

# NORTHERN LIGHTS

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

December 2006

[www.northdevonbees.org](http://www.northdevonbees.org)



## A Merry Xmas to all our Readers

*This Festive Picture has been omitted because of its large size, which will greatly increase download time*

### Editorial

Well, somewhat of a bumper Xmas edition this month to keep you occupied during those long winter nights (well, at least one of them anyway !). In this, the last edition of the year, I would like to thank all those who contributed to this newsletter over the past year, whether on a regular or occasional basis. All are equally welcome and appreciated. Keep them coming in 2007 !

### Warmer Winters – A Blessing or a Curse ?

If the “experts” are right, then we are already in the grip of climate change, and this year’s autumn has nothing to dispel that theory. As I write this, the sun is shining, the temperature is around 14°C, and the bees are out and flying. Not exactly the scene to grace our Xmas edition !

An extended active season will be good for our bees though – or will it ? By their very activity, the bees are consuming significantly more stores than if they were in cluster, but there is precious little external nourishment in the way of nectar or pollen to sustain them. Consequently, they are living off their stores of honey, which they may well exhaust far sooner than would have occurred had they been in cluster. Starvation in the early spring may well be the result, unless we are vigilant.

Moreover, it is still too early to see if other factors, such as disease, pests, varroa etc. will be improved or worsened by milder winters. All we can do is wait and adapt our procedures to suit the changes forced upon us - and more importantly on the bees themselves.

And on that cheerful note, I wish you all a Merry Xmas and a bountiful 2007.

*Editor*

### Chairman’s Chat

It occurred to me when I was checking through my winter tasks that it might be useful to share this list with some of the newer beekeepers. It’s certainly not comprehensive but it might get you thinking - and please let me know what I’ve missed.

- \* Clean equipment - blowtorch or strong washing soda for wooden and steel equipment.
- \* Clean bee suits and hang them up indoors - if they get mouldy the stain is impossible to shift.
- \* Repair hive parts or dispose of equipment which is beyond repair.
- \* Make up new frames to replace those that have been thrown out (or used as fire-lighters).
- \* Put the solar extractor under cover and give it a clean.
- \* Process any combs cut out from frames.
- \* Make an inventory so that you can find out what needs replacing, then go through the catalogue and make your order through Bitz4Bees - Dave and Jean Morris 01237 475705.
- \* Winter feed - buy your fondant in advance from Dave and Jean Morris.
- \* Spring feed - liquid feed gets your bees off to a good start so buy the sugar in advance. Brian Ford seems to be the cheapest in North Devon and if you phone them the day before they will put it in boxes and have it waiting for you.
- \* Check your apiary. The bees are quiet and not very active, so it’s an ideal time to make repairs or changes, cut back brambles and build that comfortable seat so that on those long summer days you can sit and watch the bees coming and going.
- \* Store drawn comb and treat for wax moth. You can either put the comb in a freezer for a few days, spray with Certan (Bacillus Thuringiensis) or fumigate with sulphur dioxide smoke. IMPORTANT - PDB (Paradichlorobenzene) crystals have now been banned for good reason. Other fumigants like methyl bromide or ethyl dibromide are very toxic and not recommended. Well, I can’t think of anything else at present other than to wish each and every one of you a very happy Christmas.

*Chris T*

## Apiary Managers Report November & December.

Looking back to the beginning of this beekeeping year, I remember well that we all had hopes that it would be a good year, that our colonies would prosper, our honey harvest be generous and number of Queens bred and nuclei be as many if not more than previous years.

Hoping too, that the community of beekeepers shop would go from strength to strength despite its (not loved by all) Bitz4Bees name.

Well, we needn't have worried, Our hopes were realised. At one period (when we had the EFB scare) we had in excess of forty queens in containers of one size or another. A goodly amount of honey was produced with enough spare to feed our stocks over this winter.

We raised over twenty new colonies of bees to satisfy the needs of both students, newcomers and a few old hands. We had a number of new faces turn up to work and share the experience of being a beekeeper among beekeepers (a strange bunch of people if I'm anything to go by.). A good number of students from the winter courses had hands on experience as well as a few stings. Let me express a heartfelt thank you to all for making this possible. Helping us make Horestone the special tranquil place it is. And a special thank you to Jean and David for the success of the shop. Their organising skills have helped us to create well over fifteen thousand pounds worth of business.

