

Bee Talk

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

June 2010

www.blackburnbeekeepers.com

Registered Charity

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birt_192@hotmail.com

DELEGATES TO THE CENTRAL COUNCIL

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Philip Ainsworth	Hon. Treas.	0771 3161480

john@johnzamorski.wanadoo.co.uk
email philipainsworth@btconnect.com

MEMBERS SERVICES

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

These Chemicals for treating bees can be obtained from:
Bill Ainsworth. Phone 01282 614015
(Bill 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

David Rayner on 01200 426898

MEMBERSHIP

REGISTERED MEMBER. Subscription will be £18.00

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 £11.00

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 £10.00

ASSOCIATE MEMBER. A member of our branch only, without any benefits from the BBKA or County. Subscription will be £9.00

IMPORTANT INSURANCE NOTICE

Under the new constitution, prompt payment is essential. Basically, payment will be required by the 31 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. TREAS.9 Duchess Street Darwen Blackburn BB3 0QQ
Phone 07713161480

Association Swarm Catchers.

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, ROSSENDALE AREAS

Bob Fulton

Telephone 01254-772780

E Mail::: home.brew@talktalk.net

CLITHEROE AND SURROUNDING AREAS

John Zamorski

Telephone 01200-427661

E Mail::: john@johnzamorski.wanadoo.co.uk

David Bush,

Telephone *01200 428152*

Email :::david.bush2@talktalk.net

BURNLEY, NELSON AND SURROUNDING AREAS

Bill Ainsworth

Telephone 01282-614015

E Mail::: billscotroad@o2.co.uk

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

Please bear in mind that the swarm collectors will only deal with honey bee swarms and will not deal with bumble-bee or wasp problems.

Minutes of Committee Meeting Sunday 17th January 2010
West Bradford village Hall 2.00pm.

1. Members Present :- P Ainsworth, W Ainsworth, R Bradshaw, D Bush, C Coughlin, R Dempster, A Hawkins, K Ramsbottom, D Rayner, P Roberts, V Winstanley, J Zamorski.
Apologies :- B Jackson.
2. The minutes of the meeting held on the 4th of November were taken as read and there were no matters arising.
3. The program for 2010 was discussed and the hiring of speakers decided.
4. Mentors for beginners was discussed. David Rayner would compile a list of everyone who was willing to help and these people would be allocated a number of beginners. Assistance and advice would be by telephone but in extreme circumstances home visits would be arranged.
5. Dates for the rest of this year's committee meetings were confirmed as 18th April, 20th June and 15th August.
6. During any other business, David Rayner requested that a number of books be purchased to assist members who wanted to take the BBKA modules. The sum of £160 was required to cover the cost of these books. This was passed by the Committee. There was also some discussion on the annual dinner. Up to now no member has been turned down when booking but with the increase in membership growing it was felt that we may have to look for a different venue next year if we are unable to accept all bookings this year.
7. There being no further business the meeting closed at 13.55 hrs.

Minutes of Committee Meeting Sunday 18th April 2010
Holden Clough 1.00pm.

1. Apologies for absence received from:- P. Ainsworth, R. Bradshaw, C. Coughlin, A. Hawkins.
2. Members present:- W. Ainsworth, M. Birt, D. Bush, R. Dempster, B. Jackson, D. Rayner, K. Ramsbottom, P. Roberts, V. Winstanley, J. Zamorski.
3. The minutes of the meeting on 17th January were passed as correct.
4. Matters arising from this meeting were discussed. These items included a change to the system to help beginners. Vici Winstanley was tasked to put something together to go on our web site asking for volunteers and she would co-ordinate this. The purchase of the new books was discussed and David Rayner confirmed he would bring these books to meetings for loan. David has also compiled a new list of the books available in the Branch library.
5. John Zamorski gave an update on the latest reports on disease and the committee commented on their individual losses.
6. Dates for the future meetings were confirmed as 20th June and 15th August. Bill Ainsworth commented that we should perhaps change the system of the committee meetings because of clashing with the other members arriving and possible disruption. This item will be added to the agenda for the next meeting and ideas for the change can be discussed.
7. During any other business there were a number of items. The choice of speaker was discussed and Pauline Roberts would sort this. The courses being run at Towneley Hall were discussed. The increase in membership was now creating a problem because the normal venues are not capable of seating the numbers who attend. Some other venues were discussed and it was confirmed that the July meeting would now be held at the home of David Bush. Bill Ainsworth would hopefully be able to sort out some bees for the meeting to be held at Brian Jackson's in June.
8. There being no further business the meeting closed at 2.00pm

FUTURE BRANCH MEETINGS

DATE	TIME	VENUE	ORGANISER/CONTACT
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Reminder to all committee members. Meetings marked * are also committee meetings which will start one hour before the main meeting.

20/6/2010	2pm	<i>Brian Jacksons, Lower House Farm, Cowling Keithley. BD22 0LX</i> <i>Hive opening and guest speaker Ken Pickles, Author of Buckets of Honey from</i> <i>Boxes of Bees</i>	
18/7/2010	2pm	<i>David Bush 2 Upbrooks Cottage, Upbrooks, Clitheroe BB7 1PL</i> <i>Pauline Roberts. Hive opening and speaker John Zamorski on Swarm Control</i>	
15/8/2010	2pm	<i>Salmesbury Village Hall, Salmesbury PR5 0UY.</i> <i>Pauline Roberts and invited speaker to be confirmed</i>	

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

WHAT'S IN THE HONEY POT?



A few snippets of news and information
that might be of interest

Editorial

Well, I am now back in sunny Thailand after spending a nice 7 weeks in the UK and what a change it is from the 10c you were having in England to the 40+ that we are having over here. It as been a cold start for you all but I hope by now that your bees will be making good progress and are well on their way to,lets hope making you a good honey crop by the end of August.

The meetings that we have had up to the time of writing have all been informative and well attended and there are reports for the all later in Beetalk. Its great to see the meetings well attended and with many new beekeepers as well as the older members it makes for an interesting mix.

The Commitee is looking into ways of sorting out some kind of mentoring scheme and up to the time of this editorial going out are still looking at it. I will let you know how things are going in either the next edition of Beetalk or on the website if any developments happen before the next edition.

Congratulations to John Zamorski who as been appointed the Seasonal Bee Inspector for our area . I am sure that John will take on the roll with the same drive and enthusiasm that he takes with all the other duties he does for our association as well as his own personal beekeeping.

The beginners courses that Bob Fulton as arranged at his and Jeans home and apiary have been going well and the feedback I receive from some of our members who are attending seems to suggest that they are a great success. It takes quite some setting up and alot of time and effort on Bob and Jeans part and I would like on behalf of the association to thank them for a brilliant job well done.

Steve Ganner as also done the association proud by giving bees, free to some of our beginner members and also to some of our established members who unfortunately lost bees over the dreadful winter . So again I would like to thank Steve on behalf of us all for his kindness.

I put a report out on the website in early May about the fact that the Small Hive Beetle is now in Hawaii. Now this place may seem like a somewhere which is on the other side of the earth, which indeed it is, but the fact remains that is this is where a lot of irresponsible beekeepers bring into this country queens and I am not alone in saying that this is where the Small Hive Beetle will manage to get into the UK. Its the way its spread into other countries and I cannot see it being any different here. So I suggest you start as by way of integrated pest control measure to look for it and if you find it get on to John Zamorski right away. We have on the website a leaflet from central science laboratories (CSL) which explains all about it.

I hope that by now all your swarm control methods are complete and that you should be getting ready for the rewards of all you endeavours so until the next time you all take care and have a great rest of the season.

Best wishes.

Michael

BEE BASE

Introduction

BeeBase is the National Bee Unit (NBU) website. The NBU is part of FERA – the Food and Environmental Research Agency. It is designed for beekeepers and supports Defra and the Welsh Assembly Government's Bee Health Program and the Healthy Bees Plan, which set out to protect and sustain our national bee stocks. The website provides a wide range of free information for beekeepers, to help keep their honey bees healthy. The site is aimed at all beekeepers and provides basic bee related information for folks thinking about keeping bees right through to information on individuals' apiaries, latest regulatory data and maps showing the distribution of bee diseases found by the bee inspectors. The latest version is almost a complete re-design and is quite easy to use and navigate around.

Registering

Most of the information on the site is available without having to register. However, I would suggest that all members of LRBKA who have bees, should register. This will ensure that the bee unit know of your existence and where your bees are kept, so they can include you in their inspection regime and, in the case of any notifiable disease close to you, they will advise you.

Also once you have received an

inspection visit, you will have the details available to you. Your information is only available to you and the NBU staff.

What is on the site?

The most useful information in my opinion is all the leaflets and documents you can view or download. They cover the majority of things you need to know regarding the basics of looking after your bees as well as the more advanced manipulations to raise queens, change old combs etc, as well as the "well known" documents the NBU have produced for many years on the recognition and control of diseases. If you really want to know about where there are outbreaks of foulbrood, interactive maps are provided. There is also a gallery of pictures for free use. Unfortunately, at the moment, it is of pictures of varroa and bee diseases but in the future it should become a very useful resource for pictures to be used in club magazines, publicity etc. For new beekeepers there is a section especially addressed to you. I found it very well written and the information presented in a logical manner. Also the site invites you not only to register but also to contact the NBU, that will put you in touch with the local bee inspector, who can provide help and advice as well as coming to look at your bees.

Note: When I started beekeeping, (over 30 years ago) the inspector was to be feared because he was the person "who came to burn your bees", as there was much more foulbrood around. Today however, the role of the bee inspector is not just to carry out regulatory inspections but to provide help and training to beekeepers. I talked recently to Andy Wattam and Mike Brown, the head of the NBU, who are proud of the site and are working hard to provide a site that will not only work for the bee inspectors but for all beekeepers. I encourage all members to look at this site. I am sure you will benefit from it and if you feel that the site needs change, then let the NBU know via the website. You can find BeeBase at:

<https://secure.fera.defra.gov.uk/beebase/index.cfm>

With thanks to LEICESTERSHIRE & RUTLAND BEEKEEPERS ASSOCIATION

[BEE DISEASES INSURANCE- IMPORTANT PLEASE READ](#)

The Bee Disease Insurance (BDI) scheme provides cover for hive equipment destroyed by a DEFRA Bee Inspector if Foulbrood is diagnosed among your colonies. As a member of the Association you automatically have insurance cover for three colonies. If Foulbrood is found in your colonies, BDI can pay for you to replace any frames and other hive internals that are compulsorily destroyed. Please note that frames and combs are not insured on a "new for old" basis, so the compensation for older frames or frames in poor condition may be less than the cost of new frames. You should estimate the maximum number of colonies that you will have during the season, and insure for this number, remembering that three colonies are automatically insured. Any and all sizes of hives containing bees count as a colony. For example, bees with a queen in a nucleus box count as a colony, a colony split into two to control swarming or to make increase counts as two colonies and a swarm that has been put in an empty hive counts as a colony. If you have more colonies than are insured, any claim will be rejected completely and NO payment will be made by BDI. All colonies on a communal site must be insured. If not, then any claim arising will be invalid even if the beekeeper whose colonies have been affected is fully insured. You must ensure as far as possible that any colonies and equipment that you obtain are free of disease. It is accepted that new equipment from recognised suppliers is disease free.

If your bees are destroyed by the Bee Disease Officer you should ask the Officer to give you a completed claim form. This should be sent, with the receipt for your premium (available from Phil Ainsworth the Hon. Treasurer) and the Receipt and Diagnostic Report (B4) (which will be sent to you by the Central Science Laboratory in the case of EFB only) to Phil Ainsworth for forwarding to the Scheme 'A' Manager of BDI. The information must be sent to BDI within 4 weeks from the date of the claim form. Those who wish to insure additional colonies beyond the first three (which are paid for by the Association) should complete the Form enclosed with this Apiarist and return it BEFORE MARCH 10th to Phil Ainsworth the Hon. Treasurer. The rates payable are shown on the form. Cheques should be made payable to Blackburn and East Lancs Beekeepers Association. Late payments may mean that cover will not start immediately, and that any claims made within 40 days of payment will be rejected. The detailed Terms and Conditions of the Insurance are available from Phil Ainsworth who should also be contacted if you would like further information or clarification about the scheme. Note that any one with more than 39 colonies HAS NO COVER under this scheme for any colonies. These colonies need to be covered under another scheme,- details from the Treasurer. Please remember that it is an Association rule that members must advise the Association Chairman or Hon. Secretary if foulbrood is diagnosed in the member's bees.

Further detail of the BDI Scheme can be found on the BBKA Website

Association Meetings

Once again our Annual Dinner was held at Hillcrest Tea Rooms at Mitton on Wednesday 17th March.

Members along with their wives sat down to an excellent meal. Over the years a good relationship has developed between us and mine hosts. We are now regarded as friends and not funny people with an odd type of hobby called bee keeping.

A raffle was held under the guidance of David Bush.

The Chairman welcomed everyone and gave the apologies of our secretary and his wife Lynne and wished him a speedy recovery from his operation.

Unfortunately he was not well enough to make it to the dinner (he has stayed at home to have his caviar chips and mushy peas on a comfortable seat). He also thanked all those who had helped to organise the evening and especially to the cooks and waiters who provided the food.

As the meal and the wine mellowed, the world was put to rights along with all those difficulties that have occurred in the last year of bee keeping

A very enjoyable evening (it wer a reet gud do)

Brian.

April Meeting

We have to thank Mr. and Mrs. Joseph Wrigley for their very kind hospitality at their home for our April Meeting.

There was again a very good attendance with about 50 Members.

The format was a questions and answer session and the panel consisted of our three doughty Members, David Rayner, John Zamorski and Mike Birt who answered questions from the floor with that certain je ne sais quoi that they alone possess.

We have a wealth of knowledge within our Club and any problem can nearly always be solved one has only to ask.

Everyone seemed to enjoy the afternoon as many members stayed and enjoyed tea, biscuits and fellowship. We would like to thank Mr. and Mrs. Wrigley once again for their hospitality and our thanks to our panel of judges.

*Pauline Roberts,
Programme Secretary*

May meeting at Colne Masonic Hall.

Once again the Meeting was very well attended with over 50 members present. John Zamorski chaired the meeting as Brian was unable to come.. Our Speaker for the day was Ian Molyneux Disease Liaison Officer who did a power point presentation on Nosema and Acarine

Ian brought tons of equipment to demonstrate how to catch, prepare and examine bees under microscopes. I never cease to be amazed and often smile at the ingenuity of Beekeepers. Ian's latest gizmo for catching live bees was a hand held Dyson vacuum cleaner. We had several microscopes to view the samples of these diseases and very good full colour booklets were freely available, Managing Varroa, The Small Hive Beetle and Protecting the Honey Bee. Ian is a top class speaker and very easily approachable to answer any problems you may be facing. Everyone seemed to enjoy the lecture immensely. Congratulations were offered to John Zamorski who has been appointed a Seasonal Bee Inspector and we all wish him well on his new appointment. I would like to thank Ian for the presentation and also I would like to thank John Tracey for bringing power point equipment, Bill Ainsworth who organized the venue, Lynne Zamorski and Angela Bush who helped with the refreshments.

