing, bees that ate pollen contaminated with fungicides were three times as likely to be infected by the parasite. Widely used, fungicides had been thought to be harmless for bees as they're designed to kill fungus, not insects, on crops like apples. "There's growing evidence that fungicides may be affecting the bees on their own and I think what it highlights is a need to reassess how we label these agricultural chemicals," Dennis vanEngelsdorp, the study's lead author, told Quartz. Labels on pesticides warn farmers not to spray when pollinating bees are in the vicinity but such precautions have not applied to fungicides. Bee populations are so low in the US that it now takes 60% of the country's surviving colonies just to pollinate one California crop, almonds. And that's not just a west coast problem—California supplies 80% of the world's almonds, a market worth \$4 billion.

In recent years, a class of chemicals called neonicotinoids has been linked to bee deaths and in April regulators banned the use of the pesticide for two years in Europe where bee populations have also plummeted. But vanEngelsdorp, an assistant research scientist at the University of Maryland, says the new study shows that the interaction of multiple pesticides is affecting bee health. "The pesticide issue in itself is much more complex than we have led to be believe," he says. "It's a lot more complicated than just one product, which means of course the solution does not lie in just banning one class of product." The study found another complication in efforts to save the bees: US honey bees, which are descendants of European bees, do not bring home pollen from native North American crops but collect bee chow from nearby weeds and wildflowers. That pollen, however, was also contaminated with pesticides even though those plants were not the target of spraying.

"It's not clear whether the pesticides are drifting over to those plants but we need take a new look at agricultural spraying practices," says vanEngelsdorp.

COMB CHANGING Alec Thomson

Reasons for change

Where there has been a drone-laying queen replace the comb as even when a new queen is introduced she will continue to produce drones in the now slightly enlarged cells.

Darkened/blackened frames created as a result of high usage with propolis and carapace deposits

Post winter frames clogged with solidified honey (probably ivy honey) which limits the space available for the queen to lay eggs.

Any comb where there has been infections such as Chalkbrood, Sacbrood and Nosema Brood affected by EFB or AFB will be dealt with under the instructions of the Regional Bee Inspector.

Benefits of change.

- Minimizes disease risk by removal of potentially viable pathogens.
- Maintains cell size enabling development of full sized larvae and adult worker bees.
- Enables easier colony inspection especially ability to see newly laid eggs
- Promotes good hygiene and general husbandry.

Methods of changing.

Partial frame replacement

Most textbooks recommend removal of 2/3 frames each year but care must be taken not to split the brood as in early spring this could result in chilled brood. Also partial replacement is not effective for disease control as, new foundation is likely to become soon become infected nor is effective for Varroa management and does not greatly assist inspections other than on the new frames.

Complete frame replacement.

This can be achieved by two methods either Bailey comb replacement or the Shook swarm method. The Bailey comb replacement method however, whilst it will produce some very nicely drawn brood combs, is not regarded as an effective disease control method and can take a long time (ie. weeks) for the bees to move into the new brood box and is not an effective Varroa control method. The Shook swarm method, whilst it is a very cathartic process for the bees and results in the loss of developing brood, is a highly effective disease control method and is very effective for dealing with both Varroa developing in the brood cells and the phoretic mite surviving on the adult bee. The process however has to be carried out during a good nectar flow or careful feeding by the beekeeper.

Cleaning up frames

Killing larvae/mites necessary to ensure that any Varroa mites in the brood cells are killed 48 hours in the freezer will be sufficient

Remaining wax recovery can be achieved using either a solar extractor or a steam cleaner.

Wooden parts of the frame can be cleaned by scraping and torching or by boiling in such as a 'Burco boiler' with washing soda crystals added.

With thanks to Nottinghamshire BKA

Propolis is a helpful medicine for bees and humans. Propolis inhibits fungal and bacterial growth in the bee hive; For humans the medicinal uses of propolis abound!

According to a recent article:

"Propolis (bee glue) has been known for centuries. The ancient Greeks, Romans, and Egyptians were aware of the healing properties of propolis and made extensive use of it as a medicine. In the middle ages propolis was not a very popular topic and its use in mainstream medicine disappeared. However, the knowledge of medicinal properties of propolis survived in traditional folk medicine. The interest in propolis returned in Europe together with the renaissance theory of ad fontes. It has only been in the last century that scientists have been able to prove that propolis is as active and important as our forefathers thought. Research on chemical composition of propolis started at the beginning of the twentieth century and was continued after WW II. Advances in chromatographic analytical methods enabled separation and extraction of several components from propolis. At least 180 different compounds have been identified so far. Its antibacterial, antiseptic, anti-inflammatory, anti-fungal, anesthetic, and healing properties have been confirmed. Propolis has been effectively used in treatment of dermatological, laryngological, and gynecological problems, neurodegenerative diseases, in wound healing, and in treatment of burns and ulcers. However, it requires further research that may lead to new discoveries of its composition and possible applications."

From the abstract of 'Historical Aspects of Propolis Research in Modern Times' in Evidence-Based Complementary and Alternative Medicine Volume 2013 (2013), Article ID 964149, 11 pages, by Andrzej K. Kuropatnicki, Ewelina Szliszka, and Wojciech Krol. Read the whole, interesting article at the following links

<http://dx.doi.org/10.1155/2013/964149>

or

<http://www.hindawi.com/journals/ecam/2013/964149/>

To stay informed about the medicinal benefits provided by bees check out Apitherapy News - The Internet's Best Source of Information About the Medicinal Use of Bee Products <http://apitherapy.blogspot.com/>



This was one I was lucky to get. I went into the hive as it was due to swarm and fortunately saw the This
This was one I was lucky to get. I went into the hive as it was due to swarm and fortunately saw the
marked Queen and picked her up in the queen catcher as they were streaming out of the entrance. It took
only 15 minutes for the swarming bees to form this cluster around her. It's surprising how heavy the bees
are and as you can see, it isn't really that big a swarm.



Steve Ganner

HIVE PRESERVATION

Last November I told you that the new formulations of Cuprinol (with BP as a suffix) have not been tested for use on hives and should not therefore be used.

I have now had confirmation from Ronseal that their 5 year wood stain is safe and can even be applied to a hive with bees in residence.

*Snippet in Stratford BKA August 2011 Newsletter by the editor Peter Edwards
Thanks to e bees.*

Ode to the Bee Basic Exam Takers

We've been through the mill of late you see
Taking the Basic Exam on the life of the bee
If this is basic, we really are not sure
Whether we want to advance much more
We read all the books and all the info
Hoping the examiner would ask what we know
The life cycle of the worker, the drone, the queen
So many notes and pictures to be seen
What questions will he ask out of the syllabus
Let's hope he doesn't make too much fuss
The practical test had us all really worried
But through it we must not be hurried
At last it was over and we can now relax
No longer needing to retain all the facts
Was it all that hard work worth it in the end
All those hours of study we had to spend
Oh yes it was of that that there is no doubt
Because the results are now all out
We can celebrate how well we've done
And concentrate on making beekeeping fun.