It would be very remiss of me not to thank our 24/7 support team, the small but growing band of members who make themselves available, and do lots of the unseen tasks that make keeping an apiary like ours seem easy

They, who cut the grass, trim the trees, keep Horestone looking cared for yet wild. Who keep us up to date with the latest technology and who keep us in touch with the latest beekeeping practices. Our winter work programme will have begun by the time you read this, some changes cosmetic and others structurally necessary and some new build.

Finally a sad word, Our inventor extraordinaire, Kevin Stach, who I know played a pivotal role in reinventing Horestone a number of years ago is starting a new chapter in his life, moving north to Newcastle. Kevin and Thea will be much missed. His industry, dedication and his willingness to take on roles that no-one else would tackle. Not to mention his easy come easy go generosity. Without his dedication we would have had to wait at least another year for the upgraded Honey processing room.

Branch meetings will never be the same without his off-the-cuff comments and a sarcasm that would cut glass.

May I wish you all a Good Christmas and a happy New Year

*Tony*

## Hives, Humans & History

An excellent illustrated talk was given by Glyn Davies using the most advanced Powerpoint presentation techniques that impressed the gathering of members at The Castle Centre on 25th October.

Refusing to attempt to cover the whole spectrum of apicultural history Glyn tempered his talk to the most significant highlights of the last two millennia. Starting with the earliest recorded skeps used by the Romans and the clay pots of the Far East (the design of which is still in use) he took us to the elaborately designed Victorian bee furniture including the great breakthrough by Langstroth's awareness of the importance of the bee space in 1851 and the subsequent development of the moveable frame hive.

The great observers and thinkers were not excluded. From the writings of Socrates to Charles Butler's famous book 'The Feminine Monarchie' published in 1609 that included a musical analysis of the piping queen. This was beautifully re-created by Glyn's recordings of piping queens. Twentieth century characters were featured including Dorothy Hodges and her beautiful work on pollen identification and Colin Butler and his breakthrough identification of queen pheromones and their importance in colony cohesion.

Many other discoveries, researchers and inventors were mentioned. Overall an excellent talk that was well researched and presented.

*ChrisU*

### Kay's Little Worker

(trad. with apologies)

I'm glad I am a honey bee  
With whiskers on my tummy  
I buzz around the flowers all day  
And make a lot of honey

I wait for sun to warm my bum  
Then off I go to forage  
Home I come, my day's work done  
I've covered most of Torridge

Check queen is fine (the drone's just dine  
And other things unmentionable).  
I'm out all day, sunny or grey  
My instincts are unquenchable

Back out I go, I'm never slow  
To pollinate the flowers  
And whilst I'm there, I take great care  
To miss the Braunton showers

So out again, say hi! To Ken  
To make Kay lots of money.  
There really is no substitute  
For messing about with honey.

*Ruth Neal*

## Horestone Apiary: Improved Security, & New Web Site

As indicated in last month's issue, a new security system is finally installed at the Apiary. All who need to access any of the sheds should note that they now need two 4-digit codes for entry. The first code, which is easily memorable, is used for the straightforward mechanical combination lock on the main shed. (Yes, the numbers are easy to read, and you do not need a normal key!). The second code is used to unlock the alarm system by means of the key pad inside the door of the main shed. Again this is very simple to do. For these codes and tips on their use, please contact Tony W or Dave J.

All Branch members, whether users or not of the Apiary, are welcome to use the new Yahoo! group web site facility. This '[horestoneapiary](http://horestoneapiary)' site is much more than a blog or e-mail reflector, so please make full use of it. It is, of course, free, and subscription is easy. This interactive, informal facility is specifically tailored for Branch members and for Apiary-related matters, and should not be confused with our more formal, main Branch site ([www.northdevonbees.org](http://www.northdevonbees.org)), the more general '[lawbeekeepers](http://lawbeekeepers)' Yahoo! site used by some members, or with the Instrumented Hive Partnership's site ([www.instrumented-hive.co.uk](http://www.instrumented-hive.co.uk)).

The new 'horestoneapiary' home page is:  
<http://uk.groups.yahoo.com/group/horestoneapiary>.

Please take advantage of it to keep up to date, swap ideas, record decisions, post information inc. photos, dates etc. Contact Tony or Dave if you need help or wish to suggest changes.