*Pauline Roberts,
Programme Secretary*

Beekeeping in History



Found this on the internet which shows George Washington with the Beehive symbol of Freemasonry visible in the bottom right hand corner of the picture. We hold a couple of our meeting at Colne Masonic Hall courtesy of Bill Ainsworth so I thought it would be fitting to include this as a way of thanks to Bill and Colne Lodge.

Michael

Bob Fulton's Beginner's Course is now in full swing and now is going into the hands on part of the course which means going into the bees.

Up to now, due to the winter and early spring and with not being able to go into the bees it's been learning how parts of the hive are made up and other practical subjects relating to our craft. Bob did however go into the bees earlier on in the season to carry out a first inspection and mark up any queens, clean up the hives and carry out a general inspection to see if the bees have wintered well, which he was pleased that they all came through in more or less flying colours.



Bob Demonstrating how to make a wax mould



And now into the hives



A captive audience all very willing to learn

Bob runs his courses at his home and apiary for beginners, a couple of times a month. Any novices are welcome and you can contact Bob on 01254-772780

Annual Bee Report 2009 – Northern Region.

Foulbrood Disease and Inspection Statistics

American foulbrood (AFB) has been found in the following 10km squares: -

NY37 (Carlisle, Cumbria) 1 colony in 1 apiary and

- NY47 (Carlisle, Cumbria) 3 colonies in 1 apiary*
- SD34 (Knott End, Lancashire) 1 colony in 1 apiary*
- SD30 (Little Crosby, Merseyside) 2 colonies in 1 apiary.*

The infected colonies in Lancashire and Merseyside have been traced back to bees being supplied from Scotland. (Please see below)

European foulbrood (EFB) has not been found in the Northern region this year, but as last year, there have been several outbreaks close to the Greater Manchester/Cheshire border in North Cheshire.

I have spent a large amount of time this year inspecting colonies in the North Cheshire area and found EFB in the following 10 km squares: -

- SJ69 (Warrington, Cheshire) 3 colonies in 2 apiaries,*
- SJ78 (Ashley, Cheshire) 1 colony in 1 apiary*
- SJ68 (Appleton, Cheshire), 3 colonies in 1 apiary.*

Northern Inspectors have inspected 2267 colonies in 644 apiaries in 2009.

Foulbrood Disease in Scotland.

Following the discovery of American foulbrood disease in Lancashire and Merseyside, in accordance with our protocol, we took steps to try and find the source of the disease.

Our investigations revealed that the colonies had originated in Scotland.

We informed the Scottish authorities and this in turn this initiated an inspection of ‘at risk’ apiaries, this revealed a major disease problem for Scottish beekeepers.

Between July and September 2,764 hives were inspected in 289 apiaries.

American foulbrood was detected in 121 hives in 34 apiaries, all which have been destroyed. The infected areas were around Inverness, Banchory, the Perthshire/Angus glens, Cumbernauld, Dunkeld and at the West end of Loch Tay.

Over the same period European foulbrood (EFB) had been found in 255 hives in 56 apiaries, located in many areas of the East of Scotland from Dunkeld to Montrose and from South Aberdeenshire to Central Fife with the major focus in the Perthshire/Angus glens.

Given the incidence of disease being discovered in and close to the Northern region, it is important that beekeepers are vigilant when obtaining bees and second hand equipment.

Sterilise all such equipment thoroughly before using. Old brood combs should never be used or bought.

It is important also, that beekeepers undertake a ‘foulbrood’ check on their own colonies at least twice a year, bees must be shaken from the comb, any suspect brood should be reported to an Appointed Bee Inspector or a sample should be sent to FERA, National Bee Unit, York. YO41 1LZ. Tel. 01904 462559 or 01904 462510.

Details of disease incidence in and trends in England and Wales and the National Bee Unit (NBU) ‘Foulbrood disease of the honey bee’ leaflet can be obtained from the NBU or can be downloaded from our Beebase web site <https://secure.fera.defra.gov.uk/beebase> (go to advisory leaflets)

Varroa

Varroa levels this season have generally been fairly low.

There are some concerns from beekeepers that oxalic acid is killing their bees.

I 'hive cleansed' all of my colonies last winter without any losses – all were cleansed with oxalic acid by trickling 5mls per bead (gap between the frames) of bees using 3.2% strength solution in late December. I used 1kg sugar to 1 litre (1kg) of water and added 75 grams of oxalic acid dihydrate crystals mixed in to a cool solution. Solutions should be made up fresh.

Best efficacy is when the colony is broodless, as oxalic acid does not penetrate capped brood cells.

Winter colonies should only be cleansed once.

With oxalic acid, most colony losses occur when the colony is already weak due to other problems i.e. queenlessness (mainly old bees present), diseases i.e. Varroa/virus, Nosema or few or no winter bees.

Beekeepers are now tending to use Integrated Pest Management (IPM) successfully, using thymol treatments combined with bio-technical methods and oxalic acid.

For further information on IPM methods please see the 'Managing Varroa' booklet or visit our web site <https://secure.fera.defra.go.uk/bee-base>

Colony Losses

Calculating colony loss figures.

Beebase (National Bee Unit data base) holds a number of different colony loss details, those from our inspections when the Inspector fills in the B2 Inspection form and from other sources like discussions or phone calls from beekeeper or from surveys.

As you will appreciate, the final figures are dependent upon a number of factors, particularly the amount of beekeepers inspected (early in the season we tend to visit those beekeepers who call us out because their colonies have died), the amount of beekeepers surveyed and how many returns we get from a particular area.

Figures in the Northern part of the region (particularly Cumbria and the Cumbrian West coast areas) were high in the winter/spring of 2008/9 figures of between 50 to 60%. This figure drops down as the season progresses as we inspect more beekeepers with live colonies.

Figures in Greater Manchester, Merseyside and Lancashire were slightly lower at about 40 to 50%.

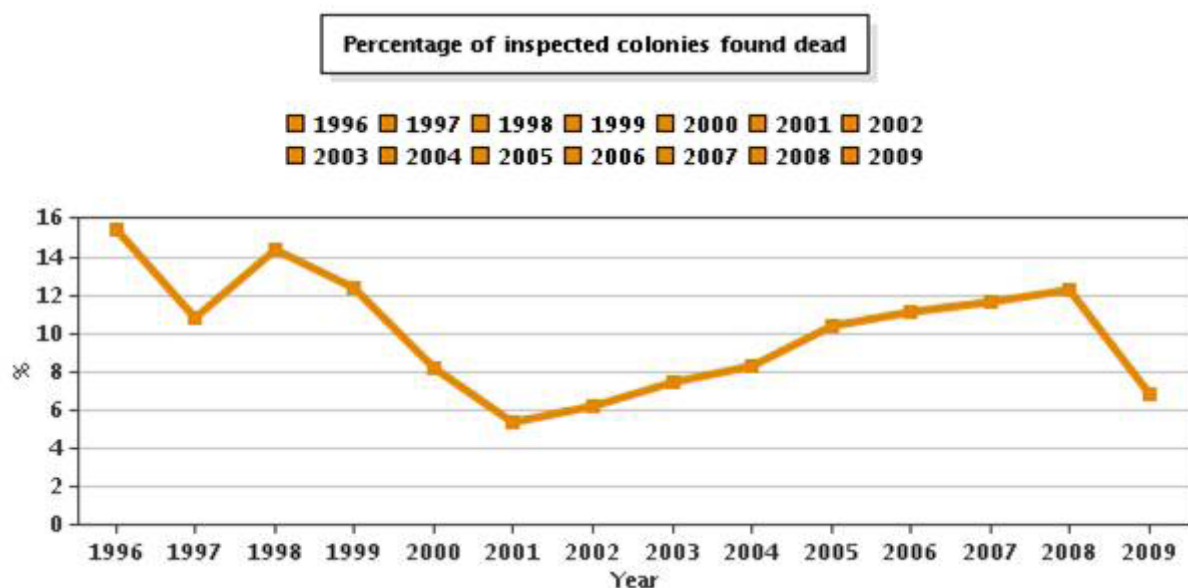
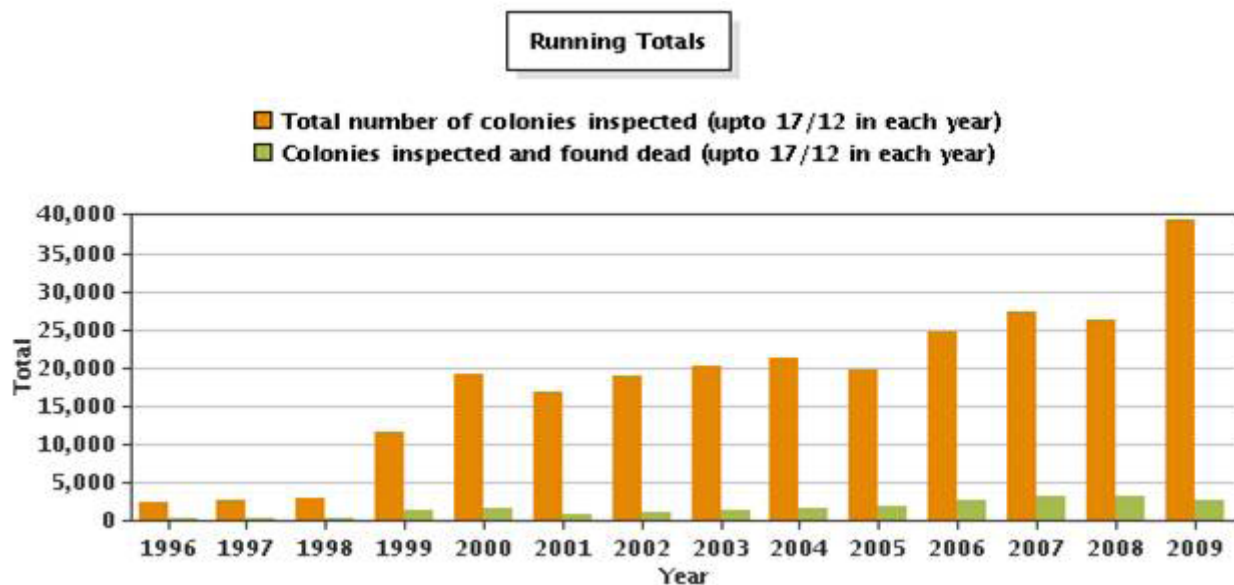
This seems to follow the trend of Pyrethroid resistant Varroa mites travelling Northwards + the poor summer of 2008 (low natural food stores) and poor mating of queens.

In saying this the overall trend in the Northern region is of fewer colony losses, as beekeepers are better at managing their colonies, understanding the need for plenty of ripe natural food stores, low disease levels, well mated queens, enough bees and those of the right type (winter bees) for over wintering

Total colony loss figures for the Northern region from B2 Inspection forms in 2008 was 12.8%, in 2009 it was 4%, nationally it was about 6%.

Total colony loss figures for winter colony losses in the Northern region from surveys and phone calls etc. (winter spring 2008/9) was around 60%.

Please find below two national graphs, one representing colony losses over the last 14 years (from B2 forms). The second one shows that the figures have been steadily rising since the development of Pyrethroid resistant mites in 2001, lets hope the trend of 2009 continues.



Nosema and Acarine

It is good beekeeping practise to complete an adult bee diagnosis for Nosema and Acarine, using old/flying bees. Samples should be taken twice a year, once in Spring (March) and once in late summer (Aug/Sept)

If required, the National Bee Unit will undertake a Nosema check for you at £10 per sample (30 dead bees in a match box). If Nosema is found they will not be able to confirm whether the disease is Nosema apis or Nosema ceranae, as they will only be completing a microscopical examination of the sample.

If your association would like training in Nosema and Acarine detection, then please let me know and I can arrange a suitable day for the training

The 2009 honey season.

As in 2008, 2009 been a poor honey season for nearly all beekeepers in the Northern region. Some have commented that it has been a worst season than 2007 and 2008.

Beekeepers who did obtain a crop were on or near the rape. In many areas farmers had planted spring-sewn rape as well as winter sewn, so this extended the flowering/nectar gathering period

There was little or no summer flow and many beekeepers in Cumbria have had no honey at all. They have informed me that they have been feeding their bees throughout the summer.

Honey crops in the Northern region were down by at least 45 to 50% on a good year.

Even the ever reliable Balsam had a nectar flow gap here of 2 to 3 weeks.

Some beekeepers, with strong stocks, reported 1 to 2 boxes of Heather honey.

Total honey crops for England and Wales was 3289 tons (metric) 45% down on good year.

Events for 2009

As part of the National Bee Unit and Healthy Bee Plan initiatives to improve good husbandry and management practises, there will be several Northern training events in 2010.

On Saturday March 6th we will be holding a 'Healthy Bee Day' at Fera York. (This location to be confirmed). This will be part of the Healthy Bee Plan and will be centred on disease prevention and control, particularly varroa and will involve workshops on other common bee diseases.

There will also be a 'Foulbrood' day in Carlisle, provisionally booked for Saturday 3rd July.

This is aimed at preventing, recognising and controlling American and European foulbroods.

Later in the year there will be a Northern Bee Forum, where members from each association will be invited to attend and offer their views and opinions on our service and any bee health related issues.

All these events will be advertised and confirmed on Beebase in the 'events' section, you will also be able to book a place on the course/s here.

Seasonal Bee Inspector Contacts

Merseyside/Wirral and Lancashire

Doug Jones, (available April to end of August)

'Honeysuckle', 3 Seabank Road , Lower Heswall, Wirral,Cheshire. CH60 4SN Tel: 0151 342 7062 Works mobile: 07775 119444

John Zamorski, (available April to end of August)

46, Woone Lane Clitheroe, Lancashire. BB7 1BG Telephone 01200-427661 Mobile 07775119446

Cumbria

Stewart Beattie (available April until end of July)

'Helensdale House', Long lane, Stainton with Adgarley, Barrow-in-FurnessCumbria. LA3 0NH. Tel: 01229463127 Works mobile: 07775 119443

Durham, and Tyne and Wear (South of Newcastle)

John Newton (available April to end of August)

150 Devonshire Road,Durham,County Durham.DH1 2BL. Tel: 0191 386 3044 Works mobile: 07775 119445

Northumberland (North of Newcastle)

Sue Scott (available April to end of August) Mobile: 07775 119446

Please note all my Seasonal Officers have new 'work' mobile numbers.

Details of disease incidence, research and news updates are regularly placed on the NBU website on www.nationalbeeunit.com or you can access our web based site at <http://secure.fera.defra.gov.uk/beebase>

If there are any items in this report you would like to discuss, then please

feel free to contact me.

Just to remind you, I am available for lectures and demonstrations throughout the year, all cost being taken care of by the NBU.

Ian Molyneux. Northern Regional Bee Inspector

10 Bramhall Ave, Harwood, Bolton. BL2 4EL Tel: 01204 381186 or 07815 872 604 (m). e-mail: ian.Molyneux@fera.gsi.gov.uk

Education Opportunities across the Lancashire & North West BKA Branches.

