NORTHERN LIGHTS

THE NEWSLETTER OF THE NORTH DEVON BRANCH OF THE DEVON BEEKEEPERS ASSOCIATION

APRIL 2010 *www.northdevonbees.org*

Editorial

We are all sorry to hear that Mel Browne passed away after a long illness. She handled her health problems with great dignity and courage and earned the respect and love of everyone who knew her. I reprint one of Mel's 2009 editorials because to me it sums up her courage and her joyous philosophy to life.

"the word evangelical comes to mind, yes lets spread the word of the life of the bees and the flowers that they need. Lets spread the happy unity of bee keepers, the support and strength we gain from each other. Lets follow the example of the bees, they just get on with it no matter what happens." *Mel*

Chair Chat

Firstly on a sad note, Mel Browne one of the editors of this newsletter, died this month. At the Memorial Service in her home village of Brendon the church was full of her friends and family, all wanting the chance to say a last goodbye. It was heartening to see so many beekeepers among the congregation—she was a good friend of North Devon Beekeepers and she will be missed

The topic I would like to consider this month is pollen. Should we feed pollen/pollen substitute to bees in the spring? Over the last few springs there appeared to be very little pollen during February and March and yet a great deal of brood was being produced, presumably because it was warm. Since brood require pollen for survival I duly fed our bees with a pollen substitute. They consumed this readily and the brood survived.

This year, due to the colder conditions, less brood has been produced but the willows and hazels have been yielding huge amounts of pollen. Since our bees are surrounded by these trees I haven't fed them any pollen substitute this year. My regular observation of the bees, even on fairly cold but sunny days, shows them entering the hives with grey hazel and yellow willow pollen.

Feeding of bees is a controversial subject but in my own mind I'm convinced that letting a colony die from lack of nutrients is inexcusable.

All this reflection on the subject of pollen led me to do some reading on the subject and it would seem that of the foraging force, 58% collect nectar, 25% collect pollen and 17% collect both. The pollen collectors take nectar in their honey stomachs before leaving the hive and as she gathers pollen, she moistens it with the nectar, making it easier to handle. In the hive, more nectar is added to the pollen plus various glandular secretions, including a phytocidal acid which prevents negative bacterial activity. This mixture is packed into the cells and capped off with a protective layer of honey to ensure that the pollen will be preserved as long as possible. The stored pollen is consumed by the nursery bees, mainly at about ten days of age when the hypopharyngeal glands are well developed. The brood food is made up of three components: White - produced from the mandibular glands, Clear - produced from the hypopharyngeal glands and Yellow - derived directly from pollen. The quantities and proportions of these three foods vary according to caste and stage of development of the larvae which can vary from hour to hour.

Workers start to consume pollen in large quantities about 47 hours after emergence as substantial amounts of protein are needed to develop the hypopharyngeal glands. The principle constituent of pollen is protein although amino acids, lipids, sterols, vitamins and minerals are also present. The amount of protein in pollen varies significantly from 2% to around 62%. It has been observed that colonies with large pollen stores grow faster in the spring and produce more honey during the first nectar flow. The question no-one seems to be able to answer is, how do we ensure that our colonies store large amounts of pollen?

Good luck

Chris Tozer

NATURAL BEEKEEPING

The last Winter talk - even though spring is officially here, is on **Thursday 8th April at 7.30pm** at the **Castle Centre, Barnstaple.**

Don't miss this one as **Phil Chandler** is talking about **'Natural Beekeeping - The Way Forward'.**

Refreshments and raffle as usual.

Apiary Manager's Chat *'Whether the weather be fine or whether the weather be not---*

Yes, as usual, we beekeepers are dependant on and waiting for good weather. This time of year we're itching to inspect our colonies and to undertake the vitally important spring clean. Each Tuesday we hope for sufficient warmth to change the woodwork, remove any 2yrs old comb and generally assess the state of the colonies. Having rejoiced that all have survived the chilly winter, we can be patient a little longer!

This year we are hoping to introduce 3 different types of hive, each using the standard national frames: a WBC, a polystyrene hive and a top bar hive, which of course uses only the top bar of a national frame to which is added a strip of foundation (come and hear more intriguing details from expert Phil Chandler on April 8th). However we hope to acquire one of each Commercial, Smiths and Dadant hives for teaching purposes, ie to have these not in use but available to illustrate to students the various hive differences.