Carole Roberts

UNITING COLONIES

Swarm controls will have resulted in an increase in numbers, Getting back to the number you thought of first is simple: put two colonies together but do it carefully. The accepted way to unite two colonies is using a sheet of newspaper. The books will tell you to move the colonies close together, moving one of them a yard at a time each day, but my experience is that this is unnecessary.

Simply wait until the bees have stopped flying in the evening, remove the crown board from one hive and lay a sheet of newspaper directly over the frames of the brood box (use a broadsheet not a tabloid) then place the second colony over the top of the newspaper, You can make a few small holes in the paper but I never do. Close up and leave for a week before inspecting and reassembling into one unit. If there are supers, ensure that there is a sheet of newspaper wherever adjacent boxes contain different bees.

A few precautions: loosen all hive parts and take any brace comb off the bottom of the frames of the top box beforehand, preferably earlier in the day. At the same time, remove the queen that you do not wish to keep. Put a queen excluder on top of the newspaper so that the queen is confined in one box and also to hold down the newspaper. I find that a fine water spray will keep the bees in the bottom box immobilized for the short time they are exposed.

Written by Celia Davis for the Warwickshire BKA. to whom we acknowledge the article via e bees

The Queen's Bees

As the Queen's official beekeeper gets busy with his bare hands, the words of Winnie the Pooh spring to mind: 'You never can tell with bees.' Sage advice, surely, from the bear of very little brain, as anyone who has ever been stung must agree. Here in Buckingham Palace's garden, however, John Chapple is in shirt sleeves as he lifts the lid from the first of the hives and removes the wooden frames filled with honey. He is wearing a veiled hat, but otherwise looks rather exposed. His assistant Andy Pedley has opted for a protective suit. Despite a liberal application of smoke to calm the bees, quite a few are still buzzing about. One heads for the nose of the Palace press officer escorting us. She tries to waft it away with her hand and is stung on the finger. Ouch! Hugely experienced Mr Chapple is sympathetic but unperturbed. He knows his bees. Really, really knows them. And here in the most genteel of settings, he has chosen them accordingly. When asked to introduce hives to Her Majesty's garden two years ago, he chose a gentle species, *Apis mellifera ligustica*, commonly known as the Italian honey bee. 'I like my bees placid,' explains the affable apiarist. 'There's no fun in working with ferocious bees. These are very relaxed. If I get stung, I get stung, but we try to minimize it.' With a twinkle in his eye, he adds: 'Can you imagine what would happen if my bees swarmed at a garden party? I'd be straight off to the Tower!' As a precaution against such mishaps, he replaces the queen — bee that is — with a new one each May. 'They're less likely to swarm when there's a younger queen because she gives off a substance that suppresses the instinct.' All this is happening in a secret part of the garden, not visible to the hundreds of thousands of paying visitors who flock to Buckingham Palace.

The Mail on line - 22nd August



Photograph courtesy of Eric Tournaret.

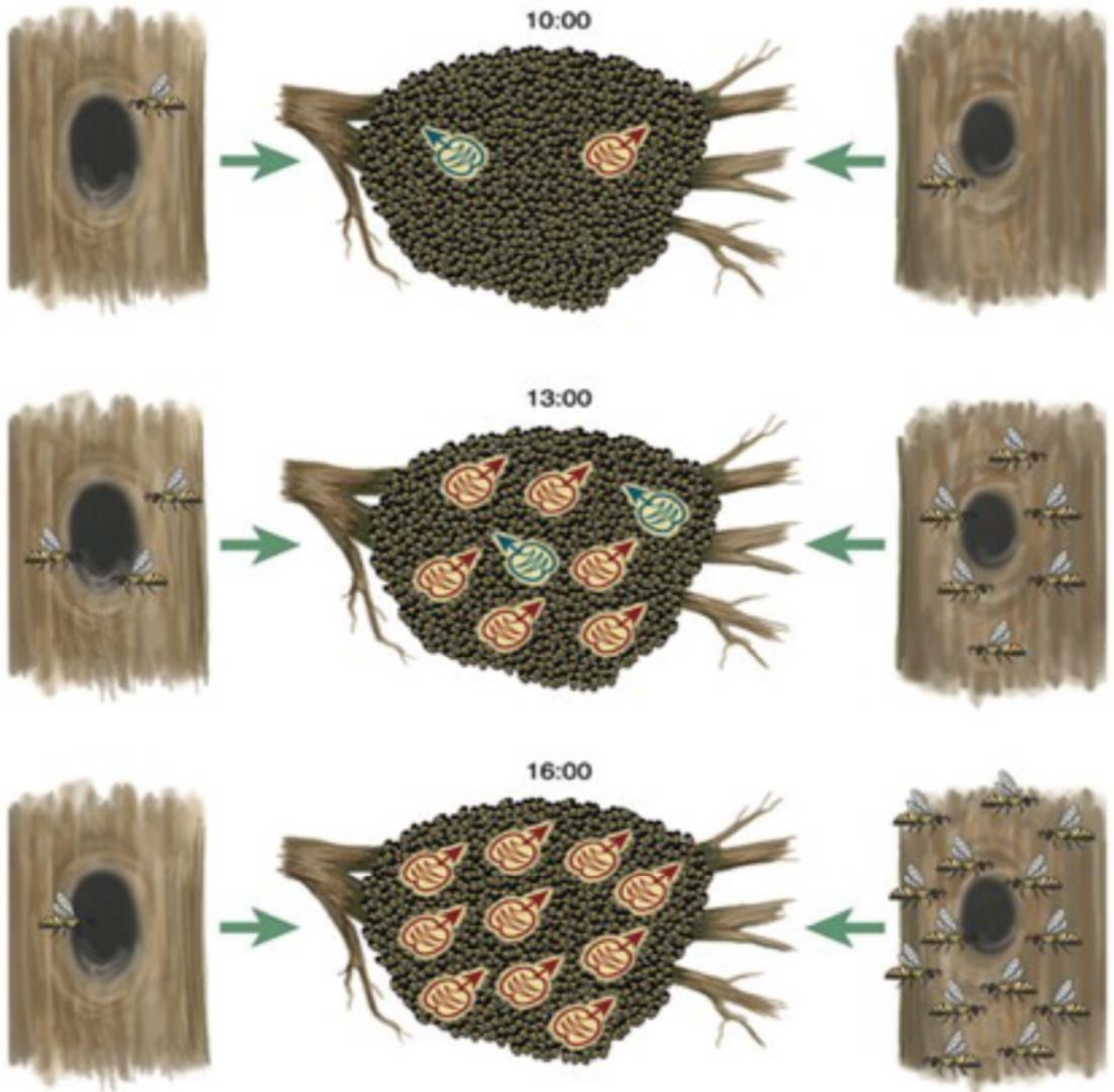
*The End of Summer and the Death of the Drones.
37 days from egg to maturity, 22 days as a flying sperm
bank, the successful drone, that is one that had mated a
queen, died in the act of copulation.*

*Now as the season draws to a close, drones no longer
have any value to the colony and so they are not fed, not
allowed back into the hive or simply evicted and left
outside to die.*

The colony is all.