All of us want to become better beekeepers, but this does not happen by accident. To help everyone progress, the Association is aiming to provide opportunities for as many people as possible to develop their practical skills or with academic knowledge.

Everyone is encouraged to reply and indicate areas of interest, to help us plan for the benefit of as many people as possible.

Full details of the BBKA exam structure and requirements can be found at http://www.britishbee.org.uk/examinations_and_assessments.php#framew

The exams.

These include:

Basic.

For everyone, aiming to bring beekeepers up to a minimum level of competence. It is practical and involves no writing.

Modules.

Written exams covering various areas of knowledge about bees and beekeeping. They can be taken in any order and at any pace. Depending on how many modules are passed, the qualification awarded is either the Intermediate or Advanced Theory Certificate.

General Husbandry.

A practical assessment of a more-experienced beekeeper's skills of bee management and processing the products of a hive.

Help and support studying.

If you are intending to study for any of the exams, please let me know: (i) what you intend to study, (ii) where you are based, and (iii) whether you would be interested in being tutored or joining a study group.

None of this commits you to taking any particular exam.

However if I know who plans to do which courses and where, it may be possible to organise tutoring or study groups as necessary. These can make the learning experience more effective and enjoyable.

General Husbandry.

Ray Dowson has recently been awarded the General Husbandry Certificate. From his own experience, he writes:

“Over the past few years many of you have taken your basic assessment and progressed with your beekeeping.

“Are you now ready to take the next step and have a go at the General Husbandry Certificate?

It is an assessment (no written answers) following on from the Basic when you have to carry out a number of practical activities such as making up a nucleus, inspecting for disease, marking queens, demonstrate a method of queen rearing.

“The Assessor will inspect your honey and wax processing equipment.

“If you would like to have a go next year you need to start your preparation now.

You need hive records for a full year. 3 colonies of bees and a nucleus. Do some queen rearing (not just from swarm cells) this year so that you are ready next year.

“The full syllabus can be found on the BBKA website. When you look at the syllabus it is rather off putting, but I found the actual assessment was less daunting than I had imagined.

“If there is the demand early next year I am sure our new education officer will be organising a workshop to help candidates.” [Ed Officer: “Yes, I will!”]

Microscopy Courses 2010.

The Association plans to arrange a series of microscopy courses for 2010. Venue and dates have yet to be arranged, but they are likely to take place on Saturdays near Liverpool. There will be a fee charged for each, but the amounts will be kept to a minimum. Full details will be provided before bookings are taken.

The precise content of each course will be confirmed later, but there are likely to be three:

Bee diseases.

Pollen.

Dissection techniques.

The first two courses would be open to any members of any of the Branches. The third would be open to all members, but priority would be given to those studying for Modules, in particular the anatomy Modules (4 and 5).

To gauge interest and assist in planning, please e-mail me to indicate interest in attending one or more of the courses. Again, this is not to commit anyone, but rather to establish whether there is an interest for such courses to be organised.

Courses, Tutors and Mentors.

Study and training is helped immensely by good tutors and mentors, for all the different exams and qualifications.

Please e-mail me to confirm whether you are planning to run courses (eg for the Basic), or you would be interested in tutoring or mentoring candidates for any of the exams. I can then put students and tutors or mentors in touch with each other.

If you have any questions or comments, please also feel free to contact me.

Derrick Harris

Education Officer, L&NWBKA

derrick.harris@ormskirkbeekeepers.co.uk

One Varroa-Free Hive?

[Celia Davis spoke about this technique for managing varroa during the honey-gathering season in our March meeting. She contributed the article below to the Warwickshire BKA Newsletter last year (reprinted courtesy eBEES).

Two and a half years ago I bought a brood frame trap from Thorne's. This year (2009) I used it. I started the procedure on 29th June when I reckoned that all the bees possible would be available for honey gathering in the main flow. I trapped the queen in the cage on a frame of clean, empty comb and left her there for 9 days. I then trapped her on a second comb as before, leaving the original comb in the hive, marked with a drawing pin. Another 9 days and the queen was again trapped on a third empty comb. At the same time the first comb was removed and its contents destroyed. After 9 days the queen was released, the second comb removed and its brood destroyed and the third comb marked and left in the hive. At this stage I furnished the queen with 3 frames of clean, drawn comb to give her plenty of room to lay. The final comb was removed, and its brood destroyed, 9 days later. The result of this manoeuvre should be a completely varroa-free hive, as the mites are restricted to entering the combs on which the queen has been trapped and have no other suitable brood in the hive.

Practicalities:

It was not as much fiddle as I had anticipated. It is, of course, necessary to be able to find the queen. It is also essential to get the timing right and this will vary from season to season and colony to colony. A start date must be selected when the hive population is strong and the maximum number of bees is present for honey gathering. On the other hand, if it is left too late, the vital winter bees will be destroyed leading to a weak colony which may die out during the winter or be weak in the spring. I expected the bees to produce queen cells but they did not. Even if they do, the queen is trapped and cannot leave with a swarm, so there is plenty of time to sort them out. When I finally released the queen, the colony temper was not brilliant, but then the weather was not good either. On 15th August there were 5 frames of sealed brood in the hive. These will start to build the over-wintering population and, since they should be completely varroa-free, this should lay a strong foundation for next season

Problems:

None really, except the psychological one of destroying large amounts of sealed brood. The queen laid up the trapped combs completely and, on uncapping them, I found very few mites, but then I have few in the apiary anyway. Of course problems may show up later in the winter or spring and, if they do, I will tell you. The traps are quite expensive, [Currently about £17 – Ed] but they should last for some years.

Advantages:

Theoretically, complete eradication of varroa from a hive without the use of any chemicals. The colony is kept intact with the queen present throughout.

What can I treat my hives with?

Cuprinol has long been the traditional treatment for cedar bee-hives. Recently there has been news that this was no longer safe, as the firm had changed the make-up of its products. However, last year, Cuprinol commissioned a study at the National Bee Unit of the Central Science Laboratory to evaluate the new formulation. Below are the results of that study.

Cuprinol Garden Wood Preserver (DP) Red Cedar and Cuprinol Trade Decorative Wood Preserver (T) Red Cedar were applied by brush application and Cuprinol Trade Low Odour Wood Preserver Clear was applied by dip coating.

In all cases treated hive parts showed no toxicity (up to 6 weeks from treatment) to bees or brood after exposure to these hive parts.

Do not treat outside of hives whilst bees are in the hive!

Decorative Preserver can also be used on external surfaces.

Avoid G S & F /Exterior Preserver as this may taint honey.

*In case of any query, contact Omar Amjad at Akzo Nobel, Wexham Road, Slough, Berkshire, SL2 5DS.
Tel. 0870 242 1100.*

Honey-bee pollination under attack

On January 20th, I and a lot of beekeepers attended the “launch” of the “POSTNOTE” on pollinators at the Houses of Parliament. POST stands for the Parliamentary Office for Science and Technology, and is a body set up to advise members of both Houses on Scientific matters, on which they might be required to legislate.

Ivor Davis spoke on behalf of the BBKA, various other groups had their say, and the whole affair was a very friendly and mutually supportive affair, as one would have hoped. There were only two sour notes, and one of these could turn out to have serious consequences.

One came from an ex-bee-farmer, who argued strongly that the government should never have axed the County Beekeeping Lecturers: a valid point, which he spoiled, however, by rubbishing amateur beekeepers, particularly recent newcomers to the craft. Having just completed the South Cheshire Branch Beginners’ Course with 24 such people, I can refute his claims categorically, and it was a shame to yet again hear a so-called “professional” beekeeper expressing such disdain for those who do not seek to make their living out of beekeeping.

The second sour note came from the very personable figure of Simon Potts of Reading University, who said that 90% of pollination was done by species of bee other than honey bees. This was slipped into an otherwise low-key and reasonable address, and might almost have escaped notice. It does not at first sight, perhaps, seem all that dangerous an assertion, although a staggering overturning of the previously accepted wisdom. Surely, you might think, anything which could be done for other bee-species would be good for our bees too. However, since the 10 million made available by the government is for “pollinators” rather than honey bees, this sort of statement, if accepted, could result in a lot of research money being diverted to other bee-species. Because the base on which research on such species could be carried out is so low, and because they are so difficult to research, compared to honey-bees, this would mean a lot of money, which could have gone a long way in honey-bee research, being effectively wasted.

What is even more staggering than this complete overturning of received wisdom is the basis for the calculation. This rests entirely on Defra figures for the number of honey bee colonies in the UK. Simon Potts has then reckoned what proportion of crops requiring pollination are likely to be within flying distance of this number of honey-bee colonies, and come up with the proportion of 10%. He then has made the assumption that the rest must be pollinated by other insects. This is, to put it mildly, a very unscientific calculation! Since most crops are planted in monocultural blocks in fields, we know that a lot of wind pollination goes on, despite the fact that insect pollination is so much more efficient. His calculation also ignores the fact, as Norman Carreck pointed out at our recent Convention, that hives of bees can be, and are, moved around to pollinate one crop after another. Already, apparently, the harm has been done, and this totally unsupported figure is being used to justify diverting research funds away from honey-bees. This would seem to be another point on which we should be writing to our MPs!

With thanks to Pete Sutcliffe Cheshire BKA

Bee venom and Multiple Sclerosis

A multiple sclerosis victim has seen a dramatic improvement in her condition after being stung by 1500 bees. Sami Chugg is using Bee Venom Therapy (BVT) to fight her symptoms. The treatment involves holding a bee in a pair of tweezers and deliberately stinging an area of skin. Some experts believe the venom in the sting stimulates the body to fight back. Sami was stung at least 1500 times over 18 months. And she claims the therapy has made her mobile again. She said: "When I started the BVT, I couldn't get out of bed or get out of my room. It was really grim. "Most people would be terrified by the prospect of being stung by a bee, but when you have a condition like MS that involves the numbing of the body, any kind of sensation is welcome, even if it's from a bee sting. "You use a pair of tweezers and get hold of a single bee. Then you gradually desensitise your body to the sting by injecting it in and out of your skin a few times. You have to build it up slowly - you start with two, then four, then six. Ten to 14 was my average for each session. It's changed my life and my approach to life. It is manna from heaven." Charity worker Sami, from Bristol, was treated twice a week during her course of the treatment. She said: "There are three locations we used for the stings - above the shoulders, the middle back and then the lumbar area. It's all centred around your spine. It had an immediate impact because it has a kind of psychological, mental effect. I used to feel elated for about two hours after the treatment." BVT, or apitherapy, uses the stings of live bees in a bid to relieve symptoms of MS such as pain, loss of coordination and muscle weakness. It is thought the body's own immune system works to reduce the swelling of the sting and in doing so it releases anti-inflammatory agents that reduce the pain of MS. The therapy is also used to treat arthritis, tendonitis, chronic pain and some skin conditions. There is no clinical evidence to support BVT's use for MS or other medicinal purposes and bee stings can be extremely harmful to some people. But it is used by 10,000 people in the US who believe it is beneficial. The Multiple Sclerosis Society advise people to consult their GP if they are considering BVT. According to the society's website, a small clinical trial evaluating BVT in MS was published in 2005. The study involved 26 people who had bee venom administered three times per week for 24 weeks. Researchers reported that bee sting therapy had no impact on the accumulation of new lesions or relapse rate. The study concluded that BVT had no effect on disability, fatigue or quality of life.

Craig McDonald, Sunday Mail

West Cornwall beekeepers courtesy of Ebees

Oxalic Acid - (HOOC-COOH) - A Chemist's Perspective

As beekeepers, we use an armoury of weapons to foil that arch villain Varroa Destructor. The chemicals we use come under attack, of one sort or another and are surrounded with legend and some myth. None more so than Oxalic Acid, and there seems to be some confusion about the true nature of this useful chemical. Acids can be categorised by their corrosive potential, in scientific terms known as strength, which should not be confused with concentration (a measure of amount per volume such as percentage or grams per 100 ml). Among commonly used acids, Sulphuric (battery acid) is Strong while Acetic (vinegar) and Citric (lemon juice) are Weak; with Oxalic somewhere in-between.

Oxalic acid is usually supplied as its dihydrate, a colourless crystalline solid, which is soluble in water and does not emit fumes in either state at normal room temperatures. On heating above 100oC (212o F), the solid acid both sublimates (converts to a smoke) and also decomposes somewhat to Formic acid – both of which are highly dangerous when either inhaled or in contact with the eyes or skin. The safety procedure is always to use suitable gloves and eye protection and to avoid inhalation of spray, dust or fumes (when heated). Any accidental contact should first be flushed with copious quantities of water and then seek medical advice if of more than a trivial nature.

A solution in water is very stable and can be stored for long periods with little deterioration; however the situation with added sugar is rather different. In the presence of most acids, Sucrose will be converted to a mixture of Glucose and Fructose and the latter will further react to form Hydroxymethylfurfural (HMF). Both of these reactions can be slowed by storing in the dark at low temperatures, but the best answer might well be to combine the acid solution with the sugar shortly before use.

When used with care, your annual intake of this naturally occurring organic acid is more likely to be via stewed rhubarb than through beekeeping activities

With thanks to Richard Kinsman – Somerton Beekeepers

Bee-ginners Stuff.

THE BEEKEEPER AND HANDLING BEES

Expect the unexpected: Bees will not do exactly what you want. Take personal protection seriously. Whenever you tend bees you must be prepared for the unexpected, Plan carefully what you intend to do before opening a hive but even then you may discover a situation quite different to that which you had anticipated. You need to think clearly and quickly which is difficult when bees are inside your veil and going up your sleeve. Even simple operations like topping up the feeder can end with you in full retreat, with stings around your ankles because you omitted to wear Wellington boots, on body and hands because of having no protective suit or gloves and on your face because you lacked a veil. When handling bees wear full protective clothing: Bee proof overalls preferably white cotton (avoid nylon and dark colours), veil, hat, gauntlet gloves and Wellington boots with trousers tucked in. Bees dislike furry or woolly garments and the dressing in some materials, e.g. new jeans. They may also react to hair spray, perfumes, hand lotions and other scented products so these should be avoided. If you do get a bee inside your veil or clothes move well away from the hives before you remove your clothing or one bee will be joined by many others.

Your hive tool: You are undressed without it; since you are almost sure to try to separate some part of the hive by hand, e.g. cover boards, supers and brood chambers which are frequently stuck together with propolis. This will involve jolting and jarring the colony unnecessarily in the process and causing the bees to become angry. Gentle leverage with your hive tool together with the use of cover cloths will minimise the disturbance.

Curiosity killed the cat: Idle curiosity is a poor excuse for opening a hive. Never open a hive without some definite purpose in mind. If routine examination is your aim then plan beforehand precisely what it is you wish to examine, why and how you intend to carry out the examination, exactly what equipment you require for the purpose and where you will place parts removed from the hive. In this way you will save both yourself and your bees stress. Careful handling makes for better-tempered bees: Good-tempered bees mean less danger for you and the general public. Know what you want to do: Do it gently and firmly, remember it is the bees' home you are handling, treat it with respect and restore it with care and precision. Don't hurry but don't dawdle. Replace frames in the same order and the same way round as when removed. Remove with this in mind.