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## Social Secretary's Notes

### December

We see that annual beesknees-up at the Plough at Bickington on Saturday 9th, from 7.00pm Carol will be serving her usual generous selection of delicious food of course, but the evening revolves around the KILLER SKITTLES. This year Tony Wright will be in charge, and he won't be tolerating the usual rubbish and ribald shouts. Well, we will see about that. The whole thing costs £5 each for the evening. Book early with Chris Utting, as we are a bit limited as to the numbers. PRIZES

### January:

Wednesday 11th, at the Castle Centre, 7.30pm. prompt. Something to exercise the little grey cells. We want loads of people, and there will be teams of four or five to a table. Each team will elect a leader, and the questions will range from weak to devilish. The best team will win a prize for each member. Question Master will be Chris Utting, but I will endeavour to see fair play.

Here is YOUR chance to win a prize before we start: If you can think of a really good quiz question (about bees

or beekeeping of course) please send your question in early (hopefully not later than 4th January) to Chris, and it will help make up the Open Section for the evening's programme.

There will be the usual raffle and a specially nice shared supper. Wow! See you there!

Friends and relations welcome.

**Some Observations, Endorsements, Invitations, Requests for the consideration of the membership of that very special beekeeping club sometimes referred to as North Devon Beekeepers.**

As December is closing in around us, and our much-loved bees are having a bit of peace from the constant ministering of their keepers, the time has come for a reflection of the year's experience.

2006 has been full of action, and I hope you have enjoyed it all as much as I have. Our membership is very varied, and there has been a huge contribution from so many, each in their in their own individual ways. Our club and its overall achievements this year are something we can all be proud of. So here goes, beekeepers, for the big new team which will run your Branch in 2007.

This is no time for shutting down until the Spring. By the time you read this, the Branch's AGM will have come and gone, but would you all please seriously consider how you can assist the new team, hopefully formed at our AGM on 2nd December. Yes, it means commitment, actual work and co-operation, and quite a lot of your time. But what have you got to lose? The more you contribute, the more fun it can be. We really need your support now. Make an offer.

Happy Christmas.

*Beryl*

### True? Easy Peasy? Profound? Rubbish?

On Christmas Morning all the foraging bees fly out to the nearest cemetery to visit the flowers that mourners have left on the graves

Universal Start: First find the queen

Pests and Diseases: it's all a matter of size.

Biggest - Bears      Smallest - Viruses

You just have to let the bees know who's boss!

You need very little to start keeping bees. Just a corner somewhere, an old hive with a few bees, and you're in business. Anyone can do it and it costs next to nothing

Beekeepers are a grand bunch of people. Very friendly and agreeable especially when it comes to beekeeping.

My bees never swarm

The drone who has just mated dies with a smile on his face.

Next year I am going to raise a lot of queens by the Jenter method

Our Shows just appear. Maybe I will spare an afternoon when everything has been set up

This Honey Judge is useless. He should never have disqualified an entry like my best honey.