With thanks to Bournemouth and Dorset South BKA

SWARM SITE SELECTION



Scout bees tune their strength of waggle dancing in relation to site quality, which accelerates the reaching of a quorum at the best available site. Here, scouts locate two potential nest sites, one with a large opening (*left*) and one with a more desirable small opening (*right*). Each scout bee then returns to the swarm (*green arrows*) and performs a waggle dance for her site (*top centre*), but the scout from the superior right tree performs more waggle dance circuits (*red symbol*) than the scout from the left tree (*blue symbol*). The result is that three hours later, the number of bees committed to the right tree has increased six-fold, whereas support for the left tree has increased only threefold, and the majority of dances favour the right tree (*middle*). After three more hours, the number of scouts at the right tree has ballooned, and dances in support of this site have excluded the left-tree site from the competition (*bottom*)



Wasp Traps

What you need are a couple of plastic bottles, scissors and tape. Bait with cheap jam (This jar cost just 29p) mixed 50:50 with warm water with a few drops of washing up liquid. At the rear of the jam is a wasp trap from Aldi.

How to make:

Cut the top third off the plastic bottle. Turn the top upside down and put into the 2/3rd section and tape in place. Fill with your chosen jam or other sweetener, diluted in water and spread the traps around your site - but not too close to the hives. Remember not to put honey into your traps as you do not want to attract bees. I also made a trap from the empty jam-jar by making a 10mm hole in the lid and adding the sugary liquid.

Whilst Wasps can be a problem, other honeybee colonies will also attack and rob a weaker colony. Make sure that your hives are in a good state of repair with no holes or gaps where wasps or other bees can access and rob the stores or attack the bees in the colony. Check that the roof is fitted correctly. If you have a weak colony and you see masses of dead bees outside the hive or bees fighting, suspect "**robbing**" by Wasps or other Honeybees and take action either/and by reducing the hive entrance to one or two bee spaces or move the colony at least three miles away - or combine the colony with a stronger one making sure both are disease free and that the combined colony only has one queen. A weak colony will not survive the onslaught of a large colony of bees or Wasps - prevention is better than the potential result – a dead colony. .



With thanks to North Staffordshire BKA for the text and Steve Ganner for the picture of what happens when you bees are not taken care of, in Steve's case because he had an operation on his feet and could not attend to his hives as he would have liked too.

Wasps and other Predators by Pollinator.

Depending on the type of Spring weather the first wasps may be seen around spare equipment and in the apiary from May onwards. They are seasonal pests as far as the beekeeper is concerned. Both the common wasp (*Vespa vulgaris*) and the hornet (*Vespa crabro*) will attempt to rob colonies and both often get inside the brood chambers after passing the guard bees. It takes several honeybees to keep a common wasp out of the hive and even more to keep out a hornet. The first common wasps to be seen in the Spring are the queens, which are much larger than their offspring, but both have the same markings of yellow and black bands and therefore are easily distinguishable from the honeybee. The hornet, on the other hand, is a tawny yellow with pale brown antennae and at least 2.5 cm long. Once the latter are inside the brood chamber they will happily carry on robbing whilst the beekeeper handles the frame! The common wasp will attack the beekeeper on occasions but the hornet is rather docile towards humans. In recent years other types of wasps have been seen in this part of the southern UK. These tend to build nests in bushes whereas the common wasp often builds its nests in lofts of buildings. However, they will build a nest at the base (at ground level) of an external chimneystack or in the base of a tree. So long as there are no naked flames in the vicinity they can be killed by pouring some petrol (about half a cupful) into a funnel pushed into the entrance to the nest. Immediately close the entrance with some earth and let the fumes kill the bees and larvae in the nest. DO NOT IGNITE. Hornets will build a nest in the corner of a barn or outbuilding as well as in disused house chimneys and often just under the chimney pot. If called upon to destroy a nest in a loft then do wear thicker protection than you have for inspecting honeybee colonies. That is to say, thicker gloves and maybe an old mackintosh over your bee suit. In a loft I would use a normal wasp aerosol spray. If you cannot get to the nest because it is near the soffit then a wasp killing powder is a good idea, as they will take it into the nest from where they enter the roof. This will kill anything in the nest. Before wasp attacks get severe it is useful to make up a few jam or honey jars containing some sugar syrup. About 3 cm in the bottom is adequate. Cover with a lid made from clear polythene sheet (the type that enclose magazines posted to you, so save some) and puncture it in the middle with a pencil size hole. String or a rubber band will secure the cover. You will discover that bees do not go down into daylight (They instead go up your trouser leg into darkness!), but wasps will. Once the first wasp goes into the jar it drowns and then ferments. They cannot find their way out. Within minutes you will find your first wasp in the trap. No honeybees will find their way into the jar. Place the jars adjacent to the hives being attacked and on the stands. The most important step the beekeeper can take to give the bees a fighting chance to defend their colony is to use a restricted entrance all year round. That is to say, use an entrance only 8 cm wide. In other words keep your entrance blocks in all year. An alternative was to use the Gilbert louvre that was a design so that the entrance could be restricted down to just one small circular hole, or perhaps five or six such holes depending on the severity of the attacks. It is a misconception that the removal of entrance blocks give better ventilation. I have seen, in Australia, hives suffer complete meltdown when entrance blocks have been removed because the bees cannot control the ventilation. Honey and wax runs out of the entrance under air temperatures of 40°C to 50°C. With a narrow entrance the bees have complete control of the hive ventilation. Another pest commonly found inside and outside hives is the ant. Usually they do not seem to do any harm but I suspect they take honey to feed their own colonies. My approach to this problem is to put a ring of ant powder around the legs of the stands that the hives are on. This only works until the rain (what's that?) washes it away. As this places the powder 60 cm from the hive floor the bees do not come into contact with it.

Other predators are the large and small wax moths and the former leaves tell tale trails across the sealed surfaces of the honeybee brood. The corner of the hive tool may be used to lift up this trail cover and then the wax moth grub can be picked out and destroyed. Tapping on the wooden frame with the hive tool often encourages the moth grub to emerge. If they are not controlled by the bees or beekeeper then they bore holes into the frames and this is often at the join between the lugs and the vertical sidebars. This weakens the frame and lugs break off, particularly if you are holding the lugs and shaking bees off for the purpose of finding queen cells. For this reason I would recommend always picking up the frames using fingers just inside the top of the vertical wooden bars. This is helpful also if the queen is under the lug as it stops you squashing her if your fingers are not there, but on the top bars themselves.