Don't block the bees' highway: Keep to the back or sides of the hive at all times and keep spectators away from the forward flight-path of the bees. Hive parts with bees on: Make it easy for bees removed from the hive to get back through the front entrance - stand removed parts on and forward of the hive entrance so that the bees will climb back into the hive. An assistant (equally well protected) is a great help: acquaint him/her fully with your intentions and what you will want him/her to do, before you start work. Supers with honey and brood chambers with bees and stores can be very heavy.

Examine frames over the hive: bees or the queen may otherwise drop off into the grass and be lost or trodden on. Learn to handle and examine a frame correctly or you will spill nectar and have bees and wasps coming from all directions to steal it, causing serious disturbance and possibly triggering robbing.

Learn to use smoke correctly: Don't suffocate the bees - smoke is merely to quieten them. Cool the smoke with some green grass or wire gauze in the nozzle of the smoker if there is danger of excess heat, flame or ash being blown into the hive entrance or over the bees. One of the most effective, gentle and least objectionable smoker fuels is softwood chips or shavings as produced by a plane in a woodwork shop. Light and insert a piece of paper and feed the shavings slowly on top. A "whiff" of smoke is sufficient to suggest to the bees the danger and proximity of fire. Beware of fire: Be careful where you put your smoker and where you empty it, particularly if there is a breeze. Ideal conditions: Midday to mid-afternoon on a fine, warm, sunny day when the bees are busy collecting nectar during a flow is the ideal time to carry out a hive inspection. Many of the bees are out, leaving fewer bees in the hive and all are busy and content. Certain operations however, such as feeding, moving hives etc, call for action in the late evening or early morning. Less favourable conditions: Very often we are forced to attend to bees when the weather is far from ideal; however some conditions are worse than others and should be avoided. Bees tend to be niggly when fine weather is about to change to foul - wind, rain, cold or thunder especially - and they may continue to be edgy until the nectar flow recommences. Bees become defensive at the end of the seasonal nectar flow when they will protect the stores on which their survival depends. Plain cold or even gentle drizzle is less harmful to the larvae than wind or hot sunshine which will very rapidly dry their moist skin, so killing them. Bees in a winter cluster should not be disturbed unless absolutely essential, close formation keeps them warm and they may be unable to re-form the cluster if disturbed.

Bee temperament: The most acceptable bees are those that remain steady on the comb during manipulations, in a second category are those that run around in confusion, making examination more difficult. A third category boil up onto your veil when you open the hive and the last and most unacceptable bees are those that follow and attack the beekeeper and seek out others to sting at a distance from the hive - "followers"! Take advice at once if you have any such trouble; requeening may well be needed since you do not want aggressive bees. These are not different species of bee but different characteristics of temperament which can differ within the same hive from time to time. They are newly emerged from a hive but if a swarm has left a hive due to lack of food, or has been in the open for a long time, it may be less good tempered. Always be prepared for the unexpected.

Stings; If someone does get stung intervene at once - don't leave it to the victim to remove the sting and venom sac, do this yourself, correctly, with a fingernail, hive tool or blunt knife edge, levering them out from the skin surface and avoiding compressing or squeezing the venom sac. Leave the skin alone afterwards. It will itch but the less it is touched the sooner the effects will disappear and it will normally be no worse than a nettle rash. If someone is seriously affected by severe swelling, faint or ill, seek immediate professional medical advice from a doctor - if in doubt, play safe. Caution. Some people are allergic to some proprietary remedies on sale.

With thanks to Nottinghamshire Beekeepers Association and E-bees

More Bee-ginners Stuff

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The Crisis in Pollination

If you missed this talk at Meon Valley on 1st October 2009, and most did, and know Robin Dean is speaking on the subject somewhere, then go! You will have your socks knocked off. This is necessarily a précis, but I hope still stimulating. Robin has about 100 hives, and his specialist area within pollination is the pollination of apples. For starters, honey bees are bad pollinators. Packing pollen into their baskets does not spread it around, and so pollination is mainly accidental. However, their great number makes up for this, which gives them the edge by a very large margin over all other pollinators. Inadequate pollination produces misshapen and undersize fruit. Apples for example need eight seeds to be pollinated, and whilst receptive over a period of three days or so, apple blossom is at its maximum receptiveness for just sixteen hours. Though looking good in May apple trees can shed loads of fruit in June if inadequately pollinated.

Robin also exploded the myth that honey bees provide 30% of our food, more like 12-15%, and we would not starve if they died out. Robin also explained that major apple producers in Germany asked him for a dedicated talk on pollination to their apple growers, indicating they were pretty ignorant of the actual process of pollination. In the USA, beekeepers host an annual breakfast for congressmen in two parts. The first part consists of food requiring no pollination, followed by foods that do require pollination, with a great increase in variety at the second sitting, to remind these legislators of the importance of bees to the national diet. Interestingly, Robin considers the classification of Colony Collapse Disorder to be politically driven, because there are grants for diseased bees, whereas if classified as Parasitic Mite Syndrome, which he thinks is more correct, this is a bee management problem and no grants are available. He also elaborated on how supermarkets affect matters by their requirement for uniform sized crops, the farmers for reducing harvesting costs by having smaller uniform trees, the need for slightly later crop maturity to enable a better price etc, etc, all have a knock on effect in pollination requirements. So to the crisis. The main factors are:

- a 23% reduction in number of hives in Europe since 2005 (in England the reduction has been 54%);*
- ageing beekeepers;*
- Varroa treatments becoming ineffective;*
- current Central Science Lab and Veterinary Medicines Directorate considered inadequate;*
- the mechanism for transfer of the existing large knowledge base from academia, i.e. the various government research and other laboratories, to the front line, is most inadequate.*
- Pesticides. Some are better than others, but the no pesticides route is not considered an option. The impact of new pesticides/herbicides is unknown, and their half life differs considerably in different soil types. Lobbyists are distorting the picture and results.*

As an example, the recent German ban on neonicotinoids was lifted after 90 days, but not reported. The problem of dead bees was quickly identified as inadequate adhesion of the pesticide to the seeds, the soil was too dry and wind speed too high at sowing, and the air pressure in the sowing drill was also too high. All were quickly rectified. But of course nothing was reported on this aspect of incorrect procedures. Another example was a bee safe insecticide found to be killing bees. The problem here was the wetting agent added to stop droplets forming. This caused the bees to be covered in a layer of water and drown. The producers had failed to mention it. Much easier to pin all the blame on the insecticides. Robin highlighted problems in China, where, in some areas, the ground is still so toxic to bees following the cavalier and abusive use of insecticides, pesticides etc in the earlier communist era, that 10,000 acres of apple trees have to be pollinated by hand and something like 50,000 Chinese are drafted in for this. If translated to the UK, this hand pollination of crops would cost something of the order of £1.5 billion. In America, where the pollination of the vast almond orchards has to be controlled by the exact timely arrival of the bees, the bees are held in storage in the Arizona desert until called forward, where they are fed pollen substitutes by spreading it on the ground and driving the trucks at 5 mph for the bees to forage. How about that for stressing bees. Robin thinks that a new IPM, in this case Integrated Pollination Management, is needed for the future. Here more research is needed on identifying and using local native pollinators, better land management with field margins being planted with pollen and nectar producers to provide forage whilst waiting for the main crop, and the balance of these elements must be adjusted to the mix of local plants, trees and shrubs, i.e. a matched mix of pollinators.

In Australia, for example, the government announced that importing bumble bees for pollinating glasshouse tomatoes was to be stopped, threatening the existence of a major food producing sector. The problem was passed to academia and a local Australian bee was discovered that specialised in tomato flower pollination. These bees are being bred and so the sector should be saved. Robin considers there needs to be more research, education and understanding of the chain of interdependence of these issues amongst regulators, producers and the agrochemical industry. I hope that gave you a flavour of the talk. There is much interesting detail missing, but to get all that you will need to track him down and attend his talk.

With thanks to David Thomas, Fareham, Hampshire BKA and e-bees

Mating flight duration of Apis mellifera queens: As short as possible, as long as necessary

To raise and maintain a sound and reproductive successful colony, honeybee (Apis mellifera) queens require a large storage of sperm in the spermatheca ranging from 2 to 6 million.

About 5 to 10 days after emergence, young queens leave their hives for mating and, after one or two short orientation flights (from 1 to 2 min), they visit drone congregation areas (DCA, as rendezvous places in honeybees are named). There they copulate with several drones, which deposit their sperm in the queen's oviducts. Back in the colony less than 5% of the received sperm is transferred from the oviducts into the queen's spermatheca. This filling process takes more than 24 hours (Woyke, 1960, 1988). Woyke (1960) measured the sperm volume in the oviducts from 129 re-turning queens.

On average the volume was equivalent to that of 10 to 12 drones. Other authors analyzed patriline of the offspring and estimated between 5 and 10 copulations during one flight (Franck et al., 2002; Schläpfer et al., 2005).

Queens regularly fly 1 to 2 km to reach a DCA (Ruttner and Ruttner, 1972). The time to reach the DCA and the highly polyandric mating system in the honeybee involves costs and risks for the queen. Since queens are not able to mate again and replenish their sperm storage once oviposition has started, a behavioral control of mating success has a high evolutionary significance.

Mating flights in general last from 10 to 30 min (Ruttner, 1954). About 60% of the queens perform two mating flights and 10% fly out more often (Woyke, 1964). Similar results were published by Schläpfer et al. (2005). In experiments of Tarpy and Page (2000), however, only 27% of the queens (8 queens out of 30) had more than one mating flight. Due to predation, weather conditions, mistakes in relocating the colony and several other causes, 10% to 20% of queens are lost during these flights (Ruttner, 1980; Ratnieks, 1990; Schläpfer et al., 2005a). Queen loss during mating is disastrous for a bee colony. The old queen has already left the nest together with a swarm before emergence of young queens and the sexual maturation of a young queen takes at least 5 days. Thus, at the time of the queen's mating flight the female larvae in the nest are too old to be transformed into new queens.

Queen loss during mating flights therefore results in the inevitable death of the colony. Limitation of number and duration of mating flights by the queen to an optimum would minimize the mating risks and increase her fitness. Woyke (1964) suggested that queens adjust their nuptial flight frequency to the amount of sperm from the previous mating flight.

He proposed that the queen's behavior is influenced either by the amount of sperm in the oviducts or by the concentration of spermatozoa in the spermatheca. Schläpfer et al. (2005) analyzed the number of patriline after one flight. Queens which tried to perform additional mating flights (but were hindered from doing so) had significantly less copulations and tended to have fewer spermatozoa in the spermatheca than queens that started oviposition without further flights.

They suggest that the queen "counts" the number of copulations "to decide" whether or not an additional mating flight is required. Both findings support the hypothesis that queens are able to adjust their behavior according to the mating success of a previous nuptial flight. Tarpy and Page (2000), however, did not find a correlation between mating flight duration and frequencies of copulation or mating flights, respectively. They concluded that there is no behavioral control by queens, neither by adjusting flight duration nor by taking extra mating flights. Numbers would support the idea that queens continuously get information on her mating success during the nuptial flight and return to the colony as soon as they have mated with a sufficient number of drones.

All very clever stuff, which you would never think happen, but which I suppose is normal to a species that have evolved over millions of years. What else goes on we can only guess at.

It is like, what an old wise beekeeper told me years ago that if we live, keep and study bees for a lifetime we will still know very little about them.

Michael

Why imported queens?

The reason for leaving the BBKA and all associations in it ten years ago was the simple reason of the amount of unnecessary drivel that is talked about in the bee world. A prime example is the forever trying to find the best bee for use, the British black bee. Well ladies and gentlemen, the fact is quite simple it never existed as you all would like it to have done. In the mythology of British beekeeping you have all seen the pictures of the veil-less beekeeper or the lady with only the long flowing dress on tending the bees. Well for any class of beginners I can do the same thing, weaken the stock, subdue it prior to the class or photograph and low and behold a calm easily manageable stock!

Many people ask me is there a problem with bees? Are they dying out? Are they disappearing, will they survive? I normally answer that despite the beekeeper, they are all doing fine, however, something is wrong and losses are up. So what are we doing about it? Breed our own? So how can someone think they can change the bee in half a life time, when they have been around for the last 35 million years in their present form? Can anyone argue that the person with the most time and experience was the late and dare I say the great Brother Adam. Anyone who cannot see that he and he alone on this island had the best chance for finding the British black bee and failed are simply living in cloud cuckoo land. Please read the book "Breeding the Honeybee" by the man himself and you will find the quote "You cannot breed something that never existed! " I cannot believe people in today's climate of bee losses; because their stocks get a little larger than they have seen before and thus the bees defend themselves more readily, they destroy the stock, yes destroy the stock and blame the aggressive bees. Not that they are not used to handling large colonies or that it was the wrong time of day to go messing with the bees, or simply that they have had the colony exposed to the outside world for so long so they can find the queen for the fourth time that week, no its the bees that are aggressive, so destroy. No ladies and gentlemen there are times bees get a little feisty, sometimes a little moody but never a bee that deserves to die because of a bad beekeeper.

I run a fair number of stocks so I don't have time to play with Mother Nature and create the "ultimate bee", so I import mated Carniolans (Carnica) bred with Italians. These are black queens that keep a very tight brood nest; I have found these to be the best in our climate even with the changes going on under our very noses today (I won't bore you with the statistics and characteristics of the breed, please if you have time, read up on them yourselves.) All I can say is that I put a nuc. of five frames with a new queen in a national hive, six feet away from the established Branch hive and it produced 67 lbs of honey to the branch hives 34 lbs. Was that better beekeeping or a better bee?

The Branch members inspected that colony when they did their own. Mr Oliver Field once suggested that I breed my own queens and I pointed out that I can't get mated queens in this country soon enough to replace losses or increase my stocks. I need to continuously expand, (have you seen the price of fuel?) and where on this island can you isolate? Unless you artificially inseminate! You cannot secure breeding. Now if the Carniolans supersede they are at least 50% Carniolan x Italians and within three years are normally replaced. So if and when I produce a batch of queens, I know at least their heritage back one generation. What I am trying to say with all this, is that what people want are bees, new people coming into beekeeping want bees, not hours of needless talk about the latest bee that can overcome Varroa after destroying how many colonies because of not treating and infesting (if that's the right word) hundreds of colonies locally; or the locally produced queens that are the best in Wiltshire or Yorkshire or the Outer Hebrides but they can't have them, because the local queen breeders had a off year and only produced three in

August and maybe next year with a bit of luck might get a queen to head a colony that they may get. They want a colony or a nucleus now or at least in May so they can start beekeeping. So I might be an importer of queens and an enemy of the state but I can at least provide a nucleus of 100% Carniolans x Italians in May to produce a colony of honey producing, mild mannered bees, that are used to a climate very close to ours.

By the way, each batch of queens are inspected by the National Bee Unit for any disease prior to introduction to the UK and the attendant workers destroyed.

I thought I would include this article which I personally think for many reasons is a load of rubbish. But its an interesting article which I hope will maybe stimulate some comments. All you need to do is send in your comments and I will put them in the next issue. And don't these look better !!!!!!!!!!!!!!!!!!!!!!!