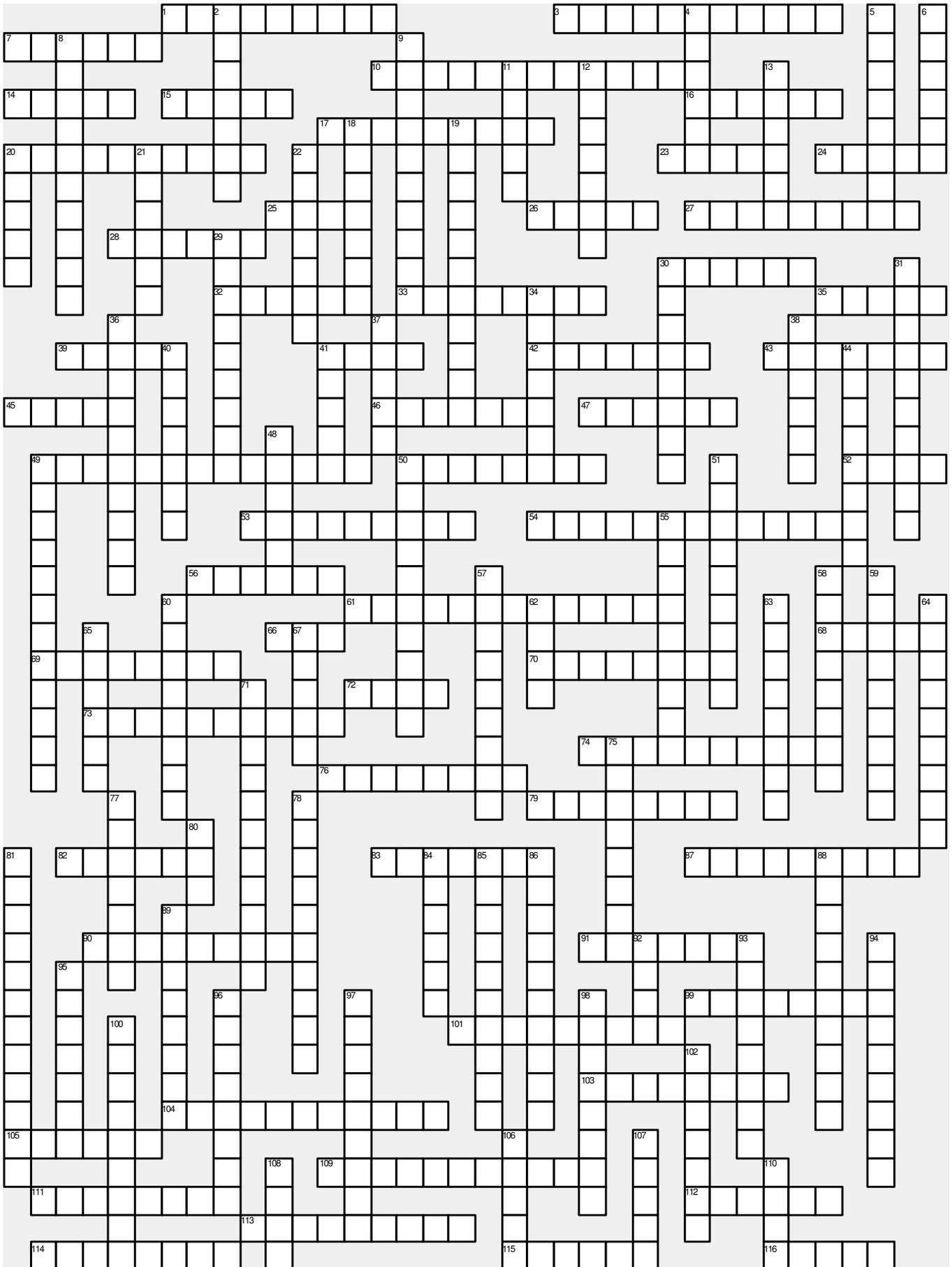
# BUZZWORDS

# Kev's Christmas Crossword

This should keep you occupied after the turkey & trimmings. Answers will be published in the next newsletter.

(Apologies in advance for any technical inaccuracies - I'm still new to this beekeeping lark !!)

There are also a couple of "deliberate" mistakes for you to moan about.



# BUZZWORDS Clues

## ACROSS

1 The word indicated by "P" in the acronyms CPV and APV, which also describes the main symptom of these two diseases. (9)

3 Type of fixed frame spacer consisting of a single strip of plastic or metal with raised square lugs. (11)

7 Large feeder named after inventor (6)

10 Instrument for measuring water content of honey (13)

14 A substance that is predominantly made up of fructose, glucose and water. (5)

15 Rodent who can use hives for winter food & shelter

16 Mite now virtually endemic in the UK (6)

17 Another name for the enzyme, sucrose. (9)

20 Poisons, used by farmers and gardeners, which can have a devastating effects on honeybees. (10)

23 The injected contents of a sting (5)

24 Each honey bee has two pairs of these (5)

25 The basic building block of honeycomb (4)

26 Same as 23 Across (5)

27 Young adults undertaking domestic duties (5,4)

28 Common type of bee escape (6)

30 Another word for capped - applied to cells (6)

32 Nasonov or mandibular are types of these (6)

33 Clumsy or rough handling can cause bees (or beekeeper !) to become this. (8)

35 A general term for immature bees (5))

39 Bottom part of hive (5)

41 Straw container, often used to catch swarms (4)

42 A action by bees to ventilate the hive or to evaporate excess moisture. (7)

43 Round cakes of pollen substitute (7)

45 Member of egg laying cast (5)

46 Devices used to keep frames at regular distance from one another. (7)

47 The act of fertilisation of the queen (6)

49 Device to remove bees from super (8,5)

50 Insects whose larvae damage comb (3,5)

52 The foremost of the three main parts of a bee's anatomy (4)

53 The two main types of this bacterial disease are American and Eu-

ropean (4,5)