The Apiary Support team have discussed the subject of Queen Rearing, and decided that when the time comes, and we open a colony to discover an excess of queen cells!!, these will not be destroyed, but reared in an incubator We tried this on a small scale last year using a heat mat placed in a small fridge, and reared queens for 3 days. The interesting records showed that the larger length cells were not the homes of larger queens. The measurements showed that all the queen cells had the same internal lengths, and all the emerging queens were same in length: the difference in the length of cell being only the thickness of the surrounding wax, and did not indicate a relationship to the size of the queen. The small numbers involved do not of course represent any final conclusions, so we will repeat the experiment again this summer. The resulting non-mated queens will be offered to anyone requesting a new virgin queen for either an apidea or nucleus, so Please Place your Requests Soon! (how's that for optimism!!!)

Flowa's cake baking skills win apiary meeting approval.

The habit of 'drifting' by the drones is a known fact but not necessarily the extent to which it occurs, so we are planning later in the season to mark the drones of 2 colonies with different colours, (not those used in marking queens!!) and record the numbers for those who stray into nearby colonies-----I appreciate we're only at Horestone for 2 hrs per week so this exercise may show nothing helpful, however it will be interesting!!

Here's wishing everyone 'exciting findings' on your first inspections, and please let us know of any unusual or fascinating observations to include in our next edition of NL, so until then:

we'll whether the weather, whatever the weather, whether we like it or not!!

flowa

BRANCH TALKS

We have had two Branch winter talks during March. The first one was given by Dan Basterfield on the subject of double brood chamber management. Dan's father Ken started beekeeping in 1974 initially as a hobby beekeeper. Dan was soon helping and was clipping/marking queens at 8 years of age. As their interest developed, so did the number of hives until now they are managing 120 colonies - they hope to triple this over the next few years. In 2004 Dan put aside his career in IT to become a full time beekeeper. The family are currently building a Honey Farm with educational, laboratory and teaching apiary facilities onsite. Dan uses and recommends using a double brood box system. He recommends it because it uses existing equipment, gives plenty of space so reducing the bees enthusiasm for swarming, there is increased potential for colony growth and an increased potential honey crop. He finds it adds flexibility to brood manipulation and allows for swift colony assessment. One of Dan's motto for colony management is, have a method, have everything to hand, have a plan. The talk was excellent and many of us will be considering the double brood box when out colonies begin to expand.

Our second talk was given by Glyn Davies, Editor of Beekeeping on the subject of Bees and Climate Change. We discussed the various views on climate change, whether it is real or whether the consequences of global warming are widely exaggerated. We looked at the many problems affecting beekeepers and discussed the serious threat of small hive beetle arriving with newly imported queens. We discussed the Copenhagen Climate Change Conference in 2009 and talked about the Stern Review: the economics of climate change.

It was a thought provoking discussion highlighting the fact that the politics of global warming are changing and that there is less confidence now regarding the progress of climate change.

Suggested reading:-

The Sceptical Environmentalist by Bjorn Lomborg.

Cool It - Bjorn Lomborg.

James Lovelock - Gaia Theory

Web site - www.phenology.org.uk

Greetings all members!

Spring is sprung , (well, it was until the rotten wet and increasingly cold [and for some of you snowy] weather this past few days) the grass is ris , (not much sign of grass growing, but plenty of luvly little buds about to get frost nipped! I do hope that doesn't put the mockers on pollen production for our foraging bees), I wonder where dem birdies is.....,

I don't know about the birds, but the bees are snuggled back in their clusters ... a real problem with what should be rapidly expanding brood. Do try and keep them as warm as you can, and don't try to sneak in a Spring Inspection until we have had good warm weather for several days. And make sure they aren't getting a bit light on food, as their consumption rate shoots up as they feed brood and keep it warm, which can be tricky when the weather hampers foraging, especially when forage is sparse anyway.

And then they have to deal with Nosema. Nosema is probably endemic - present all the time- in pretty much all honey bees but usually at such tiny numbers per bee as to be largely undetectable and no hazard. This is the "normal" situation for unstressed happy and well fed bees. But the demands that this time of year - and weather - make upon the bees can hamper their resistance such as to let Nosema romp away and cause havoc - and death!