Michael.



With thanks to Terry Cooke of the Wiltshire Beekeepers Association and e-bees

NEW FARMING PROTOCOL INCLUDES BEEHIVES

Farming UK Newsdesk 15 January 2010

Bird populations will enjoy a 33% boost in food supplies on some British farms next winter following a revision of Conservation Grade's farming protocol, which enhances a range of animal and plant life by turning 10% of viable farming area into wildlife habitats. The protocol, which is the only one in the UK specifically designed to increase critical biodiverse species while focusing on efficient crop production in the other 90% of the land, is increasing the areas required to be sown with wild bird seed mixes such as cereals, quinoa, sunflower and millet, from 1.5% to 2%. It is also newly supporting the introduction of beehives on all its farms as a 'desirable option', to go with the existing requirement for owl and bat boxes.

The wild bird mixes produce seed during the winter to provide food for birds such as the yellowhammer, linnet and corn bunting. Brin Hughes, agri-environment advisor with Conservation Grade, explained that the wild bird seed mix area had been increased because of compelling evidence of the optimum concentrations of seed growing areas to provide maximum benefit to birds.

"Recent DEFRA research conducted by a group of conservation and biodiversity groups including the RSPB has confirmed that the optimum size for a block of wild bird seed mix is two hectares per one hundred, or two per cent. It may seem like a small change but on our farms alone this will produce as much as 375 tonnes of extra bird seed each year," he said. "The new recommendation to include beehives is simply providing further opportunities for bees to utilise the food supplies from the wild flower and legume habitats required by the protocol."

BUMBLEBEE REJECTED FOR LIVE IMPORT

Environment Minister, Peter Garrett has rejected a request to allow the live import of large earthbumblebees (Bombus terrestris) into Australia. Mr Garrett said a plan by representatives of the hydroponics industry to allow the bees to be brought into Australia for crop pollination in greenhouses could have posed a serious risk to the

Australian environment, native bee populations and native bird species. "As we've seen with animals like the cane toad, originally brought to Australia to deal with pests in sugar cane crops, the introduction of alien species into Australia can have serious environmental consequences. "While I appreciate the potential benefits of improved pollination for the hydroponic industry, the national environmental legislation requires me to adopt a precautionary approach to any proposal to introduce a new species into Australia. "The scientific evidence and advice I have received suggests that the environmental and economic risks of a large earth bumblebee population spreading throughout mainland Australia are significant. "No matter how hard we try to contain them to greenhouses the risk of their escape into the environment are too great. "Bumblebees have escaped greenhouses and established in a number of countries, including Japan and Israel, despite strategies to contain them.

The illegal introduction of the bees into Tasmania in the 1990s saw their rapid and widespread establishment something that could easily happen again throughout southern Australia. "Because these bees are such effective pollinators they have the potential to contribute to the rapid spread of weeds, including exotic species that have not yet become established. And because of their resilience to temperatures and adaptability, these bees would compete with native species for food. "Large earth bumblebees can upset pollination and damage flowers when taking nectar, potentially robbing native birds of food -many of these are already under threat because of habitat loss and destruction." Mr Garrett said his decision followed careful assessment and consideration of public, industry and expert comment. A similar proposal to import live large earth bumblebees was put up for public comment in 2006 and was rejected by all states and territories. The large earth bumblebee is listed as a potentially threatening process in Victoria as a key threatening process in New South Wales and an invasive alien species in Japan.

Maybe the government of Australia have the edge on this lot in the UK and have in their wisdom banned the imports of alien species of bees, Good on you OZ Ed

2009 Queen Bee Imports (News item courtesy eBEES)

Taunton & District Beekeepers Newsletter reported that their Bee Inspector had provided the following figures for the KNOWN import of queens to this country in 2009.

*Greece 2085 Australia 300
Cyprus 778 Hawaii 4182
Slovenia 2034 New Zealand 740
Italy 375
Austria 8
Poland 128
Denmark 44
Germany 113*

The editor commented: I find this figure quite staggering when we are warned of the possibility of exotic species coming into the UK.

All I can say is do they check every queen and her retinue for Nosema cerena etc if not, maybe that's why its now in the country and is maybe the cause of colony collapse syndrome. Michael

The Heddon Method of Swarm Control.

In the production of comb honey, the bees may swarm in spite of the bee keeper's efforts to prevent them. If full advantage is to be taken of the swarm and parent colony, to secure the maximum honey crop, the foraging force of both hives must be conserved. For this purpose, the 'Heddon' method may be applied as follows:

1. Move the parent hive to one side.
2. On its original position, place a new hive, with either built combs or with sheets of wax foundation in the brood chamber.
3. Transfer both the queen excluder and the "super" or "supers"(which will contain bees as well as honey) from the parent colony to the new hive, placing them above the brood chamber.
4. Establish the swarm in the new hive.
5. Put the parent hive close to the new one, but with its entrance at right angles to the new one, and leave them in this position for two days.
6. On the third day, turn the parent hive through an angle of 45 degrees, so that its entrance comes that much closer to the new hive, and leave again for two days.
7. On the fifth day, move the parent hive through the remaining 45 degrees, bringing its entrance into line with and close beside that of the new hive. Leave the hives like this for a further two days.
8. On the seventh day, transfer the parent hive to a new position at least ten yards away.

The advantages of this system are:

1. Honey production is not interrupted, since the honey "supers" are given to the swarm. It should be remembered that, under suitable conditions a swarm is a most efficient honey-producing unit.
2. After-swarms or casts, which cause the bee keeper a lot of trouble and often weaken the parent hive, are avoided, by moving the parent hive. When the latter's entrance is at right angles to that of the new hive, all the flying bees from the former colony are diverted to the swarm and increase its "foraging" force. By removing the parent hive on the seventh day, a further force of flying bees is added to the swarm by their well-developed "homing instinct"
3. The young queen will emerge from her cell in the parent hive seven days after the prime swarm has left. As the colony has been depleted of bees, the other queen cells are not defended by the workers and the first queen is able to kill all her rivals. This she does by biting a hole in the sides of the cells and stinging the developing queens inside. The "surplus" queens are thus eliminated and further swarming does not occur.

The book goes on to say that although casts are automatically prevented by this method, it is not suited to all apiaries. By examining the brood chamber of the parent colony on the day the prime swarm issues, one can examine the condition of the queen cells. One or possibly two cells will be sealed. The remainder containing 'royal' larvae at various stages of development. A week later, it will be observed that the ripe queen cells have dark brown 'papery' tips. These have been thinned down by the workers to allow the queens to chew their way out more easily. A ripe queen cell should be selected and using a knife, the lid is slit open, allowing the queen to emerge. The remaining cells must be broken down.

With thanks to Jack Cox. Ludlow and district BKA and e-bees

AN INFORMAL STUDY OF VARROA TREATMENTS-AUTUMN 2009

We monitor for Varroa in early September both before and during Apiguard treatment. This year we continued with further monitoring, and also needed to make further treatments. The results are interesting despite the study not being properly pre-planned, and we consider them worth sharing. Note - for obviously large numbers of mites, the insert was divided into 16 squares and then the 4 diagonal squares were counted and the total multiplied by 4. Note on statistics. r^2 is the correlation coefficient between 2 data sets. Values are in the range 1.00 indicating a perfect fit, to 0.00 indicating no fit at all. p is probability. $p < 0.05$ suggests there is less than a 5% chance of the results arising by chance and that the relationship can be regarded as a true one.

Apiguard

At the beginning of September we had 9 colonies, but for various reasons e.g. hives returning from an out-apiary, only 5 gave useful results for comparative study. The Apiguard treatment on all hives was from 11th September to 9th October

Hive	Fall per day pre-treatment	Mite fall in first 10 days of treatment
Orange	2.65	561 (of which 531 in first 5 days)
H1	0.67	40
Black	0.17	5
Red	2.17	140
Yellow		504

These results show a good correlation ($r^2=0.82$, $p<0.05$) between monitoring and fall, confirming that monitoring is a good means of assessing the need for treatment. The result for orange is interesting; it had returned from the heather attempting supersedure and at the time of treatment had no unsealed brood. With no mites able to go into cells, the kill from Apiguard was enormous in the first 5 days. The supersedure was unsuccessful so the colony was united onto H1; hence the use of 10 day drop rather than the full 48days.

Icing sugar

2 weeks after the completion of the Apiguard treatment we decided to use icing sugar to get some idea of residual Varroa numbers. We had read (www.scientificbeekeeping.com) that icing sugar is a good method of measuring the phoretic Varroa infestation and that the drop is about half complete in the first hour. All colonies were dusted with 3-4 oz of icing sugar along the gaps between the top frames with bees and the mite drop counted after 1, 2 and 42 hours.

Hive	Total fall in 42 hrs	Fall in 1st hour	Fall in 2nd hour	% Fall in first 2 hours
Orange H1	5	1	1	40
Black	69	24	6	43
Red	11	5	1	55
Blue	48	14	4	68
H2	10	3	1	40
Yellow	16	7	2	56
Pink	75	32	3	47
Mauve	81	60	0	74

What conclusions can be drawn from these results?

That Apiguard did not have a very high percentage kill – many Varroa remained in the hive.

That icing sugar quickly brought down Varroa; nearly half the fall was in the first hour.

That colonies not in a single box (Blue, Black and O/H1) looked to have a slightly

Slower fall rate, but the first hour was still a useful indicator over all. ($r^2=0.89$, $p<0.001$)

If you want to assess your Varroa levels quickly, an icing sugar treatment followed by a count after 1 hour is a very useful method, as proposed by the American work. It also gets rid of some mites! Unfortunately we currently have no threshold values to help us interpret the figures.

Oxalic acid

In late November (just before the Claro Bees opening day) we again monitored the natural drop over 6 days. The numbers were disappointingly high, so we treated all colonies with oxalic acid, following the recommended procedure, on 9th December. The drop was recorded after 2 days, 9 days and 19 days. In almost all cases the fall in the first 2 days was far greater than that in the next 7 and the fall in the final 10 days was very low. Again, there was a good correlation between monitoring and subsequent drop. ($r^2=0.88$, $p=0.001$) This probably holds only if treatment follows closely.

Hive	Treatment drop per day	Post treatment drop per day
Orange/H1	0.0	111
Black	0.8	589
Red	2.8	290
Blue	8*	2834
H2	0.2	146
Yellow	0.3	58
Pink	3.8*	2080
Mauve	3.0	319

*Pink and blue were the strongest colonies, having returned from very good forage at the Golf Club. One can only surmise that they had more brood through the warm late autumn and into November, giving the residual Varroa opportunity to continue to multiply producing these unexpectedly high results.

What other conclusions can we draw from this study?

It is essential to monitor frequently, including after Apiguard, in early winter to see if further treatment is necessary. All the Varroa are then phoretic, so easier to attack.

We had frighteningly high counts in December, when you consider that these hives had all been treated with Apiguard in September and then Icing sugar in late October. These are both useful Varroa treatments, but cannot be relied on either alone or in combination.

Integrated Pest Management, using all the techniques we have, is the name of the game – and it's a very hard game.

Robert and Judith Hart

Many thanks to Judith and Robert for sharing their study with us. This sort of beekeeper interaction makes deciding on a course of action or treatment much easier than going it alone. It is always reassuring to know that others have had the same successes /failures that you have! Please, if you have any opinions or experiences on the efficacy, ease of use etc, of any treatments you have tried, share it with us. We are all in this varroa thing together and need all the support we can get! Ed.

As a start, our own experiences have led us to believe that Apiguard is quite effective on low and medium infestations, but cannot cope with high mite counts. We have had two or three strong but badly infested colonies simply dwindle away, despite intensive Apiguard treatment. Recently, we used Oxalic acid (Dec 2009) on all colonies in one apiary-some had previously been Apiguarded in Sep 2009, some not. All the mite drops, after 48 hours, were >15. We immediately wondered if the stuff was working, but were 'reassured' when the last colony dropped >100 varroa. This colony had showed a heavy mite load earlier in 2009, but had three supers on so was not treated until July, with formic acid, then two months later with Apiguard, then the oxalic acid. Each treatment brought down heavy varroa numbers but the colony was dwindling all the time. Was this over-treatment? Could we have done anything else? With hindsight, I think we should have cleared the supers and redistributed them in May and treated immediately with Apiguard or Formic acid. Will it survive? Watch his space. We also practice what IPM we can. We drone cull all colonies two or three times in spring, but never to the exclusion of all drone brood. They have a job to do later on! The official method is to uncap about 100 cells and work out the percentage which are infested. In practice, we have found that varroa cells tend to be clustered in particular areas of the comb. If these are/are not, the only ones you uncapped, you may get a false reading. It is better to uncap all the capped cells one side at least. Most hives have OM floors, to enable us to monitor mite drops before and after treatment. Swarms are treated whilst varroa are still phoretic. (This includes any shook or artificial swarms carried out). We have not used icing sugar as a treatment as it has to be done twice weekly to begin to be effective. Feasible on a couple of hives close to home, but not on lots of them, ten miles away!

Judith & Mike Rowbottom

With many thanks to Judith & Mike Rowbottom and all at Harrogate and Ripon BKA and also e-bees

The Bailey Comb Change - replacing old brood comb

We are advised that old brood combs should be changed regularly as they become damaged, contain excessive amounts of drone comb, but mainly because they may contain the causative organisms of bee diseases, especially foul brood and Nosema. No brood comb should be used for more than 3 years and used comb should be rendered or burnt. Ideally these frames should be replaced with drawn comb but, if foundation is used, the bees will need to be fed with syrup in the absence of a nectar flow at this time of year. However, it seems more sensible to me to do a complete change so that all (possibly) diseased, deformed and grotty frames are changed at the same time. This can be achieved by doing a shook swarm, but this seems unnecessarily disruptive in the absence of proven European

Foul Brood. An alternative is the Bailey Comb Exchange.

How to do it? There is an account in February BBKA News p 4, but it is unnecessarily complicated. Here is a simpler version which works. It can be performed between March and June, but the earlier the better.

Prepare a clean brood chamber filled with frames of foundation, using narrow spacing, and place it over the existing brood chamber. Unless there is a strong nectar flow on, feed with thick syrup (1kg of white sugar to half litre water). When the bees have drawn some of the foundation, find the queen and place her on this comb, putting a queen excluder between the old and new brood chambers, thus trapping the queen in the top new one. Keep feeding, so that the bees continue to draw the foundation. After three weeks, when all the brood in the old brood chamber will have emerged, the old chamber is removed and the new one is placed on the floor with the queen excluder above ready for supering. The old comb should be rendered or burnt.

NB Foundation should be fresh as, when old it becomes brittle and the bees are reluctant to draw it out, preferring to chew holes in it! Old foundation can be restored in part by warming, in the airing cupboard for instance, which releases the oils.

Combs at the ends of the brood box tend not to be well drawn especially on the outer face, as the bees cannot cluster there to make wax. Turn it around and/or move it nearer to the brood nest.