54 The honey bee (4,9)

56 Neither workers nor queens (6)

61 Wire or slotted frame fitted between brood box and supers (5,8)

66 Traditional hive (1,1,1)

68 Solid winter food (5)

69 Approximately 7 mm (3,5)

70 One of the openings in a bees thorax or abdomen which allow air into the body (8)

72 Another name for food, more commonly associated with motor vehicles (4)

73 blank "frame" placed at one end of brood box. (5,5)

74 A treatment for killing mites (10)

76 Movement of bees from one colony to another (8)

79 Means of storing and selling honey (8)

82 Called 'bee lice', technically they are flies (6)

83 A bee virus, first discovered in Rothamstead in 1977 in bees originating from India (7)

87 Undesirable wax construction which joins parts of hive together (5,4)

90 A chemical secreted by the queen to influence the behaviour of other bees in the colony (9)

91 Same word as 22D *Oops!* (7)

99 Another name for a cup cell (4,4)

101 A colony missing one particular caste (9)

103 Commonly called "bee glue". (8)

104 Normally inserted between brood box and supers to remove bees from the latter. (6,5)

105 Single lens eyes (6)

109 Unmated egg producing bee (6,5)

111 Treatment for Nosema (7,1)

112 A spore forming protozoa which lives in the bees gut (6)

113 Cell structure produced by bees (9)

114 A well known treatment for varroa (8)

115 Used by scout bees to indicate location of food and water (6)

116 Defensive part of worker bee, the use of which results in her death (5)

## DOWN

2 To provide a new bee capable of laying fertilised eggs. (7)

4 The next stage of young brood after eggs (6)

5 Opening at front of hive (8)

6 Same as 32 Across (6)

8 Worldwide, the most common type of hive (10)

9 Devices to remove bees from supers (3, 7)

11 Worker, drone or queen (5)

12 Placing an identity mark on the queen (7)

13 Rectangular removable wooden structures which support the comb (6)

18 Small hive used for starting new colonies. (7)

19 Characteristic of heather honey preventing its extraction by conventional means (11)

20 Larvae become these when cells are sealed (5)

21 A single society of bees (6)

22 Providing colonies with extra sustenance, typically sugar syrup. (7)

29 Primary role of queen (3,6)

30 Defensive action of worker bees (8)

31 Topmost part of hive before roof (5,5)

34 Another term for creamed honey (4,3)

36 Rolled wax sheet with honeycomb pattern. (10)

37 Undesirable organism in honey which can cause it to ferment (5)

38 Type of large hive, named after its inventor (6)

40 Removal of stores from one hive by bees from another (7)

41 Rectangular box of frames, generally positioned above the brood box, which contains the majority of the honey stores (5)

44 ----- mite, American name for the Acarine mite. (8)

48 Covering spun by larva before pupating (6)

49 Problem when larvae are not maintained at correct temperature. (7,5)

50 UK woodland bird which can attack beehives in winter (10)

51 Sensational and inaccurate term for *apis mellifera adansonii*, introduced into Brazil from Africa in the 1950s (6,3)

55 Device for removing honey from comb using centrifugal force. (9)

57 Another word for uncapping (9)

58 Mesh fitted between brood box and supers to restrict queen to the former (8)

59 Jaws (9)

60 Instinctive behaviour of bees which results in the splitting of the colony. (8)

62 A small secondary swarm (4)

63 Collecting food (8)

64 Intestinal disorder which may be associated with Nosema, although there may be other causes. (9)

65 Container for placing sugar syrup (or honey) in hive. (6)

67 Large predators, fortunately not found in UK (5)

71 The act of fertilising a flower (11)

75 Feelers, located on the head (8)

77 Desirable characteristic of brood (and of beekeepers !), evidenced by a good laying pattern and other positive symptoms (7)