With thanks to the Essex beekeeper and of course e-bees

Queen Clipping

The subject of clipping the wings of queens has been briefly aired at a couple of this winter's meetings of the Nottingham Region and a mention of it was made in the April edition of BEEMASTER . The matter really deserves a more in-depth appraisal than it received on those occasions. With regard to the technique, it is only the forewings of a queen which are clipped. Ted Hooper clipped his queens' forewings at the level of the petiole, which is the waist-like narrowing between the thorax and the abdomen (ie. the wings were clipped quite short). Bob Manley clipped about a third from both the forewings of each queen. The aim of clipping is to prevent the queen effectively flying and provided that at least a third of one or both forewings is removed the queen will be unable to fly. There is no exception to this rule!

A clipped queen which attempts to leave a hive with a swarm or absconding colony will either stay on the hive, even re-entering it, or in attempting to fly away will spiral uncontrollably a short distance and get lost. The swarming or absconding workers and drones will mill around in the air near to the hive but will quickly return to their hive, whether the queen is there or not. It is the workers near to the hive entrance and fanning pheromone from their Nasonov glands which attract the flying bees back to the hive. A swarm of bees will not leave their original nest/hive and go to a new nest-site without an accompanying queen.

- There are a couple of cautionary points to make.

It is a fact that clipping an established queen's wings will not prevent the swarming urge developing in the queen's colony if conditions are right for that to happen. If conditions are met for swarming to occur then queen cells will be formed and virgin queens will subsequently emerge. Clipping the queens' wings is just one part of a beekeeper's swarm prevention and control strategy. Clipping does not mean that all the other necessary aspects of that strategy can be ignored. Most importantly regular inspections remain essential, even if required less frequently when the queens are clipped. Once queen cells are found the appropriate swarm control procedure must be implemented if the loss of secondary swarms (also called casts and after-swarms) is to be prevented.

- It is most important that queens are not clipped until they have been inseminated and have established good egg-laying patterns. Virgin queens must be able to fly on orientation flights and get to and from drone congregation areas during the first two or three weeks or so of their lives. Personally I usually clip and mark my new queens in their first summer when they have become established in three or five frame nuclei and when the colonies are still of a size making it easy to find the queens. Any queen not marked at that time will be clipped and marked in the early spring of the following year when again the colonies are still relatively small and the queens easily found.

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So, what are the advantages of clipping queens?

- The prime swarm is effectively controlled and will not leave the hive for a new nest site.
- A beekeeper gets much more time to recognize when swarming is imminent and to implement swarm control measures to prevent loss of the after-swarms. This is particularly important if artificial swarming is a beekeeper's preferred method of a queen replacement
- Programme and if the beekeeper wants to do his or her best not to lose £200-worth of bees. The time when the first after-swarm with a new queen will leave the hive will be at least three days after the first virgin emerges and 11 to 12 days after the first queen cell is sealed (Winston). Clipping gets rid of the tedious situation of losing a prime swarm when only unsealed queen cells are found in the colony. It is frequently stated that the prime swarm leaves when the first queen cell is sealed. Any beekeeper with a few years experience knows that is not true.
- The queen must be clipped if a beekeeper chooses to use a Taranov Board to artificially swarm a colony of bees. It was at the February meeting of the Nottingham Region that Gerry Collins eloquently described this method of artificial swarming as being more like the normal swarming process than that obtained by Pagden's or Demaree's methods because more younger bees are "selected" into the artificial swarm containing the old queen.
- Colonies in which the queens are clipped will not abscond Last year I treated my bees with Apilife-VAR®. They all had one treatment with no problems occurring, and I gave them the second dose just before going to France for a short holiday. This holiday coincided with the remarkable heat wave which occurred in September. When we returned I found that three of my colonies had vacated their hives and had built extensive comb underneath the hives in the hive stand spaces. There was hardly a bee to be found in any of the three hives, but there was brood and stores in the new comb. However, the queens were clipped and at least I did not lose any bees. It could be argued that even if the queens had not been clipped they would have behaved in the same manner and not flown to a new nest site, but there are plenty of examples of colonies absconding in these circumstances.

Newcomers to beekeeping will find it easier not to clip queens until they have developed confidence in handling bees. However, there is no reason why these newcomers should not ask the suppliers of their bees to clip the queens for them. Maybe the suppliers will be happy to show the beginner how clipping is done.

The clipping of queens' wings is a long established practice used by very many highly respected beekeepers. From amongst the real elite I have mentioned Ted Hooper and Bob Manley. Brother Adam was also obsessive about the clipping of the wings of his queens. As a final point, it says in the BBKA Advisory Leaflet B1 –Bees and Neighbours - "Keep all queens clipped".

N.B. Colonies in mini-nucs are notorious for absconding but obviously this is not a situation where queens can be clipped.

With thanks to Nottinghamshire BKA and e-bees

SEPTEMBER.

Honey should all have been harvested by now.

Return extracted (wet) frames to the hive they came from; leave the crown board on the brood box and put the frames in an empty super above. The bees will clear the frames of the remaining honey and take it down into the brood box.

Store the now dry frames in sealed plastic bags. A builders rubble sack is bee and wax moth proof.

Seal the joins with tape parcel or gaffer tape.

The BBKA September News Letter page eight has more details.

Decide on your Varroa treatment. If you attend the 'Preparing for Winter' on the 10th, there will be plenty of advice and Thymovar for sale at cost price.

Check the hive to see if there are enough stores for the winter.

How much is enough?

40lbs weight per hive should be adequate, and candy can be fed later if stores seem low.

40lbs is about six super frames and 5 brood frames of stores.

If you need to feed use 2:1 syrup. That is 2lbs white sugar to one pint of water.

Reduce the entrance with an entrance block. This will help the bees defend the colony from wasps and robbing.

Bees are inveterate robbers so don't give them the opportunity.

Make sure that when you put the hive back together after checking, that all faces and edges are tight so as not to allow bees to sneak in and avoid the entrance guards.

Also check that old hives have no holes in them which could give access to robbers.

Put out wasp traps if wasps are a nuisance.

Use a jam jar with an inch of water in the bottom in which you have stirred some jam and beer or wine dregs; put the lid back with a pencil sized hole in it. This is cheap and effective and does not attract the bees.

With thanks to Bournemouth and Dorset South BKA

Varroa - A Brief Guide

MITES reproduce on a ten-day cycle. To breed, a mated adult female mite enters a brood cell just before the cell is capped over, where she remains in the brood food until the cell is sealed. About four hours after capping she begins to feed on the immature bee and, after about 60-70 hours of entering the cell, the mite starts laying eggs on the larva which hatch into several females and, typically, one male.