Anne McQuade: (An Hes [West Cornwall Newsletter] March 2010)
(Courtesy eBEES)

BEE HEALTH THROUGH WINTER AND SPRING

How our bees fare over winter will tell us much about our bee husbandry skills. The condition in which our bees emerge for 2010 will have a considerable influence on results for the season. The biggest colony killers over winter and into spring are starvation, varroa mites and their associated viruses, nosema diseases (note the plural), spring weather conditions and failure of the bee keeper to recognize these conditions and their interactions and to take timely appropriate action. Experience (mostly bitter) is a great teacher! Autumn and early winter are now usually milder and relatively frost free. A lot of bee books were written when the weather conditions were more severe, resulting in bees becoming relatively inactive for most of the winter and consuming relatively little stores. Now our bees remain active much later in the season and consume a lot more of their stores. A super of stores in addition to a well provisioned brood box – or two if we keep a prolific strain of bee, will do no harm, is unlikely to break the bank and could well ensure a colony is kept alive. A late nectar flow from Himalayan balsam can be a valuable source of winter stores. However, balsam nectar has a high moisture content which results in damp conditions in the hive at a time of year when bees can not readily dry out the nectar. This puts the colony under stress, which causes Nosema to flare up. Nosema can also make an appearance later in winter as a result of nutritional stress or as a result of a high varroa mite population. Mesh floors and vigilance on the part of the beekeeper help considerably to avert the problem. One tell-tale that all is not well with the colony are dysentery splashes on the hive front. When you open the hive to trickle the treated syrup over your bees, sniff and sniff again. If the odour is unpleasant your bees probably have dysentery and very probably also nosema. The treatment here is to trickle 50% syrup, preferably warm, medicated with Fumidil B, over your bees without delay. I found that three treatments, a day or two apart, were enough to bring spore counts down to almost undetectable levels. Total medicated syrup quantity used was about half a litre per hive. I do not think that quantity need be very precise. The objective is to persuade the bees to consume the medication over a few days. Fumidil B manufacturers' recommended quantity of Fumidil for direct application is to be found on the leaflet enclosed with the product. We have all become accustomed to dealing with varroa – or have we? The autumn treatment with 'strips' – plastic 'strips' Bavarol or Apistan, no longer work in most apiaries. The mites have become resistant to these pesticides and we have need to look elsewhere. Oxalic acid at 3.2% concentration in a 1:1 sugar solution applied directly to the bees in mid to late December (refer to the product documentation for dosage rates) is a very effective treatment. Oxalic acid must be applied when the colony is broodless, hence the timing. January is too late as brood rearing starts about the middle of the month and oxalic acid is damaging to brood. The practice of some integrated pest management, aimed at varroa, as the season progresses eg use of a thymol product or the crystals themselves, plus drone brood culling, helps to maintain a low mite population. Those of us with the time and the enthusiasm can monitor mite population levels by the use of sticky boards and a magnifying glass. This is another benefit of equipping our colonies with mesh floors, which themselves help to maintain a low mite population, as any mites which fall off their hosts go through the mesh and are therefore unable to climb back. A light coloured sticky floor under the mesh enables us to count the mite fall. The National Bee Unit booklet on the subject (available free) explains how the mathematics work and action levels. We need to keep an eye on the level of stores particularly in late winter. 'Hefting' the hive is one method – lifting one edge of the hive to access its weight and hence stores. Lifting the crownboard and looking down between the frames but not, please not, lifting frames out in cold weather conditions, to check on whether the cells are still capped or empty, is another. Bakers fondant given as a pattie directly onto the topbars is a very useful emergency food supply for a colony short of stores. I have found the use of contact feeders less successful. Just before we leave the subject of nosema there is one other point to bear in mind. We now have two forms of nosema locally. *N. apis* has been around for a long time and is mostly a disease of autumn, winter and spring. *N. ceranae* is a relative newcomer and is reported to strike at any time during the year so do be vigilant during the summer. Early spring is a critical period for bees. Stores are likely to be low and if the weather is cool they may not be able to forage. Once again we have a stressful situation which can very quickly result in nosema which can and does quickly bring a colony to a state of collapse. The disease destroys the epithelial cells in the ventriculus, the main digestive organ, of the workers. Infected nurse bees are unable to digest pollen and their ability to produce brood food in their hypopharyngeal glands is thus impaired. The resulting impairment of the colony's ability to produce the next generation of workers spells disaster for the colony. Late autumn, winter and early spring are not times when we can forget about our bees; some inspection is required as described above. Do take a veil to the apiary in winter, the bees are by no means asleep and may not be best pleased to see you! NB. Thymol and Oxalic acid mentioned in this article can be damaging to the bee keeper and must be handled in accordance with the label instructions whilst wearing appropriate protective equipment.



Good bee keeping, healthy bees and full supers in 2010.

With thanks to David Rennison., Harrogate and Ripon Beekeepers Association and e-bees

Tributes to king of beekeeping

Tributes have been paid to the man responsible for writing the “bible” of beekeeping.

*Ted Hooper, 91, passed away at Broomfield Hospital recently. He lived in Boreham. In 1976 his book *A Guide to Bees and Honey* was published and became a must have of many beekeepers throughout Britain and the world. It has been translated into more than 12 languages and has sold over 100,000 copies worldwide – being re-published many times.*

*Mr Hooper became the lecturer in apiculture at Writtle College in 1962. He moved to Essex with his wife Joy and two daughters. Initially, he lived at the rectory in East Hanningfield where the Rev Ost was both the incumbent and a beekeeper. From 1962 until his retirement in 1984 Mr Hooper lectured at Writtle and in all ten divisions of the Essex Beekeepers Association. He was the county beekeeping instructor for the same period. He was also President of the Essex Beekeepers' Association for several years. Mr Hooper was a very popular lecturer in Britain and abroad, being able to explain beekeeping procedures in a way everyone could understand. He was an excellent handler of honeybees and taught others how to read the combs, in order to know what was happening in the hive. His interest in beekeeping began when he lived in Devon where he was born. Not wanting to work in his father's joinery and decorating business, he and Joy went to beekeeping classes. He started keeping bees as a hobby, but was later employed for five years by Rowse Honey Farms, in Hampshire, working more than 500 hives. Having passed the many British Beekeepers Association examinations, he successfully passed the examination of the National Diploma of Beekeeping. Later in life he became the chairman of the National Diploma of Beekeeping committee and chairman of the BBKA examination board for more than 15 years. In 1985, in conjunction with Roger Morse, professor of apiculture at Cornell University in the USA, Mr Hooper coauthored the *Illustrated Encyclopedia of Beekeeping*. In 1988, in conjunction with Mike Taylor, of Writtle College, he coauthored a book called the *Beekeepers Garden*. Those who received tuition from Mr Hooper owe a lot to his knowhow. Through him many beekeepers, especially in Essex, have gained considerable knowledge which is now being passed on to others.*



Mr Hooper was awarded his MBE in recognition of his services to beekeeping. He will be sorely missed and our condolences and good wishes go to his wife Joy and their two daughters, five grandchildren and two great grandchildren.

Swarm Management

Before you need to do any swarm management controls you will first have to look at the colony and assess if the colony is ready for swarming. The way to do this is as follows:

In our area, the end of April to early May is a good start for your inspection monitoring but this will depend on the climate and your colonies condition at the time.

When checking for swarming preparations look always for the following things.

- *Drone brood on the comb and a lot of mature drones flying. Monitor for the increase of drone brood.*
- *Does the queen look thinner than the last time you look at her as the workers will slim her down ready for swarming.*
- *Is there absence of eggs in worker and drone cells as the queen will stop laying in readiness for swarming.*
- *Look for queen cells, they will usually be found along the top, bottom and side edges of the comb.*
- *The presence of eggs in queen cells.*
- *Sealed queen cells, these can trigger a swarm 8 to 9 days after the egg is laid if the weather is good.*
- *Make sure your queen is marked up and if you wish to clip her do it now.*

Swarm Management options.

If you have done the above and identified that the colony is about to swarm you have 2 options on what to do.

1. *Swarm management with no increase in colony numbers.*
2. *Swarm Management with an increase in colony numbers.*

In both cases you will need to make an artificial swarm. The artificial swarm is the colony that contains the original queen. Whist the parent colony (original colony) is the colony which the new queen cells will be raised and new queens will emerge and mate.

Have all the equipment you require ready in your apiary and read through from below which method you want to do, make notes and what you are doing. Have a couple of dummy practice runs to know where to put things and in what order. Make sure that the queen is marked.

This should have been done at your first inspection a month or so ago.

First of all you will have to make up an artificial swarm. And here is how to do it

Making up of the artificial swarm.

- *Gentle smoke the entrance of the hive and stand back for a couple of minutes.*
- *Remove the roof gently and smoke over the crown board, and put the roof to one side of the hive about a metre away.*
- *Remove any supers and put at one side on top of a crown board, cover them up with a cloth to keep the bees quiet and in the supers.*
- *Place the original brood box on a spare crown board.*
- *On the original location where you have just removed the brood box put a floor and an empty clean brood box.*
- *Go back to the original brood box you have at the side, containing the queen and gentle smoke over the frames. Make sure you only use a little smoke as if you use too much you will panic the queen and she will move off the frames into a recess of the hive and will be hard to find.*
- *Go through the frames until you find the marked queen.*
- *Use a queen marking cage to hold her on the frame whilst you check the frame for any queen cells.*
- *If this frame is the only one in the hive with queen cells move the queen onto another frame. On no account must she be on a frame with any queen cells.*
- *Place this frame with the caged queen and bees into the new brood box on the original site and let her out of the marking cage.*
- *Make up the rest of the brood box with drawn clean comb or foundation.*
- *Replace the queen excluder, supers, crown board and put the roof back on.*

Most of the flying bees will go back to the original site which now contains the artificial swarm. Feed this artificial swarm with light syrup unless there is a good honey flow in progress.

With this now done you are now ready to do your

1. *Swarm management with no increase in colony numbers.*
2. *Swarm Management with an increase in colony numbers.*

So here we go

Swarm management with no increase in colony numbers

The objective here is to keep up the honey production of the colony by keeping the foraging bees as a single colony rather than losing them to a prime swarm and after casts. Also by this method the rearing of brood continues uninterrupted, the artificial swarm will continue to forage for nectar and the colony as been re-queened.

- *Move the parent colony close to one side of the artificial swarm you have just made.*
- *Select 2 unsealed queen cells containing larvae and destroy the rest from all of the frames.*
- *Mark with drawing pins the tops of the frame or frames that have the queen cells you have just selected.*
- *Calculate the number of days which you expect the queens will have emerged from the queen cells and also the number of days that surviving queen will have mated and will be laying. This can be up to 21 days after the date she emerged from the queen cell: if after this time you look into the hive and there is no sign of any eggs, the queen will have been lost on her maiden flights or maybe have been damaged in some way or another. You will also be able to tell with the attitude of the bees if she is there or not even if you cannot see her.*
- *When this new queen is laying you can unite this colony with your artificial swarm. But you must first find the queen in the artificial swarm (the original queen) and get rid of her, that unless she is a valuable one and you wish to use her for breeding, in which case you can transfer her to a newly made up nucleus colony.*
- *Unite the 2 colonies by newspaper method, by this I mean place a newspaper which is been perforated in a few places which will enable the bees to chew through and so open up a contact between the 2 colonies. The odours will mix and the colonies will unite. The colony with the queen should be at the bottom and you can use a queen excluder to stop her going into the top box, but this rarely happens.*
- *Put on the queen excluders and supers and leave until all the brood in the top brood box as hatched out. Then you can shake the bees down and take away the top box, putting any stores etc down in the bottom box.*

Swarm Management with an increase in colony numbers

This method lets you produce 2 nuclei (nucs) which you can grow into 2 new colonies.

- *Put 2 nucleus boxes with their floors on the roof of the artificial swarm to have just made up. Make sure that the entrances face opposite directions.*
- *Go through the combs of the original colony and split the colony into 2 equal parts with each part having two unsealed queen cells.*
- *Remove all the other queen cells.*
- *Put each half part into each of the nuc boxes.*
- *Mark the frames which contain the queen cells with drawing pins.*
- *Replace the crown boards and the roofs of the nuc boxes.*
- *Again calculate the times for which the virgin queen will have emerged, mated and will be laying eggs.*
- *Once the queens are laying and are getting on with, they can be transferred to full brood boxes and moved to another site more than 3 miles away for a week and then brought back to continue their development.*

There are many other variations to the above methods which I will not go into on this paper. These include the Curry Method, The Snelgrove Method, Pagden Method, Damaree Method and the Taranov Board to name a few. There will also be other methods that some beekeepers have thought up for themselves which I am sure work well. The above methods are the basic ways of swarm control which are, I suppose the work horse way of doing and have been handed down over the years and to me are a sound basis for the beginner.

The Trigona Species, (Stingless Bees). Their roll in higher plant pollination.

Introduction

Bees are social insects which are closely related to wasps and ants. The bodies of bees are divided into head, thorax and abdomen, with three pairs of legs, pairs of segmented antennae and two pairs of wings on the thorax. The queen lays eggs in a wax cell by the ovipositor that is modified in the workers to form a sting.

Bees live in colonies. They have divisions of labour in which individuals carry out particular duties. There are three kinds of bee in a colony, a few hundred drones or males, one or two egg-laying females or queen, and from 300 to 100,000 thousand workers bees,(number are varied on species and environment).

The mature queen is easily recognized by her large abdomen. Bees have combined mouth parts, so they can both chew and suck (whereas grasshoppers can chew and moths can suck, but not both)

Honey bees are primarily distinguished by the production of honey, beeswax and pollination. Honey bees belong to members of the tribe Apini and genus Apis. They represent only a small part of the approximately 20,000 known species of bee.

Also some other types of related bees produce and store honey, but only members of the genus Apis are true honey bees.

The largest bee in the world is an Indonesian resin bee or leafcutter bee (Megachile pluto) whose females can attain a length of 39 mm while the smallest bee is Trigona minima, a stingless bee those workers are about 2.1 mm

Stingless bees

Stingless bees are very diverse in behaviour, but they are highly eusocial.

Stingless bees are of the tribe Meliponini in the family Apidae, and closely related to the common honey bees and found in most tropical or subtropical regions of the world.

Stingless bees are not active all year round; they are less active in cooler weather. Unlike other eusocial bees, they do not sting but will defend by biting if their nest is disturbed.

They live usually in nests in hollow trunks, tree branches, underground cavities, or rock crevices. 500 stingless bees' species are recorded and they are classified into five genera: Melipona, Trigona, Meliponula, Dectylurina and Lestrimelitta and some of them like Trigona and Melipona are the honey producing bees.

Australian stingless (Teragonula carbonaria) bees produce less than one kilogram honey but it is prized as a medicine in many communities.

Trigona Species

Trigona is the largest genus of stingless bees and have many subgenera. Trigona is a genus of the Meliponini tribe which is found extensively in tropical regions. It extends from Mexico to Argentina, India, Sri Lanka to Taiwan, the Solomon Islands, South Indonesia and New Guinea, but no members of the genus occur in Africa.