It is a really good move to check a sample of bees from each of your colonies in the Spring to get some understanding of what risk they are at - and to consider treating them if there is evidence of a significant Nosema problem. This is done by submitting a sample of 30 bees for microscopic examination. Many beekeepers do this themselves, and most Branches have a Branch Microscopist who can examine you samples - for a fee.

Alternatively, you can avail yourself of the FREE checks carried out by the DBKA as part of the DBKA Nosema Survey 2010 - details on p79 in your copy of the March Edition of the DBKA publication "Beekeeping".

This article tells you how to take samples, and how to package them for transport. It also tells you where to send them.

BUT ... if you would like to have your packaged samples taken down for you to one of the days, then Barbara Carlyle - one of your North Devon Branch Committee - notes :

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Hi I will be going down to Cheriton Bishop to get a sample of my bees tested on April 11th . If anyone can get a sample to me I could take others for them if wanted.
Barbara
baranlyle@hotmail.co.uk

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So - please contact Barbara if you would like to make use of her kind offer

Happy Spring Inspections!

Patrick Moore
Secretary
North Devon Branch
Devon BeeKeepers Association

Honey Brewing *by Graham Kingham.*

Honey has been added to drinks and fermented by itself to form alcoholic beverages since time immemorial. The addition to beer can be traced back to 1796 when honey was added at the rate of 385 gms per 23 litre batch, but just what does it contribute to a glass of ale?

For the uninitiated I will briefly summarise the brewing process.

Barley is first malted via steeping in warm water for a few days, then it is spread out onto flooring to germinate, after a few days the roots and acrospires, (growing tip) are removed and the resulting barley is gentle kilned to dry it out, this process allows the starch that is locked up in the grain to be readily available for the next stage.

The grain is then mashed in hot water for an hour plus in order for the enzymes in the grain to work to release the sugars into the water, next the resulting liquid is drained off into a kettle with added hops, it is then boiled for an hour and a half to extract the lupin in the hops which give the beer its bitterness and help preserve the end product. Once it is cooled down the yeast preparation is added and left for nature to take over for a week, by which time the beer is racked off into the barrels and left for a further two to three weeks to mature and clear then it can be served to the imbiber!

From a technical standpoint, virtually any type of honey can be used in the brewing process. There are over 300 types of honey, with the colours ranging from water white to dark amber, and the tastes from delectably mild to distinctively bold. Each type of honey contributes something different in terms of end-product colour, aroma, rounding effect and flavour. In lagers, brewers tend to prefer mild honeys such as clover honey. Other floral sources such as alfalfa, wildflowers, sage or citrus are excellent ingredients in porters, stouts and herb or spice beers.

Brewers generally add honey to the kettle toward the end of fermentation and avoid exposing honey to high temperatures for an extended period of time. This is done to prevent the loss of honey volatiles, which contribute to the flavour of the final products. Honey beer is often lighter and “crisper” than all-malt beer, but it does not lack character, offering background flavours and aromatic nuances. Honey’s carbohydrates are over 95% fermentable and adding honey early in the brewing process will yield a product with no residual sweetness. Honey is often used to obtain a lighter, dryer, more refreshing beer than an all-malt beer.

Through several mechanisms: first, honey contributes its own flavour, second, honey has an impact on how the four basic tastes are perceived and third, honey has a “smoothing” or “rounding” effect on the overall flavour profile. Obviously, the extent to which honey affects the flavour of beers depends upon the type of honey selected (floral source), the amount of honey added and the brewing technique used.

NB. Do not use Eucalyptus honey, as this will produce an undesirable medicinal taste.

Floral Source	Typical Color	Suggested Use in Beers
Clover	Light Mild	Ales, brown ales, stouts
Alfalfa	Light Mild	Ales, lagers
Sage	Light Mild	Pale ales
Orange Blossom	Light Mild,	Ginger, spice beers
Raspberry	White to light Delicate	Ales Spice, fruit beers
Wildflowers	Medium to dark Medium to strong	Pale ale, Specialty beers
Blended	Medium	Cream stouts, porters

By adding between 3 & 11 % will give a subtle honey flavour at a maximum 30 % a distinctly noticeable honey flavour note will develop. Higher hop ratio, caramelized or roast malts will be needed to balance out the taste at these levels.