Spread.

Mites can easily move between bees within the hive. They depend on adult bees for travel between colonies through the natural processes of drifting, robbing and swarming. Varroa can spread slowly over long distances in this way. However, the movement of infested colonies by beekeepers is the principle means of spread over long distances.

Mating.

Mating between mite offspring (usually brother and sister) occurs within the cell. Mature female mites leave the cell when the host bee emerges. Males and any remaining immature females die, unable to survive outside the sealed cell. With heavy infestations numerous female mites may enter the same cell to breed. The mites have a preference for reproducing within drone brood (10-12 times more likely). In fact in their original host, *Apis cerana*, they are only able to reproduce within the drone brood, but are also well suited to infest worker cells of the Western honeybee. Bloodsucker The adults suck the haemolymph (blood) of adult honey bees for sustenance, leaving open wounds. The compromised adult bees are more prone to infections. In winter, when brood rearing is restricted, mites over-winter solely on the bodies of the adult bees within the winter cluster, until brood rearing commences the following spring. During the summer, female Varroa mites may live for two to three months. During the winter, or bloodless periods, they can live much longer, feeding on adult bees. Mites cannot survive more than a few days without bees to feed on. As well as causing physical damage by weakening the larvae and adults by feeding directly upon them, they also act as a vector for a number of honeybee viruses and the feeding process may stimulate latent infections to become highly virulent to the bees they affect.

Lifespan

The life expectancy of mites depends on the presence of brood and will vary from 27 days to about five months. During the summer mites live between 2-3 months, completing 3-4 breeding cycles. Developing mites pass through two juvenile stages, known as protonymph and deutonymph, before becoming adults. Development time from egg to adult for males is 6-7 days and, for females, 5-6 days. Each female lays 5-6 eggs, the first being a male followed by 4-5 female eggs laid at regular intervals of 30 hours.

Increase

Mite numbers can increase between 12 and 800 fold over a season. Researchers agree it is wise to try and keep Varroa infestation in the hive below 1,000 mites.

Courtesy of The Scottish Beekeeper; RAMSAY GRAHAM and ebees.

COMB CHANGING Alec Thomson

Reasons for change

Where there has been a drone-laying queen replace the comb as even when a new queen is introduced she will continue to produce drones in the now slightly enlarged cells.

Darkened/blacked frames created as a result of high usage with propolis and carapace deposits.

Post winter frames clogged with solidified honey (probably ivy honey) which limits the space available for the queen to lay eggs.

Any comb where there has been infections such as Chalkbrood, Sacbrood and Nosema
Brood affected by EFB or AFB will be dealt with under the instructions of the Regional Bee Inspector

Benefits of change

- Minimizes disease risk by removal of potentially viable pathogens
- Maintains cell size enabling development of full sized larvae and adult worker bees
- Enables easier colony inspection especially ability to see newly laid eggs
- Promotes good hygiene and general husbandry.

Methods of changing

Partial frame replacement.

Most textbooks recommend removal of 2/3 frames each year but care must be taken not to split the brood as in early spring this could result in chilled brood. Also partial replacement is not effective for disease control as new foundation is likely to become soon become infected nor is effective for Varroa management and does not greatly assist inspections other than on the new frames.

Complete frame replacement

This can be achieved by two methods (which will be the subject of a future article) either Bailey comb replacement of the Shook swarm method. The Bailey comb replacement method however, whilst it will produce some very nicely drawn brood combs, is not regarded as an effective disease control method and can take a long time (ie. weeks) for the bees to move into the new brood box and is not an effective Varroa control method. The Shook swarm method, whilst it is a very

cathartic process for the bees and results in the loss of developing brood, is a highly effective disease control method and is very effective for dealing with both Varroa developing in the brood cells and the phoretic mite surviving on the adult bee. The process however has to be carried out during a good nectar flow or careful feeding by the beekeeper. Ian and Jo were of the opinion that this method was the most effective in contributing to hygiene and husbandry.

Cleaning up frames

Killing larvae/mites necessary to ensure that any Varroa mites in the brood cells are killed 48 hours in the freezer will be sufficient for both feed dead larvae to chickens or similar Remaining wax recovery can be achieved using either a solar extractor or a steam cleaner.

- o Use minimal smoke - because smoke makes the queen run
 - o Cause the minimum of disturbance
- o If you have double brood boxes, always inspect the bottom box first
 - o Run through all the frames twice
- o The queen prefers the 'dark side' and will move quickly out of the sunlight
- o If you still can't find the queen, remove the frames and place them in pairs. Then open each pair like a book and inspect
 - o A warm part of the day is best – because there are fewer foragers
 - o Scan the outside of the frames first and work in towards the centre
- o Stand back - and remember you are looking for 'something unusual' - this is often where the queen is located.

Wooden parts of the frame can be cleaned by scraping and torching or by boiling in such as a 'Burco boiler' with washing soda crystals added.

With thanks to Nottinghamshire BKA and e-bees

Wasps and other Predators

Depending on the type of Spring weather the first wasps may be seen around spare equipment and in the apiary from May onwards. They are seasonal pests as far as the beekeeper is concerned. Both the common wasp (*vespula vulgaris*) and the hornet (*vespula crabro*) will attempt to rob colonies and both often get inside the brood chambers after passing the guard bees. It takes several honeybees to keep a common wasp out of the hive and even more to keep out a hornet. The first common wasps to be seen in the Spring are the queens, which are much larger than their offspring, but both have the same markings of yellow and black bands and therefore are easily distinguishable from the honeybee. The hornet, on the other hand, is a tawny yellow with pale brown antennae and at least 2.5 cm long. Once the latter are inside the brood chamber they will happily carry on robbing whilst the beekeeper handles the frame! The common wasp will attack the beekeeper on occasions but the hornet is rather docile towards humans.

In recent years other types of wasps have been seen in this part of the southern UK. These tend to build nests in bushes whereas the common wasp often builds its nests in lofts of buildings. However, they will build a nest at the base (at ground level) of an external chimneystack or in the base of a tree.