Two species (Trigona binghami and Trigona minor) are newly added to the list of 30 species recorded earlier by Schwarz (1939), and Michener and Boongird (2004) making a total of 32 stingless bees of Trigona species currently recorded in Thailand. The newly recorded species were found in HM Queen Sirikit Botanical Garden in Maerim, Chiang Mai, Chanthaburi and Mae Hong Son Provinces, Thailand. During 2004 to March 2005 in the lower mixed deciduous forest at the Golden Jubilee Thong Pha Phum Project, in Kanchanaburi Province, 2 genera (Trigona and Hypotrigona.) and sixteen species of stingless bees were found in this area, namely Trigona apicalis Smith, T. melanoleuca Cockerell, T. atripes Smith, T. canifrons Smith, T. thoracica Smith, T. terminata Smith, T. ventralis Smith, T. flavibasis Cockerell, T. iridipennis, T. iridipennis, T. iridipennis, T. iridipennis, Hypotrigona scintillans, H. pendleburyi and H. klossi. The diversity of Trigona. and their resin and gum collecting behaviour mostly depended on environmental factors. The bees prefer to collect resin and gum from 16 plant families including Anacardiceae, Dipterocarpaceae, Euphobiaceae, Hypericaceae, Meliaceae and Moraceae.

During the rainy season they collected resin and gum all day, whilst during the dry season start from afternoon until late in the day. T. apicalis collect resin and gum to make the largest number of propolis compared with the other bee species. The cytogenetic study of 31 species of genus Trigona found females had $2n = 34$ chromosomes and males had $n = 17$ chromosomes. The C-banding patterns showed that the karyotypes of these species consisted mainly of acrocentric and pseudoacrocentric chromosomes.

Pollination

Pollination means the transfer of pollen grains from plant to stigma by the help of biotic and abiotic agents by the same plant or same kind of species. After transfer, pollen grains then fertilise and sexual reproduction take place. Pollination is a necessary step in the reproduction of flowering plants and results in the production of offspring. The pollination process is interactive between flower and vector and was first addressed in the 18th century by Christian Konrad Sprengel. It is important in horticultural crops because fruits are the end product of pollination after fertilization.

There are two types of pollination, abiotic and biotic pollination.

Abiotic pollination

means where pollination takes place without the involvement of living organisms or transfer of pollen by help of wind and water. It's quite rare, only 10% of flowering plants are pollinated without organisms. This form of pollination is predominant in grasses, most conifers, and many deciduous trees. In aquatic plants pollination occurs through water by releasing their pollen directly into the surrounding water. About 80% of all plant pollination is biotic. Of the 20% of abiotically pollinated species, 98% is by wind and 2% by water.

Biotic pollination

When pollination takes place by the help of living organisms like insect, birds, etc. we call it biotic pollination. There are roughly 200,000 varieties of animal pollinators in the wild; most of them are insects. Pollination by insects (bees, wasps, ants, beetles, moths, butterflies and flies) and often occurs on plants due to their attractive developed coloured petals and strong scent. Also pollination is carried by vertebrates such as birds and bats. Plants adapted to using bats or moths as pollinators, typically have white petals and a strong scent.

Mechanics of pollination

Sometimes the terms “pollinator” and “pollenizer” are confused, for clear understanding the term pollinator means the agent of biotic or abiotic system which helps to transfer the pollen from source to a definite place, while the term pollenizer is the plant that develops as the pollen source for the same plant or other plants. Some plants are self-compatible and can pollinate themselves while other plants have chemical or physical barriers to self-pollination and need to be cross-pollination.

In pollination management, a good pollenizer is a plant that provides compatible, viable and plentiful pollen and blooms at the same time because pollination requires consideration of pollenizers.

According to pollenizers, pollination can be classified in two ways like cross-pollination (with a pollinator and an external pollenizer) and self-pollination (basically without pollinator).

Plants and pollinator interaction due to biological and physical features such as colour shape and odour of the flower and it is governed by energy needs.

The pollinators are highly selective in their floral visits and are shown to choose those flowers which best meet their energetic needs. The energy needs and foraging dynamics of pollinators are dependent upon prevailing weather conditions which regulate the schedule of pollination.

Pollinators and agriculture

Pollinators provide an important ecosystem service to both natural and agricultural ecosystems. Pollinators ensure fruit set development and dispersal in the vast majority of plants in both ecosystems. In turn, plants provide food and nesting resources for pollinators.

The process of securing effective pollinators to service agricultural fields is not always easy.

There is a renewed interest in ensuring pollination services through practices that support pollinators.

Pollinators like honey bees, birds, bats and insects, play a crucial role in flowering plants for the production of fruits and vegetables. Without the help of pollinators those plants cannot reproduce. They can pollinate two-thirds of our food crops.

In countries like Canada, Germany, Italy, Japan, France, Great Britain, Australia, New Zealand, China, Argentina, Mexico, India, Netherlands, Korea, they have developed the beekeeping industry, and increased crop production tremendously. In Israel the beekeepers are able to commercialise the culture of bumblebees for crop pollination, particularly for greenhouses, they export these bees throughout the world.

The fact is there is no country on this planet that has productive crops without a developed beekeeping industry.

The crops and pollinator species belong to each other and the world's food supply depends on the health of these pollinators.

There are more than 100,000 different animal species or perhaps as many as 200,000 species playing a role in pollinating the 250,000 types of flowering plants on this planet.

The annual monetary value of pollination services in the global agriculture industry could be as high as \$200 billion.

Honey bees pollinate approximately \$10 billion worth of crops in the United States annually, however, the crops that make up most of the world's food supply, only 15% are pollinated by domesticated bees, while at least 80% are pollinated by wild bees and other wildlife.

Australian farmers rely heavily on the introduced Western honey bee to pollinate their crops.

Trigona species (Stingless bees) and crop production

Plants and bees are made for each other because their development is closely related.

If bees are allowed to cross-pollination, crops are able to increase up to 40% in production. Bees are absolute pollinators compared to bats, birds and others due to their vast numbers, for example a Trigona colony has a maximum of 100,000 workers while Apis mellifera could have 60,000 maximum workers.

Stingless bees have been shown to be valuable pollinators of crops such as Macadamias and Mangoes.

The pollination effectiveness of two species of stingless bees (*Tetragonisca angustula* Illiger and *Nannotrigona testaceicornis* Cresson) and Africanised honey bees (*Apis mellifera* L.) was determined for the ornamental plant *Salvia farinacea* Benth.

All three species of bees highly increased the seed production in comparison with pollinator-deprived plants

They may also benefit strawberries, watermelons, citrus, avocados, lynchies and many others. In the Philippine the Trigona are better pollinators than the Apis species because they are very efficient and effective under these conditions.

Pollinator bees, particularly Trigona, have great markets in Japan and Korea. These countries are now importing Trigona species from Australia. The Japanese are now appreciating the value of Trigona over the Apis species because of the worry of stinging of the Apis species. Trigona have a very low tendency to swarm because there are more than two queens per colony, they rarely absconding and have a longer working life of up to 60 days per worker.

Trigona worker bees forage up to 500 meter radius which means more intensive pollination of crops near to the hive. Also they have very short tongue so they can gather more nectar and pollen compare of other species.

Trigona species are highly tolerance to pests and diseases because of their smaller size and extensive use of propolis which serves as germicidal and pest repellent. They are highly tolerant to heat because of their propolis canopy.

Due to above mentioned characters, Trigona species are the best pollinator for pollination in horticultural crops.

NEW FARMING PROTOCOL INCLUDES BEEHIVES

FarmingUK Newsdesk 15 January 2010

Bird populations will enjoy a 33% boost in food supplies on some British farms next winter following a revision of Conservation Grade's farming protocol, which enhances a range of animal and plant life by turning 10% of viable farming area into wildlife habitats. The protocol, which is the only one in the UK specifically designed to increase critical biodiverse species while focusing on efficient crop production in the other 90% of the land, is increasing the areas required to be sown with wild bird seed mixes such as cereals, quinoa, sunflower and millet, from 1.5% to 2%. It is also newly supporting the introduction of beehives on all its farms as a 'desirable option', to go with the existing requirement for owl and bat boxes.

The wild bird mixes produce seed during the winter to provide food for birds such as the yellowhammer, linnet and corn bunting. Brin Hughes, agri-environment advisor with Conservation Grade, explained that the wild bird seed mix area had been increased because of compelling evidence of the optimum concentrations of seed growing areas to provide maximum benefit to birds.

"Recent DEFRA research conducted by a group of conservation and biodiversity groups including the RSPB has confirmed that the optimum size for a block of wild bird seed mix is two hectares per one hundred, or two per cent. It may seem like a small change but on our farms alone this will produce as much as 375 tonnes of extra bird seed each year," he said. "The new recommendation to include beehives is simply providing further opportunities for bees to utilise the food supplies from the wild flower and legume habitats required by the protocol."

NATIONAL HONEY SHOW

Scottish Beekeeper newsletter

It's a bit early to be thinking about the National Honey Show isn't it? Well, not really, especially if you are new to beekeeping and joined your Local Association after 1st August 2009. Is that you? If so, you can get in free! To get your free ticket you need to ask Maurice Jordan to apply on your behalf to the NHS General Secretary. He will need to supply your name, address and your email address if you have one. The NHS is run entirely by volunteers. Using email helps simplify the administration. The cut off date for applications is 31st July and time rushes by when the season starts so get that application in now.

AN EXPERIMENT NOT WORTH REPEATING Mark Fife, Wiltshire BKA

(Selected by Bob Logan from the newsletters of other BKJA circulated to interested members)

The fact that I am a scientist and a relatively novice beekeeper (in that I am not wizened through years of experience....) means that I really like to see things for myself. Indeed, some may say experiment! So when, at the end of the season, it was time for Varroa knock-down, I had a plan. Let's see what will happen if one of my six hives does not get any treatment....

The five remaining hives were treated with Apiguard as directed, and the drop from these hives ranged from medium to high. Indecently, after the second treatment I noticed that the few remaining morsels of Apiguard patty were in the tray.... Not wanting to waste anything I glibly tossed these onto the top of the frames. This act was also because I did not want to disturb the bees again...

How wrong I was! When the patty is broken up and put directly into the hive, the surface area for sublimation is much higher. This results in a very high level of thymol, beyond the level which the bees will tolerate.

Needless to say a large number of them (including the queen) exited very quickly and clustered on the outside of the hive. Workers were then seen leaving the hive with little white packages of the offending smell! Anyway, once the hive had been sufficiently ventilated, the colony returned home! Whew! Not so lucky with the real experiment though. The bees in the untreated hive seemed at first to be managing fine, and the Varroa drop in this hive was very low. (Not surprisingly.) However, by early October the level of mites within the hive had reached infestation levels. Inspection of the hive revealed many bees with more than one mite fighting for space to drain the bee of its haemolymph- evil creatures.

Within a few more weeks the numbers of bees had begun to drop very significantly, and those remaining appeared to be suffering from all sorts of peculiar ailments. The most commonly observed characteristic was bees that seemed unable to walk or fly. The poor things were dragging themselves across the front of the hive, only to fall off and be dismembered by wasps.

After observing this for a few days I had had enough. It seemed that if bees indeed feel anything they were not in a happy state. Additionally, I was now concerned that if they were infected with viruses, they may spread this to my treated colonies in the apiary. They had to go. Luckily I have a good source of dry-ice and this is the quickest, easiest and kindest way of destroying a colony but not affecting the precious drawn comb. The deed was done by sealing the hive and putting in a 1/2 kg dry ice. The next day the dead bees were discarded and the wasps allowed to do their work. Within 3 days all of the brood and the little stores in the hive were cleared and the hive was stored in acetic acid vapour over winter.

The moral of the story is to use all of the controls and integrated pest management against Varroa at your disposal, or face losing your girls.....

HELPING BEES GET A GRIP

Kelli Whitlock Burton, Science NOW Daily News

To take a drink of nectar, a bumblebee has to keep its balance on wobbly flower petals. The bees get some help from plants, according to a new study. Cone-shaped cells, found on 80% of flowering plants, offer firm footing and may have evolved to increase the odds of pollination. Scientists have debated the function of these cells, known as conical epidermal cells, since the 1970s. Some thought they made flowers more attractive to bees by enhancing their colour or by increasing the plant's temperature a degree or two, which might boost nectar production. But plant molecular biologist Beverley Glover of the University of Cambridge had a different theory: that the cells provided traction.

"In the wild, a flower isn't just a stationary dinner plate," says Glover. Cells that allow bees to latch on as a flower is waving in the wind make pollination more likely and would be an evolutionary plus, she says. To rule out colour and odour as functions of the cells, Glover and colleagues created white, odourless epoxy casts of snapdragon petals. The surfaces of the casts were either flat or lined with cone-shaped bumps simulating conical epidermal cells. Small tubes on the petals held sucrose.

When the casts were horizontal, the bees were equally attracted to flat and bumpy petals. However, when the casts were placed at an angle or vertically, the bees were far more likely to choose the petals with a rough surface, the researchers report online today in Current Biology. Analysis of high-speed video showed that when bees landed on the bumpy petal casts, they latched onto the surface with all legs, stopped beating their wings, and dined with ease. However, bees attempting to feed on smooth petals slipped around, their middle legs scrambling on the petal surface while their wings beat furiously.

"Beating their wings costs bees a lot of energy," says Nickolas Waser, an emeritus evolutionary ecologist at the University of California. "Animals want to gather as much energy as possible as quickly as possible, so it makes sense that bees would prefer a surface that allowed them to conserve energy while they ate."

START THE CHILDREN IN BEEKEEPING.

Country Gentleman

Parents make a big mistake when they keep their children dependent until they are full grown. Give that 10year old boy a pen of pure-bred fowls, and the 13-year-old girl two colonies of pure Italian bees, and buy the products at market price andpay them in cash. Sell them the feed and supplies, and you will be astonished at the business talent they will develop.

Nearly always one member of the family will take a delight in the bees, and undertake to manage them. Many farmers have a pleasant little home at one end of the farm for their hired man. He generally has a garden and lot, and if the proprietor does not wish to keep bees, it might be quite an incentive to the hired man if he or his family were allowed to make somemoney from a small number of colonies. The bees would be a benefit to the land-owner, especially if he were growing fruit. Start with one or two good colonies, but do not have scrubs or cross, malicious hybrids. Good, thoroughbred stock pays just as well in the bee-yard as in the poultry-yard or cow-stable. We want to emphasize the suggestion that the children be encouraged to "take to bees." Many of them will be wonderfully pleased to have one or more colonies all their own, and manage them alone as far as possible. It will pay to interest the children in a way that will help to keep them in the country, instead of their crowding into the unhealthy cities with their awful competition in all lines of work and business. Begin this winter to interest the boys and the girls in bees, and when spring comes again, give each a colony of bees, or something else, to manage as their own, and thus let them learn how to plan and carry on business early in life. Of course, they will often need your helpful counsel and wise advice, and you will greatly enjoy giving them all they may require. We believ fully in the boys and girls, and want to enter a strong plea that they be started in business for themselves while under the care and direction of blessed home influences.