78 A commercial process for creamed honey, named after its supposed inventor. (4,6)

80 A complex mixture of organic compounds secreted by bees from glands in the abdomen. (3)

81 Action of yeast on honey (12)

84 Season of year when colonies build up their numbers. (6)

85 Metal device, fitted to front of hive, to deter certain pests (5,5)

86 Food fit for a queen (5,5)

88 Action of bees in winter to minimise heat loss (10)

89 One of the two main constituents of honey (8)

92 First stage of new bees. (4)

93 Placing young larvae into wax cups for the purpose of raising queens (8)

94 Abnormal condition of brood where cells are still uncapped during the pupal stage (4,5)

95 A tracheal mite (7)

96 Wax structures not joining parts of the hive together nor forming an integral part of the frames (4,4)

97 A measurement of the resistance of honey to flow (9)

98 Removing a portion of one or more wings from queen (8)

100 Providing weight, description of content, origin etc. on honey products (9)

102 Solid sugar-based feed (7)

106 85D, without the pest ! (5)

107 General term for tiny arthropods such as "*Acarapis woodii*". (5)

108 ---- mixture. Obsolete method of treating Acarine, which is named after its inventor Richard Watson ---- (4)

110 Apoidea (4)

## Langstroth's First Principles in Beekeeping

Those members who attended Glyn Davies' talk on 'Hives & Humans in History' at the end of October will remember his reference to the year 1851 when the Rev. Lorenzo Langstroth had his Eureka! moment. Langstroth suddenly realized the significance of the bee space and how it could be applied to a new type of removable frame hive. This eventually became the famous Langstroth hive. Subsequently in 1853 he produced his book 'A Practical Treatise on the Hive and the Honey-Bee'.

In Glyn's talk, he referred to Langstroth's ten first principles and promised to let me have a copy. These are reproduced below and although having a quaint 19th century style contain some fascinating observations.

*"There are a few first principles in bee-keeping which ought to be as familiar to the Apiarian as the letters of his alphabet:*

*1st Bees gorged with honey never volunteer an attack*

*2nd Bees may always be made peaceable by inducing them to accept liquid sweets*

*3rd Bees, when frightened by smoke or by drumming on their hives, fill themselves with honey and lose all disposition to sting, unless they are hurt.*

*4th Bees dislike any quick movements about their hives, especially any motion which jars their combs.*

*5th Bees dislike the offensive odour of sweaty animals, and will not endure impure air from human lungs.*

*6th The bee-keeper will ordinarily derive all his profits from stocks, strong and healthy, in early Spring.*

*7th In districts where forage is abundant only for a short period, the largest yield of honey will be secured by a very moderate increase of stocks.*

*8th A moderate increase of colonies in any one season, will, in the long run, prove to be the easiest, safest, and cheapest mode of managing bees.*

*9th Queenless colonies, unless supplied with a queen, will inevitably dwindle away, or be destroyed by the bee-moth, or by robber-bees.*

*10th The formation of new colonies should ordinarily be confined to the season when bees are accumulating honey; and if this, or any other operation must be performed, when forage is scarce, the greatest precautions should be used to prevent robbing."*

Chris U

## No Longer a Virgin

This time last year I had attended the first few weeks of a very well run beekeeping course by Chris Utting and Beryl Smales at ND college. I had always liked honey and had discussed keeping bees with the family without any action. My re-awakening came after reading a warm-hearted, moving book which came free with Woman and Home called *The Secret Life of Bees* by Sue Monk Kid about a young girl finding sanctuary in the

home of three beekeeping sisters in South Carolina. This coincided with seeing an ad for a Horestone Open Day and seeing the real thing.

It was strange learning the theory before even knowing what the inside of a hive was all about and I have to say, a bit confusing in parts, taking on so much new information and new jargon. However, I was hooked on the world of bees and their complex adaptive system.

I tried to get to the Tuesday meetings at the apiary as much as possible and was introduced to a wonderful group of people with a wealth of beekeeping experience. Heaven knows how anyone keeps any semblance of a waistline when feasting on the sumptuous teas!

I was pleased to see that swarms were evident even at the well-managed apiary – this is something that I still worry about.

My nuc was finally delivered by Chris at the beginning of August and my mission was to keep it alive and build up the colony. Suddenly it was all down to me and I fed them with syrup until they were probably sick. Then I wondered whether you could overfeed the hive! Nothing was written in the books. However, the girls seem happy and are still flying, bringing in ivy pollen on warm days.

I decided to bottom super without a queen excluder like my mentors but having thought I had nice "Utting" bees, my ideas were changed when I disrupted their house and got stung several times through inadequate trousers and had to cover the hive with a dish cloth and walk away for a bit. My confidence was knocked for a bit and it was good to get to Horestone and practice under guidance.