So long as there are no naked flames in the vicinity they can be killed by pouring some petrol (about half a cupful) into a funnel pushed into the entrance to the nest. Immediately close the entrance with some earth and let the fumes kill the bees and larvae in the nest. DO NOT IGNITE. Hornets will build a nest in the corner of a barn or outbuilding as well as in disused house chimneys and often just under the chimney pot. If called upon to destroy a nest in a loft then do wear thicker protection than you have for inspecting honeybee colonies. That is to say, thicker gloves and maybe an old mackintosh over your bee suit. In a loft I would use a normal wasp aerosol spray. If you cannot get to the nest because it is near the soffit then a wasp killing powder is a good idea, as they will take it into the nest from

where they enter the roof. This will kill anything in the nest. Before wasp attacks get severe it is useful to make up a few jam or honey jars containing some sugar syrup. About 3 cm in the bottom is adequate. Cover with a lid made from clear polythene sheet (the type that enclose magazines posted to you, so save some) and puncture it in the middle with a pencil size hole. String or a rubber band will secure the cover. You will discover that bees do not go down into daylight (They instead go up your trouser leg into darkness!), but wasps will. Once the first wasp goes into the jar it drowns and then ferments. They cannot find their way out. Within minutes you will find your first wasp in the

trap. No honeybees will find their way into the jar. Place the jars adjacent to the hives being attacked and on the stands. The most important step the beekeeper can take to give the bees a fighting chance to defend their colony is to use a restricted entrance all year round. That is to say, use an entrance only 8 cm wide. In other words keep your entrance blocks in all year. An alternative was to use the Gilbert louvre that was a design so that the entrance could be restricted down to just one small circular hole, or perhaps five or six such holes depending on the severity of the attacks. It is a misconception that the removal of entrance blocks give better ventilation. I have seen, in Australia, hives suffer complete meltdown when entrance blocks have been removed because the bees cannot control the ventilation. Honey and wax runs out of the entrance under air temperatures of 40°C to 50°C. With a narrow entrance the bees have complete control of the hive ventilation.

Another pest commonly found inside and outside hives is the ant. Usually they do not seem to do any harm but I suspect they take honey to feed their own colonies. My approach to this problem is to put a ring of ant powder around the legs of the stands that the hives are on. This only works until the rain (what's that?) washes it away. As this places the powder 60 cm from the hive floor the bees do not come into contact with it.

Other predators are the large and small wax moths and the former leaves tell tale trails across the sealed surfaces of the honeybee brood. The corner of the hive tool may be used to lift up this trail cover and then the wax moth grub can be picked out and destroyed. Tapping on the wooden frame with the hive tool often encourages the moth grub to emerge. If they are not controlled by the bees or beekeeper then they bore holes into the frames and this is often at the join between the lugs and the vertical sidebars. This weakens the frame and lugs break off, particularly if you are holding the lugs and shaking bees off for the purpose of finding queen cells. For this reason I would recommend always picking up the frames using fingers just inside the top of the vertical wooden bars. This is helpful also if the queen is under the lug as it stops you squashing her if your fingers are not there, but on the top bars themselves.

With thanks to Essex BKA and e-bees

CLEARING SUPERS, USING PORTER BEE ESCAPES

By Bob Gilbert of Warwickshire BKA, courtesy e-bees (slightly edited).

The Porter Bee Escape was invented in 1891 by Edward Porter, and is a very effective method of removing bees from a super if used correctly.

Correctly means using a minimum of 2 escapes in a crown board the correct way up most have top written on them - if not, fit it with the single hole on top! Additionally the spring must be adjusted so there is a 3mm gap between each pair of springs.

To use the board you must provide enough space for the bees to evacuate to so it is no good just placing the clearer board on top of the brood box. Any colony that has collected a super full of honey will be strong and populous.

You must add another super below the clearer board for the bee to collect and cluster in - this must

obviously not be a full super. Effective precautions must be taken to ensure the super is bee tight, (*so that robber bees cannot get in and pinch all the honey! Ed*) so place another crown board on top (sealing off any feeder holes) and use gaffer or masking tape to cover any bee sized gaps. Do not rely on just a roof as they often have faulty ventilators and/or fit loosely. The board works best on a warm day when there is a flow on and most of the bees will clear in 24 hours; any straggler can be shaken out.

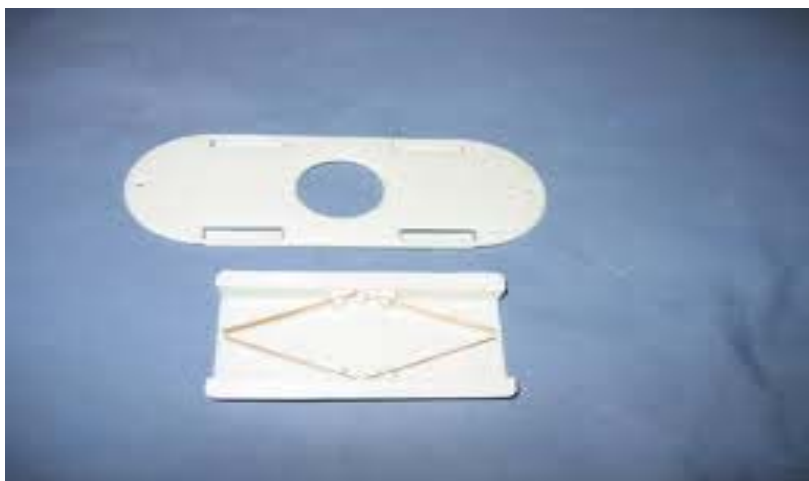
Sometimes if the weather is poor they may be reluctant to leave the super but before you blame the weather, as all 'Englishmen' do, check that there is no brood in the super.

Bees will not desert their young and many times I have found supers still full of bees because of a faulty queen excluder allowing the queen access to the super(s). I always now (well when not in a rush!) check the centre two frames in the first super for brood – finding brood needs other actions not relevant to this article. An additional problem is that some brood may be drone brood and drones being bigger will block the escape springs.

How many boards do I need? Well in my experience placing a pile of supers over a single clearer board will not work, so if you have four supers to clear place TWO empty supers below a clearer board topped with the first TWO supers to be cleared.

Then add another clearer board with the other TWO supers on top before sealing the pile. If you have three supers to clear the order is clearer, ONE super, clearer, TWO supers and a sealed crown board. Do not try to clear more than four supers and it is better to just clear them in pairs. Clearing multiple supers only works in warm weather with a good flow on so be warned!

With many thanks to Bob Gilbert, Warwickshire BKA, courtesy E-BEES



BEGINNER'S PAGES-PREPARING FOR WINTER.

It always seems a little sad that just when summer is in full swing, we must turn our thoughts to colder times ahead. If this is your first winter be particularly careful to prepare your colony well. Several issues need to be considered:

1. Varroa and other pests and diseases.
2. Colony strength and condition.
3. The hive.
4. Honey stores.

1.Varroa.

Varroa physically damages the honeybee larvae and adults in two ways-by feeding on the bee's haemolymph and in the process, vectoring virus diseases. It is these viruses that cause many colony deaths, especially over the winter. Bees hatched in late summer and early autumn are the ones that will carry the colony through to the next spring. They slightly different physiologically to spring born bees and are known as 'winter bees'. They can live for six months as opposed to the six weeks of the hard working spring bees. Many viruses have the effect of shortening the life of the bees, so if the winter bees are affected they will die off faster than they can be replaced. The colony may then dwindle in size until it is no longer viable. 'Traditional' timing for Varroa treatment is in the autumn, maybe as late as October, but it makes much more sense to treat earlier, in August and so have the winter bees hatching into a relatively Varroa-free environment. This way the danger of virus-vectoring is greatly reduced.

