



Beetalk September 2023

General info and news about bees

Hello and welcome.

Beetalk is a compilation of news from across the bee keeping word.

Its not affiliated to any beekeeping group so you wont get things like the next meeting and what we are doing and such like.

We hope that the articles provided will be useful to anyone interested in the a rewarding hobby and in some way we also hope that you may gain some pleasure in reading some of the article that are included.

Also we intend to include articles that may be helpful to anyone new to the hobby.

Being based in Lancashire it would be great for any contributions from Beekeepers from the county. But as stated above, please nothing about your association or group.

Hope you enjoy.

Editor

If you have any articles that you think may be useful to have included in Beetalk.

Please e-mail them to the editor

at

birt_192@hotmail.co.uk

**PLEASE SUPPORT THE
FOLLOWING.**

NORTHERN BEE BOOKS

**OVER THE PAST TWENTY YEARS OR SO WE
BEEKEEPERS HAVE HAD**

**TREMENDOUS SUPPORT FROM NORTHERN BEE BOOKS. WE WOULD LIKE TO THANK
THEM BY**

PUBLICISING THEIR WEBSITE

WWW.BEEDATA.COM

THE POSTAL ADDRESS IS:

NORTHERN BEE BOOKS

SCOUT BOTTOM FARM

MYTHOLMROYD

HEBDEN BRIDGE HX7 5JS

PHONE 01422 882751

BY THE WAY, THEIR

CONCESSIONARY RATE

www.beedata.com/beebooks.htm

UK Honey Labelling Regulations

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

- 1. The Word "HONEY" is required.*
- 2. The weight must be on the label - we will ensure it is the legal size and format.*
- 3. You can specify the area where the honey is produced. For example, Lincolnshire, Forest of Dean, Scottish Borders.*
- 4. You can specify the type of honey. For example, Heather, Borage. The honey must be at least 75% of that particular type.*
- 5. If you are selling the honey, you must have your name and address on the label. It does not need to be complete but you should be able to be found from the information.*
- 6. If you are selling the honey through a third party, you must have a lot number.*
- 7. New for 2003 You must have a best before date on the jar. We suggest 2-5 years from now.*
- 8. New for 2003 You must have a country of origin on the jar. For example - Produce of England, Product of Scotland, Harvested in Wales. Adding the country to the end of your address is not acceptable.*

E H Thorne (Beehives) Ltd disclaims all responsibility for all consequences of any person acting on, or refraining from acting in reliance on, information contained above.

From EH Thorne's online catalogue 2010 - other sources are available

A beekeeper's work is never done!

Something to think about fo next seasons beginning.

Or March time.



The clocks go forward this month a real sign that the days are getting longer –m but is the weather getting any better? The February weather was cold and wet which can be of benefit to our bees in that they stayed in the cluster and didn't waste energy breaking out of the cluster when the temperature rose and then reforming as it dropped again.

March is a time when things in the hive really start to happen. The amount of brood should be building up quite rapidly, the stores depleting quickly and the winter bees dying off at an increasing rate. All in all a risky time, keep a good eye on the hive but it is still too cold to open it up and look at the bees, so don't be tempted to do this. Heft the hive – if it is getting lighter, that is a good sign, feed if necessary to make sure the bees do not starve.

On warmer days watch at the hive entrance – are the bees flying? So they are still alive! Is pollen being brought in? That is a good sign that the queen is laying and that there are larvae to be fed.

If there really is no activity from a hive, lift the crown board and have a quick look down between the seams to see if there are signs of life. If active, put it back quickly to minimise the heat loss. If the colony has died then you can look further to try to find out why. If you are concerned, then seal the hive up to stop other bees coming along and robbing it out and either ask a more experienced beekeeper to look at it or contact the Regional Bee Inspector, and discuss it with him or her

Towards the end of the month change the floor of the hive for a clean, scorched floor. It is easy if there are two of you to do this. One lifts the hive off the old floor, the other swaps the old floor for the clean one, put the hive back in the same spot. Job done in 30 seconds. In some hives the floor will look quite clean, in others there may be a thick layer of dead bees. Unless there are other signs of diseases the dead bees are likely to be winter bees that have died in the hive and the 'undertaker' bees been unable to clean them out.

If the weather is getting warmer towards the end of the month and the bees are flying, you can stimulate the colony to grow by giving them a feed of thin sugar syrup – 1kg sugar to 1 litre of water. If there is pollen around the bees will take the syrup and the queen will increase her rate of egg laying – essentially converting the syrup into brood.