So the hive is set for the winter and I look forward to the spring and hope I can keep the colony alive!

Liz Wilson

## A Little "Winter Wonderland"

(Thanks to Marnie Quy for the picture)



## Beeswax Candles and Unscented Honey & Beeswax Soaps

Chris and I have been making small batches of hand-made soaps in our kitchen and we're gift wrapping them to sell at Christmas Fairs in the area.

The ingredients for the Unscented Honey & Beeswax soaps are Olive oil, Lye, Organic palm oil, Coconut oil, Honey, Beeswax, Grapefruit seed oil and Carrot Root Oil.

We also make Honey & Lavender Soaps with the same ingredients but with added Essential Oil of Lavender.

They have terrific skin moisturising properties but unexpectedly when Chris ran out of shampoo one day he tried the soap instead and it was brilliant - I've never seen his hair so soft and shining, so we don't buy shampoo any more.

Chris has also been beavering away in his den making beeswax candles of every shape, colour and size you can think of, both solid and foundation, plain or decorated with little wax bees, tiny candles for table and cake decorations, Christmas tree shapes, traditional candles .....

So, if you're interested, we shall be selling soap, candles and Branch honey at the following Christmas Markets:

\* The Plough Arts Centre Christmas Market in Great Torrington - Starts at 7pm on Friday 1st December (with free mulled wine in The Gallery) and continues right through to Christmas.

\* Bideford Farmers' Market in Bideford Pannier Market - Saturday 2nd December - 8.00am - 3.00pm

\* Eggesford Christmas Food Fair at Eggesford Garden Centre - Saturday 16th December

Hope to see you there

*Sue Tait and Chris Tozer*

## The Secret of Propolis

Propolis is a vegetable mastic made by the bees from tree and plant resins. Once harvested, the resins are brought back to the hive and mixed with beeswax and salivary secretions.

Containing approximately 55% resinous compounds and balms, 30% beeswax, 10% aromatic essential oils, and 5% bee pollen, propolis is the substance used by the colony to help neutralise any bacteria, fungi or virus that enters the hive.

It is one of the most powerful antibiotics found in nature. It is rich in amino acids and trace elements, has a high vitamin content, including at least 38 valuable bioflavonoids.

Because of the high levels of bioflavonoids in propolis, the product has a high antioxidant value. A large number of studies have shown propolis to be highly antimicrobial. It is found to have an inhibitory affect on at least 21 species of bacteria, 9 species of fungi, 3 species of protozoa, and a wide range of viruses.

Within the colony, as well as helping to prevent infection, its main uses are to varnish the hive interior, seal cracks and stick things together. Propolis both reinforces the hive and protects it from the effects of weather.

Moreover, its beneficial qualities are not a new discovery. Hippocrates, the father of medicine, is believed to have prescribed the use of propolis to help heal sores and ulcers, internally and externally. Both Aristotle and Pliny described the healing properties of propolis for suppurating wounds, abscesses, and boils. During the Boer War, both honey and propolis were used to treat injured soldiers.

Propolis is known to have a stimulating effect on tissue growth, anti-inflammatory properties and a positive influence on the immune system.

### REFERENCES:

*Elkins, Rita, "Healing From The Hive-Bee Pollen, Royal Jelly, Propolis, and Honey",*

*Yagudin, Alexei and LaRocco, Mike, "Propolis-Research Review"*

## Cooks Corner

### Honeyed Lamb

4lb shoulder of lamb	¾ pint (450ml) dry cider
clove garlic	1 tsp chopped mint
sea salt	1½ tsp chopped thyme
fresh ground pepper	1oz (25g) plain flour
4oz (125g) runny honey	1 tsp lemon juice

### METHOD

Line roasting tin with piece of foil large enough to wrap over joint. Rub meat all over with clove of garlic. Place joint in tin and season with salt and pepper.

Mix the honey with ½ pint of the cider and pour mixture over joint. Sprinkle top of joint with herbs.

Fold the foil loosely over joint and cook in pre-heated oven at 230°C (450°F or Reg 8) for about 30 mins.

Open foil and pour over rest of cider. Close up foil again and reduce oven temp to 180°C (350°F or Reg 4) and cook for a further 60 mins, folding back the foil for the last 30 mins to allow joint to brown.

Remove meat from the oven and keep hot.