BEES AT THE NORTH POLE Le Rucher Belge July 1898

The explorer Ejvind Asrup found many bees in latitude 830 north. He thinks they may be at the North Pole, as the remaining 70 wouldmake no great change in flora. There's only three months summer; but as the sun doesn't set in that time its as good as six months hereand plants develop with astonishing rapidity and vigour, and the flora is of extreme richness. We wonder if some enterprising bee-supplydealer won't establish a branch house next door to the North Pole now. Talk about hardy bees why not get a few queens from that semisunless land. They ought to be tough enough to extract sweetness from the "snow-ball " bush!

*With thanks to Nottinghamshire Beekeepers'
Association for the above articles*

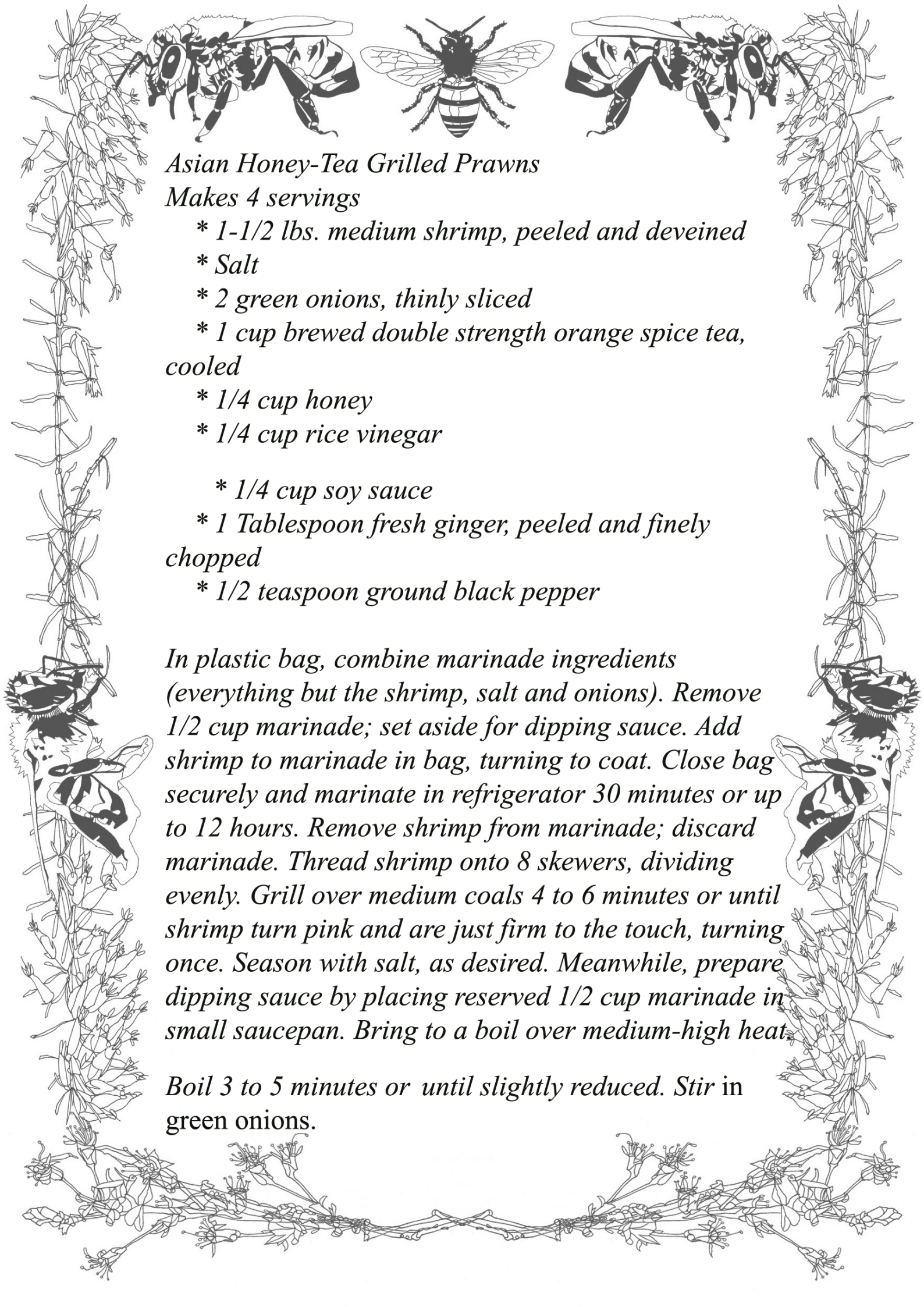
PLAN BEE

Urban beekeeping could be vital in helping reverse a decline in honeybees, the Co-op (now the Co-operative Group) has claimed. The company, which has 600 hives on land around the UK, is rolling out a scheme to encourage more people to keep hives in towns and cities. It began training budding beekeepers on allotments in Manchester in 2009. Now the Plan Bee scheme, which the firm hopes can boost honeybee numbers, is being rolled out to other areas of the city as well as London and Inverness. The Co-operative is spending an extra £225,000 on the project with the aim of getting 300 new beekeepers in cities. Would-be beekeepers are sent on a free two-day course and, if they are interested, are provided with free kit, bees and an easy-to-use plastic "beehaus" hive. The new Plan Bee funding will also finance more research into the cause of declining honeybee population in the UK.. £160,000 was donated in 2009 and a further £150,000 is pledged for this year. "Urban beekeeping is becoming increasingly popular and could be a vital tool in the reverse of honeybee decline in the UK ", said Paul Monaghan , head of Social Goals at the Co-operative. He continued. "Nature's number one pollinating machine appears to be breaking down and no one knows for sure why. Urban beekeeping is becoming increasingly popular and could be a vital tool in the reverse of honeybee decline in the UK. Through our urban beekeeper projects we want to show people that you don't have to have acres of land to take up beekeeping." Last year the government's conservation agency Natural England urged people in towns and cities to keep bees in their gardens to counter declining honeybee populations. They face a growing number of threats including pests and diseases such as the varroa mite and a lack of habitat providing food sources such as wild flowers. The Co-operative have also banned the use of neonicotinoid pesticides on their own farms and all own brand fresh and frozen food products sold in their stores. Experts believe the honeybee population halved in England between 1985 and 2005, the Co-operative said. Across the UK, numbers of honeybee colonies have fallen by between 6.7% and almost 12% a year over the past three years, according to the government.

BBC Radio4 Program- Today

Technical Topics: All about Propolis Richard Alabone (Mr Beesy) With thanks to Essex BKA

We tend to regard propolis as a nuisance, which of course it is, but at the same time it's very important in the hive and there are some fascinating things to find out about it. It comes from the resin extruded by trees to deter insects and moulds on tree wounds and buds, so bees use it because of its antibiotic properties. It's also used to seal hive gaps in order to keep out unwanted insects and to generally glue things together. But how do bees collect it? With difficulty is the answer. They manipulate it with their mouthparts on the tree in the first place and then contrive to store it on their leg pollen baskets. Back in the hive it has to come off, but only with the help from other bees. Sometimes this ungluing process can be seen on the alighting board with bees tugging the sticky glue off another's pollen basket with their mandibles. Though not having seen this myself, I read about it in the ABC-XYZ of bee culture. The best propolis is used to seal gaps around the brood nest, to keep out ants etc., so we see it in the area of brood frames and queen excluder, damaging gloves and making life generally awkward for the beekeeper. We can collect it in quantity on a plastic screen, rather like a queen excluder, where the gaps become filled with good propolis. If we take it away and freeze it the propolis is easily removed by bending the screen and it's used for various purposes. By mixing with surgical spirit, then decanting off the wax and dirt, it produces a tincture, for use on wounds or is even used internally. It's generally removed by the beekeeper from mating surfaces in hives, between boxes for example, with the hive tool but a paint scraper for even broken glass mworks better. Some bees stick pillars of wax and propolis to support frames from the floor, while others attempt to seal the top porter escape hole, or even an over large entrance. Its antibiotic properties are used by bees to sterilise their honey and brood containers. In some way they spread a thin layer on the inside of the cells. Whether this is thinned by bees somehow, or whether a thin propolis is collected, from plants perhaps, we don't seem to know. But in any case we can see it on super frames as a brown colouration and very old super comb becomes black and heavy with propolis reducing the space for honey after many years. Its use on comb is to prevent honey fermentation and imparts antibiotic properties to the honey itself, which has been used to seal our wounds for hundreds of years. It's the antifungal and anti-inflammatory properties that we don't fully understand, both in the honey and propolis. It has even been chewed by some people. Difficult things to clean are gloves, glass quilts and the gauze in contact feeders. Alcohol in the form of meths works well. Frame design gives us a bee space, to aid frame removal, but most frame designs ignore the problem of bee glue. Our standard Hoffman frames have 28 inches of 12 the glue while the Manley super frames have 52 inches. To remove the first frame from a box of Manley's, can prove almost impossible where bee glue has flowed between the frame spacers. It is extraordinary that beekeepers persist in using these highly unsuitable frames, but having said that, their design is still better than the SN 1 or SN 4. Modesty prevents me mentioning a frame designed to reduce propolis to a minimum by only having point contacts. Finally, one interesting use of the bee glue is by violin makers. I once supplied a relative who was a violin maker in Saffron Walden. It's used in the varnish, and also the special glue, but the proportion used is up to the violin technician. I believe the use of a propolis tincture to prepare the wood for gluing is important. The way Stradivarius used it has long been a mystery, but clearly he did something very special, and it is said that the secret of the Strad was in the way he used the propolis.



Asian Honey-Tea Grilled Prawns

Makes 4 servings

- * 1-1/2 lbs. medium shrimp, peeled and deveined*
- * Salt*
- * 2 green onions, thinly sliced*
- * 1 cup brewed double strength orange spice tea, cooled*
- * 1/4 cup honey*
- * 1/4 cup rice vinegar*
- * 1/4 cup soy sauce*
- * 1 Tablespoon fresh ginger, peeled and finely chopped*
- * 1/2 teaspoon ground black pepper*

In plastic bag, combine marinade ingredients (everything but the shrimp, salt and onions). Remove 1/2 cup marinade; set aside for dipping sauce. Add shrimp to marinade in bag, turning to coat. Close bag securely and marinate in refrigerator 30 minutes or up to 12 hours. Remove shrimp from marinade; discard marinade. Thread shrimp onto 8 skewers, dividing evenly. Grill over medium coals 4 to 6 minutes or until shrimp turn pink and are just firm to the touch, turning once. Season with salt, as desired. Meanwhile, prepare dipping sauce by placing reserved 1/2 cup marinade in small saucepan. Bring to a boil over medium-high heat.

Boil 3 to 5 minutes or until slightly reduced. Stir in green onions.

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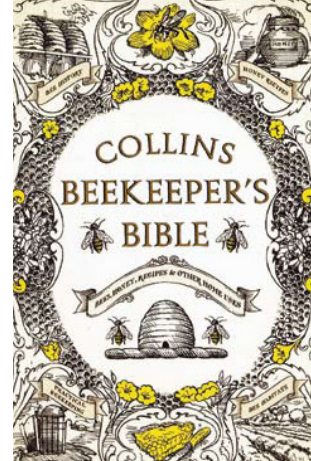
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Collins

Beekeeper's Bible - Bees, Honey, Recipes & Other Home Uses.

*This weighty tome of about 400 pages, generously illustrated through-
out, provides the reader with detailed information on many aspects of
beekeeping. Each section of the book is authored by differed writers
who show that they have a deep interest in their chosen subject and
who are able to express clearly the knowledge that they have gained
from years of experience in the craft. There are five main sections to
the book:*

*1. Bees and Beekeeping History by Sharon Sweeny-Lynch and Sally
Bucknall. The honeybee in myth and symbol, Honeyhunting and early
beekeeping, The global spread of the European honeybee.*

2. Understanding the Honeybee - Richard Jones.

*A special kind of insect, Bee organs, A selection of honeybee races
across the world, Occupants of the hive, From egg to adult, Social life
in the hive, Bee Communication, Swarming, Winter survival, Man's
best friend, Honey, wax and propolis, When bees sting, Bee habitats,
A bee friendly garden, Threats to bees.*

*3. Practical Beekeeping - Claire Waring. Choosing a suitable hive,
Creating and keeping your beehive, Where to keep your bees, Clothing
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4. Honey and Other Bee Products - Richard Jones.

*Honey - nectar of the gods, Medicinal properties of honey, Beeswax -
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pain killer, Royal jelly - a rare blend.*

5 Recipes and Home Crafts - Sarah Banberry

*Food and drink, Soups and appetisers, Main dishes, Deserts, biscuits
and sweets, Cakes and Breads, Dressings and chutneys, Drinks, Beauty
recipes, Health Recipes, Domestic crafts.*

*The book is international in scope and there are some very welcome
fresh illustrations (far too often the same pictures are frequently used
especially as regards beekeeping history) - which shows that the picture
researchers were very diligent in their task. The size and prominence of
the pictures not only clarifies the text, but adds enormously to
the design of the book giving the work
much visual appeal. Bang up-to-date,
beginners to the craft will have a reliable
source of background and practical
information at their finger tips and those
who are experienced beekeepers will find
plenty that is new or to stimulate them
further. Well recommended*

To be published on March

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HOMESPUN

When you hear someone refer to something as 'Homespun' it is often in a patronising or even derogatory way. However, Harris tweed, which was homespun in the early days, could be so well spun and woven as to produce a jacket that was actually waterproof.

"Buckets of Honey from Boxes of Bees" is a little homespun book by Ken Pickles of Wharfedale. Because it is homespun, the book is easy to read and will strike a chord with anyone who has an interest in the countryside and nature.

Reading the title, you could be forgiven for thinking this was just another book about beekeeping and I am sure every beekeeper will find something in there of interest and value as a form of instruction. But read the words and read between the lines and you will find much more than how to keep bees. To use that much maligned word again there is a deep and meaningful homespun philosophy which should be drummed into the head of all beekeepers and those who aspire to be beekeepers.

Ken has been a bee farmer as well as a hobby beekeeper but the produce of the hive and the profit or loss from the bees is of secondary consideration.

I am not a beekeeper but have learned much from such people as the late Jack Armistead, Ken Preedy, Ken Gaiger and Albert Morris as well as the never late Bill Ainsworth, Michael Birt and others in The Blackburn Beekeepers Association. One thing they all seemed to have in common was a love and affection for the bees which is something that shines through Ken Pickles book.

Anyone who gets swept away with the 'Green' media obsession with 'The Bees' and decides they will take up beekeeping because a) it's fashionable and b) it's going to make money should be made to sit down and read Ken's book. If when they've finished they are imbued with his enthusiasm and ability to accept stings, and various beekeeping disasters, then welcome them to the fold but if the stings to sensitive parts of their anatomy, and hard work involved in lifting hives and extracting honey puts a seed of doubt in their mind then let them take up bird watching or growing a herb garden in the window boxes. They can console themselves that they are being green. I urge anyone, whether beekeeper or not, to get hold of a copy of this little book. I read all one hundred pages in one sitting - I simply couldn't put it down.



Kindly reviewed by our very own Arthur Bickerstaffe who you will all remember was for many years, along with Bill Ainsworth the co- editor of Beetalk and can be obtained from

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Bob Fulton as a few things for sale which are as follows.

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