Honey contains about 80 % fructose, maltose and glucose the remaining amount is made up of proteins, amino acids, vitamins and minerals, giving the flavour compounds.

In honey, wild yeasts and bacteria are ubiquitous, yet they are kept in statis due to the low water content. Averaging 17 %, once diluted in wort they are free to proliferate. Boiling honey with the wort destroys these bugs but also hinders the flavour components in the finished ale.

Allow for the increased sugar when formulating your recipe; mash temperature should be higher to encourage dextrin formation, as the sugar content will ferment out leaving a drier, thinner bodied beer. It will also raise the alcohol content.

The supermarkets offer a wide choice of ‘honeyed ales’ on their shelves, why not pick up a bottle and sample one next time you are shopping, or even select one for your loved one as a surprise or reward!

Graham has been craft brewing beer as a hobby for over thirty years now and has recently converted to bee keeping

LIBRARY

A reminder that the books out on extended winter loan should be returned now please. Come and change them for something new.

John Hoyles has kindly given us a copy of 'Fifty years Among The Bees' by Dr C.C.Miller one of the old masters of beekeeping and remembered for the miller feeder. It is still a very pleasant and instructive read.

We also have 'The Healthy Hive Guide' a book with brilliant photographs to help both new and older beekeepers understand and diagnose what is going on inside the hive.

There is also a copy for use in the apiary. This is being kept on the wonderful new wall rack Ian has made us which means that we have so much more news/ information available for browsing. *Julie*

Nucs for Sale orders are being taken for 5 frame nucs—will deliver and install in North Devon, £90.

Contact: Chris Utting 01237 474500

Community of Beekeepers (Bitz4Bees)

OPENING HOURS At the start of the very busy Beekeeping Season, the Shop will be open an extra half hour every Tuesday 11.00 – 13.30 (11am - 1.30pm).

PRICES

As new stock is bought in some prices will increase. The price of a Complete Hive has already increased to £175.00.

A new Price list will be available in early April and any amendments to it will be sent out as necessary.

Happy Beekeeping.

Dave & Jean 01237 475705

Easter Pancakes with Yoghurt and Honey

125g flour	1 1/2 tsp baking powder
1 tbsp caster sugar	1 tsp ground mixed spice
1 tsp lemon zest	1 free-range egg
250-300ml milk	oil/butter for frying
natural Greek yogurt	**runny honey**

Place the flour, baking powder, caster sugar, mixed spiced and lemon zest into a bowl and mix well to combine. Beat in the eggs and milk until you have a smooth batter with the consistency of double cream. Heat a non-stick frying pan and add a little butter/oil. Ladle in small batches of the batter and fry for 1-2 minutes, or until bubbles start to form on the surface of the pancakes. Flip the pancakes over and cook for a further 1-2 minutes, or until golden-brown. Transfer to a warm plate and repeat with the remaining pancake batter. Serve the pancakes in a stack with the yoghurt and honey drizzled over the top.

This beautiful photograph was sent in by Jeff Orr. The camellia bush in his garden was covered in bees at a time when there was very little other forage available. Has anyone else noticed bees on a camellia?

BASIC ASSESSMENT

Please let me know if you are interested in completing the BBKA Basic assessment this year. I'll organize the assessment for a day in the summer. Contact me at jack-mummery@mypostoffice.co.uk or phone me on 01598 760209 *Jack Mummery*

Education Officer

NEEDED! Hive products for the County Show. We need honey, candles, cosmetics, etc. etc. to sell at the county show this year. You get the selling price less 20% commission, so you benefit and the association benefits.

Please see the Devon Beekeepers Association web site for prices and an "offer" form. Follow this link and select the County Show even and download the price list and offer form. http://www.devonbeekeepers.org.uk/news.html

Diary Dates

8th April – Branch winter talk – Phil Chandler – see front page.
DBKA Nosema Survey 2010 – Saturday 10th April at Ottery St Mary, Sunday 11th April at Cheriton Bishop Village Hall (see Beekeeping March for further details).
April 16/17/18 BBKA Spring Convention at Stoneleigh – details on BBKA website.
Beekeeping Taster Days at Horestone 9th May and 27th June from 1—4 pm
May 20/21/22 – Devon County Show
August 4 – North Devon Show
30/31st October – St John's Honey Show

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All contributions welcome, copy by 23rd of month for publication in following month's newsletter.