What to use?

Bayvoral and Apistan strips, based on pyrethroids, used to be the solution, but Varroa have largely become resistant to them. The remaining treatments, Apiguard and Miteaway, based on Thymol and formic acid respectively, rely on warm ambient temperatures to be effective. This is another reason for treating early. Oxalic acid cannot be used as part of winter preparation as it does not kill Varroa in the brood combs, only phoretic mites. However it is well worth considering treating with it in December when the hive is brood less. The snag of course, is that many colonies will still have honey supers on, and these are meant to be removed during treatment, if the honey is for human consumption. Residues of most substances used to treat Varroa will end up in either the honey or the wax, although they are not necessarily harmful to the health of bees or humans.

Other diseases.

Give your bees a health check and final inspection at the end of the summer. If you know what healthy brood looks like, you should be able to recognize anything different, even if you are not sure what it is. If you are worried, contact an experienced beekeeper or the Bee Inspector if you suspect foulbrood. Brown staining in or on the hive could indicate nosema, which is becoming more common. Send a sample of bees to the Association microscopist for free analysis. Older bees are best for a sample. Put an entrance block in the hive while the bees are flying. When they are clustered on the front of the hive, put a large, open, empty matchbox over them and gently slide it shut. Put the box in the freezer to humanely kill the bees, and then send immediately to the microscopist. If nosema is diagnosed, the colony can be treated with Fumidil B in their autumn feed.

Pests.

All manner of wildlife can be found around beehives, but the most troublesome pests are wasps, mice and other bees. Wasps start to be a nuisance in August, as their colony breaks down and the adult wasps are unemployed and looking for the sugary treats formerly excreted by the wasp larvae. Once they have targeted a hive, even a strong colony has difficulty defending itself, and a weak colony can be wiped out by wasps stealing the honey and killing the legitimate owners. You can try reducing the entrance to one bee space, or piling grass loosely in front of it, or leaning a sheet of glass against the entrance, but you may have to move the colony away if the wasps are really bad. Robbing by other honeybees, from your own or someone else's colonies, is also a serious problem once it has started. Again, reduce entrances to make them defensible, but the colony may have to be moved. Later in the autumn, around October, mice start to look for winter quarters, and a snug beehive is ideal. Although rarely destroying a colony, mice can make a terrible mess of the comb and frames. To prevent them entering, fit a mouse guard over the entrance in October, but first make sure there isn't a mouse inside! If you suspect rats live nearby, put something more heavy duty around the entrance and covering any exposed wooden edges they could get their teeth into. Rats can completely destroy a colony-comb, frames, woodwork- whilst the bees are too torpid to defend themselves. Woodpeckers can also damage hive woodwork, but are deterred by wire netting wrapped around the hive.

2. Colony Strength.

A beehive will keep out the wind and rain, but the temperatures inside it is the same as that outside, no matter how cold, and this is as it should be. The bees provide their own insulation by clustering together. A tightly packed layer of bees on the outside of the cluster keeps in the heat generated by the inner bees shivering-they eat just enough honey to provide the energy for this, perhaps a pound a week. The bigger the cluster the better its insulating powers. (Apparently, though, there is an optimum cluster size and very, very big is not better than just right.) As bees die from age or disease a small cluster may shrink until it cannot keep in enough heat, no matter how many stores they have. It is better to send one strong colony into winter than two weak ones-unite if you have to. The other important issue is the age and vitality of the queen. A one or two year old queen who is laying well, should go through the winter alright. A three year old may become a drone layer-but she may also have a supercedure daughter to go through winter with her. In a poor mating year, a new queen laying a lot of drone eggs should be replaced before winter, as a colony with a drone laying queen is doomed.

3. The Hive.

It is damp, not cold, that kills bees. Make sure your hive is absolutely watertight with no knotholes, rotten wood or rusty patches. The bees will propolise up any small cracks inside, so don't separate the hive parts unless it is essential. Open mesh floors let in sufficient ventilation, but keep them well raised up off wet grass. A hefty stone on the roof helps if it is windy, and a WBC hive may need its roof tying down. The double walled WBC hive does give extra protection in an exposed apiary site.

4. Winter Stores.

It is vital that the bees have adequate honey to see them through to the next spring. Relatively little is used in early winter, but as soon as brood rearing starts, maybe in January, consumption of honey rises quickly. An average colony needs about 40lbs of honey to over winter. It is best if the bees' own honey can be left with them-they worked hard enough for it! Some years though, they simply don't produce enough and if there is less than this available to the bees they must be fed sugar syrup

Assessing stores.

In early September go through the frames and assess the weight of honey in them. A good deep frame, full on both side, holds about 5lbs honey, a shallow frame about 2lbs. Work out the equivalent weight of each arch of honey on the brood frames. Add all the weights together to reach the total amount of honey in the hive. Alternatively, weigh each side of the hive, using luggage scales or a spring balance. Add the two weights together. Subtract the actual weight of the hive plus bees and you arrive at the weight of the stores.

A single deep brood box hive weighs about 30lbs.

A double deep brood box hive weighs about 42lbs.

A deep brood box plus a shallow box (super) weighs about 40lbs.

These weights include the roof, frames and bees.

Example: The right hand side of a single brood box hive weighs 26lbs, the left side weighs 32bs. Total, 58lbs. Subtract the weight of the hive itself (30lbs) and you are left with 28lbs. This is the weight of the stores in the hive. You will have to feed 12lbs of sugar as syrup to attain 40lbs stores.

Hefting.

This means feeling the weight of the hive manually. This is not recommended for beginners, as you need considerable experience to know what the correct weight feels like. However, once you have a good estimation of the weight of the hive, heft it to get a feel for that weight. Suffice it to say that a double brood hive with enough winter stores is almost impossible to lift.

Feeding.

Having worked out how much sugar your bees need, you must now feed. Only use **white, granulated sugar**, as brown varieties are unsuitable and the bees probably won't eat them. Autumn feeding is given as 'thick' or 'strong' sugar syrup. This uses the least amount of water that will dissolve the sugar completely. This is so that the bees can 'ripen' it as quickly as possible and turn it into 'Tate and Lyle' honey. It works out as about 2Kg sugar to 1 litre water. This amount makes about 2 liters of syrup and fills a rapid feeder. Despite what some books say, 1lb sugar to 1 pint of water is a thinner syrup and will take longer to process. You can also put the required amount of sugar in a container, mark the level, and fill to there or a little higher with water. It is important that the sugar is dissolved completely, and boiling water can be used, but never boil the actual syrup.