Now is the time to start putting foundation in those frames you built or cleaned last month! With the warmer weather the wax foundation will not be so brittle and crack as soon as you look at it. You will then have supers ready for that nectar flow from the rape that was sown in the autumn when it flowers in late April/ early May.

How too

To clean and sterilize the frames to a standard suitable for fitting new foundation and then for use in the hive requires a bit more TLC and, of course, more equipment. How you do this depends on the scale of your operation and I will outline the various methods I have used. A cautionary note here is to only treat serviceable frames not the ones with greater wax moth tunnels, split woodwork or rat damage. Some frames may have loose joints and so require additional nails but do not rectify this till after they have been boiled up as this can also loosen them.

Burco type boiler

- A tea urn type of boiler is great for many beekeeping jobs and once set up can deal with a large number of frames in a short time. If your boiler is made of aluminium then do not add the washing soda or it will corrode the metal work. A stainless steel one is best. Safety is an important point here so work outside.

Place the boiler on a stable stand that is high enough off the ground to allow a bucket to fit under the tap. A rickety stand with a boiler full of very hot washing soda solution is asking for trouble. Wear stout waterproof gloves preferably ones that cover your wrists. Have an apron on and safety goggles are advisable. Have a bucket of cold water ready should you spill/splash any hot liquid on yourself.

Steamers

- Thorne's sell an 'Easi-steamer' which can be used to steam a whole box of frames without even scraping them first, well in theory!

If you watch the video @ <http://www.youtube.com/watch?v=9B31PT5fBPM> then you get an 'ideal view' but I feel that the author has used clean frames to do this! When I tried, there were problems with leaking steam and lots of wax and 'slum-gum' remained on the frames inside. However, if you scrape the frames first and tape up the box it did a good job of cleaning up the frames. More costly purpose built steamer - I bought the one shown from Carl Fritz in Germany. It is excellent for melting down wax and sterilizing frames. It has a basket, which can be hung at different heights, to catch the debris and a spout for catching the reclaimed wax.

Procedure

- ◆ Place the boiler on the stand and two thirds fill it with water, add washing soda at a rate of 100g per litre. Bring to near boiling. If you are working outside then a blanket or some form of insulating jacket on the boiler will save the electricity! Once hot, plunge the frames into the water and swish around. I 'thread' the frames onto a stick so they hang in the hot water. After a short time, how long depends on the temperature and 'dirty-ness' of the frames, lift them out and let them drip for a short time. Now reverse them so the other side of the frame can be cleaned. Once you are happy they are clean enough, lift them out and hang to dry. Once dry check they are OK and re-nail. It uses a normal wallpaper steamer and is easy to use.

Other methods

- Ron Brown, in his book "Beekeeping: A seasonal Guide" describes using an old metal oil drum over a fire built in a pit in the garden. In this he boils up frames and old combs inside a hessian sack. I have used a smaller cooking oil drum on a gas burner and that works well for a few frames.

Of course a solar wax extractor could be used, but at this time of year and in fact most of last summer, (can I use that word for it?), it is not a viable option.

Notes

- If you wish to collect the wax for reuse then rain (soft) water should be used as the chemicals in normal (hard) tap water react with the wax. A steamer will produce distilled (soft) water and so there is no problem. If you use washing soda then any wax collected will not be usable, so miss it out and just boil the frames to kill Nosema spores.



Burco type boiler



Steamer

Gardening For The Bees!

Echinacea

To most people, Echinacea conjures up a herbal remedy for colds and 'flu - a vital boost to the immune system. For gardeners Echinacea purpurea is a versatile herbaceous perennial with handsome, long-lasting flowers but for beekeepers, however, it is a valuable, easily accessible source of pollen and nectar for the bees and a plant that will last for years. This wonderful addition to your bee-friendly border is a sturdy, self-supporting, hardy, easy to grow, undemanding plant suitable both for the formal border and the cottage garden, meadow look.

The common name of 'coneflower' couldn't be more appropriate for this bee & butterfly-attracting flower. The disproportionally large cone of stamen that protrude upwards from the centre of the light purple petals is packed full of pollen & nectar and bees will spend ages going round the cone to collect as much as they can. The elements of Echinacea which make it a herbal remedy will then be incorporated into your honey so it's a win-win situation all round!

How to grow Echinacea

With today's plant breeders providing us with new varieties, you will find a range of different colours and heights of Echinacea on offer.