To make gravy, pour off the juices from the roasting tin into a saucepan. Leave to stand for a few mins then skim fat from surface. Blend the flour in a basin with 4 tablespoons of the juice, then stir back into saucepan. Bring to boil stirring constantly until smooth and thick. Season with salt and pepper and stir in lemon juice. Serve hot with joint.

Minted new potatoes and roasted/baked onions go well with this dish.

## Bees At War – Part 2

### A Whole New Meaning to “Sting” Operations.

As I am sure you are well aware, dogs, with their acute sense of smell, have for many years been used for military and defence purposes, such as seeking out explosives or chemical weapons. Other animals, including dolphins, have also been the subject of military experiments which make use of their vastly superior sensing mechanisms. However, I bet you weren't aware that bees, specifically honey bees, have also been proposed for recruitment to the armed services for similar roles.

Well, at the behest of the US Defence Advance Research Project Agency, a certain Professor Bromenshank at the University of Montana has been leading a 3½ year study in such a detection role.

According to the professor, there are two main ways that honeybees can be used for detection purposes.

Firstly, they can be sent into an area of interest to collect data. A honeybee's body has a natural static electricity that collects air particles, including dangerous particles from an explosive device. Apparently, the bees can be trained to prefer certain odorants over their usual food sources, and that conditioning will persist for a useful period of time. In tests, bees clustered at locations where explosives had been placed, after being trained to recognise the odours of such explosive. On return to the hive, the contaminants clinging to the bees' bodies could be analysed by instrumentation placed inside. Toxic metals, industrial and military chemicals, diseases and anthrax could all be assessed on this basis as they could all be collected by static electricity.

Secondly, the other way to use the bees is to train them to use their highly sensitive receptors to locate harmful chemicals. Bee handlers could then either use cameras or binoculars to see when their flight patterns change. Bees have successfully been trained to fly a sharp “zigzag” pattern when they detect a particular vapour, such as that given off by a particular explosive.

According to Professor Bromenshank, bees can accurately find a cluster of landmines, drugs, biological spores and even decomposing bodies.

"They have an incredible sense of detection and can find particles ranging from a few parts per trillion, and possible even a few parts per quadrillion. They are very reliable, very accurate and are on par with [the detection ability] of dogs. But, unlike dogs, bees don't feel the need to bond with their handlers."

"Sending a whole colony of bees is more effective than one or two dogs," he added, explaining how his team trains the bees in bulk -- hundreds of thousands of them

at a time.

Bees do, however, have some drawbacks. Like other detection animals, bees have trouble seeking explosive materials in heavily-sealed containers. A bomb needs to have a leak or a ventilation system for the bees to properly 'hit' on the device, the professor explained.

“Bees also won't work in the night, when it's cold or during wetness”, and, he added, “research so far indicates bees are most likely unable to detect radiation”.

*Summarised from an article published on [www.dcmilitary.com](http://www.dcmilitary.com)*

### It's Not What You Say .....

*These bloopers are reported to have appeared in actual church bulletins. I know, it has nothing to do with bees – but what the heck - have a chuckle at Christmas*

1. The sermon this morning: "Jesus walks on the water." The sermon tonight: "Searching for Jesus."
2. Ladies, don't forget the rummage sale. It's a chance to get rid of those things not worth keeping around the house. Don't forget your husbands.
3. Remember in prayer, the many who are sick of our community.
4. Don't let worry kill you off - let the Church help.
5. Miss Charlene Mason sang "I will not pass this way again," giving obvious pleasure to the congregation.
6. For those of you who have children and don't know it, we have a nursery downstairs.
13. Irving and Jessie were married on October 24 in the church. So ends a friendship that began in their school days.
14. At the evening service tonight, the sermon topic will be "What is Hell?" Come early and listen to our choir practice.
15. Eight new robes are currently needed due to the addition of several new choir members and to the deterioration of some older ones.
16. Scouts are saving aluminum cans, bottles and other items to be recycled. Proceeds will be used to cripple children.
17. Please place your donation in the envelope along with the deceased person you want remembered.
20. The ladies of the Church have cast off clothing of every kind. They may be seen in the basement on Friday afternoon.
21. This evening at 7pm there will be a hymn singing in the park across from the Church. Bring a blanket and come prepared to sin.
25. Weight Watchers will meet at 7pm at the First Presbyterian Church. Please use large double doors at the side entrance.

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