Feeders.

'Contact feeders' are a container with a mesh insert or very small holes in the lid. It is upended over the feed hole in the crown-board, and the bees suck the syrup through the mesh. They are the best to use in cold weather as the bees do not have to move to access them. The largest size holds a gallon of syrup. Fill them right up with syrup and upend them over a bucket or similar, as syrup always runs out until a vacuum is achieved, and you don't want to flood the hive or spill syrup around the apiary. It is tricky to see if the syrup has all been taken as you can't see through the container. An eke is needed to support the roof.

'Rapid Feeders'

The bees have to go up through an access point and then down to reach the syrup, which they are reluctant to do in cold weather. The commonest rapid feeder holds half a gallon and also needs an eke. Larger sizes, Miller, Ashforth and Jumbo rapid, fit the hive top and hold up to two gallons of syrup. They are easy to use and it is simple to see if the feeder needs refilling-just lift the lid.

'Frame Feeders.'

The same dimensions as a deep frame and fit inside the hive. These are designed for a hive that cannot be fitted with a feeder for any reason and are not really suitable for autumn feeding as they hold so little syrup.

Summary.

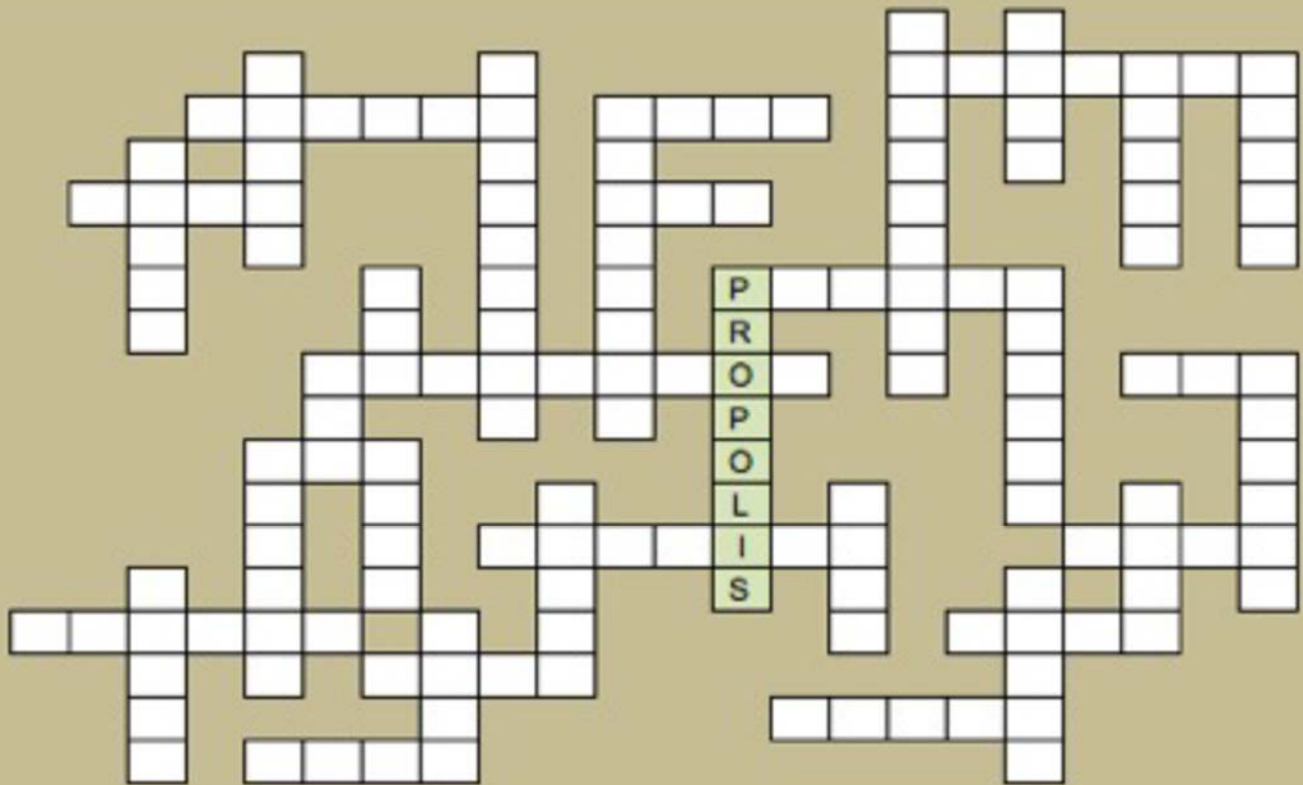
If you take these precautions and send a strong colony of healthy, well-fed bees with a decent queen, into winter, you will have done all you can to ensure their survival. Your bees should have as good a chance as anyone else's of building up quickly once spring arrives. Then, of course, you will have swarming to worry about, but that is another Story!

Judith Rowbottom of Harrogate and Ripon BKA and of course e-bees



A couple of Pictures I took of my Stingless Bees in Thailand .

CHAINWORD.



ACROSS	No of letters	DOWN	No of letters
A NASTY IMPORT FROM THE USA	3	A COMMON MARKET DISASTER?	3
WILLIAM BURROUGHS CARR	3	THE WORKER DOESN'T GET ANY	3
ACTUALLY MEANS 'TO STRETCH'	3	CAN HOLD A PRISONER AS WELL	4
THE PROTECTING --- -- --	4	A POOR AFTER-SWARM	4
BEE HOME	4	OH, BROTHER	4
LETS AIR INTO THE HIVE	4	SYRUP OR CANDY	4
A STING DOES, JOHN	4	ALSO USED ON UNRULY HAIR	4
MEANS BEE TIGHT, NOT BEE QUICK	4	LOUD -- -- -- -- UPSETS THE BEES	5
TO WHICH WE SHOULD ALL BELONG	4	THE DRONE -- -- -- -- THE QUEEN	5
HOLDS A VERTICAL WAX WALL	5	NOT NECESSARILY GAY	5
PROVIDES THE PROTEIN	6	ONE OF BP'S?	5
BERTIE WOOSTER'S CLUB	6	NOT A ROWNTREE'S JELLY FLAVOUR	5
AKA HUMBLE	6	THESE TYPES ARE NOT MADE BY OTIS	5
MITE DO SOME DAMAGE	7	ABOVE	5
HEAD/THORAX/-- -- -- -- --	7	PROVIDES THE ENERGY	6
USED TO BE A MASSEY FERGUSON?	9	HAS A SIX WEEK HARD LIFE	6
		BEES' BOTTOM WASHERS ?	6
		'FOR THE CITY' (GIVEN)	8
		ESSENTIAL GAP	8
		A COMMON STRAIN OF BEE	9
		OUR BEE SPECIES	9

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