Whilst they all have something nice to offer, I would stick, initially, to growing the original Echinacea purpurea 'Magnus' – the bees seem to love this one best of all! This variety is a clump forming perennial, with stiff flower stems reaching up to 36", topped with large, deep pink, horizontal, daisy-like flowers with prominent dark orange central cones from July to September. The petals bend away from the centre in an unusual but nevertheless attractive way! A visit to most garden centres or nurseries will enable you to buy 1 litre container grown specimens of the plant. But, as coneflowers always look better in drifts of three or more plants, this can prove quite expensive.

Thankfully Echinacea purpurea 'Magnus' seeds are readily available and inexpensive so the best solution is to grow the plants yourself, from seed. Sow the seeds in early spring at 20-24C (70- 75F) in a tray of good seed compost just covering the seed with compost or vermiculite. Keep soil damp but not wet and don't exclude light as this helps germination. Sealing in a polythene bag after sowing is helpful. Germination usually takes 10-21 days. Remove the polythene bag as soon as you see signs of germination otherwise the seedlings will become leggy. When seedlings are large enough to handle, transplant into 3" individual pots and grow on in cooler conditions.

Gradually acclimatise to outdoor conditions for 10-15 days before planting out, after all risk of frost, 45cm (18in) apart in groups or drifts in sun and ordinary, well drained, soil. I have found that they will also grow well in partial shade as long as they get a few hours of sun each day. Flowering is prolonged if you cut off the flower stalks as soon as the flowers fade. Feed during the growing season every couple of weeks and alternate between a general feed and a high potash (tomato) feed, to encourage good flowering.

Enjoy!





Asian Hornets Nest.

A French beekeeper demonstrates the size of an Asian Hornets nest, holding it by the branch of the Oak tree around which it had been built.

The photo, by taken by
Richard Woodhouse,

Such a nest could support a colony of 4,000 hornets and this image underlines the scale of the imminent threat posed to the honey bee in the UK.

See further reading on how to make a trap!

Secrets of the honey bee bite.

A previously unknown honey bee defence weapon against Varroa and a potential new natural anaesthetic for humans. Researchers have discovered that honey bees can bite as well as sting and that the bite contains a natural anaesthetic. The anaesthetic may not only help honey bees fend off pests such as wax moth and the parasitic Varroa mite, but it also has great potential for use in human medicine. The surprise findings discovered by a team of researchers from Greek and French organisations in collaboration with Vita (Europe) Ltd, the UK-based honey bee health specialist, will cause a complete rethinking of honey bee defence mechanisms and could lead to the production of a natural, low toxicity local anaesthetic for humans and animals.

The natural anaesthetic that has been discovered in the bite of the honey bee and measured at the University of Athens is 2-heptanone (2-H), a natural compound found in many foods and also secreted by certain insects, but never before understood to have anaesthetic properties. Independent tests have verified Vita's findings and the potential of 2- heptanone as a local anaesthetic.

As a naturally-occurring substance with a lower toxicity than conventional anaesthetics, 2- heptanone shows great potential.

Until recently, research seemed to indicate that 2-heptanone was either a honey bee alarm pheromone that triggers defensive responses, or a chemical marker signalling to other foraging bees that a flower had already been visited. Vita's results contradicted these notions.

The new research clearly shows that 2-heptanone paralyses small insects and mites bitten by bees for up to nine minutes. Somewhat like a snake, the honey bee uses its mandibles to bite its enemy and then secretes 2-heptanone into the wound to anaesthetize it. This enables the honey bee to eject the enemy from the hive and is a particularly effective defence against pests, such as wax moth larvae and Varroa mites, which are too small to sting. Dr. Max Watkins, Technical Director of Vita (Europe) Ltd, said, "We are very excited about our findings on at least two levels. Firstly, the revelation that honey bees can bite enemies that they cannot sting confounds some existing ideas and adds significantly to our biological knowledge. Secondly, the discovery of a highly effective natural anaesthetic with huge potential will be of great interest to the pharmaceutical industry eager to develop better local anaesthetics." In laboratory neurophysiological trials in the School of Biology of Aristotle University in Thessaloniki (Greece), 2-heptanone was found to have a similar mode of action to Lidocaine, the dominant local anaesthetic used in humans and other mammals.

2-heptanone is found naturally in many foods such as beer and white bread and is so safe that it is permitted as a food additive by USA regulatory authorities. 2- heptanone therefore offers considerable potential as an alternative to Lidocaine. Very recent laboratory research using mammalian cells in the USA, has confirmed Vita's expectations that the anaesthetic could be as effective on humans and mammals as it is on insects and mites. In considering the biological impacts of the findings,

Dr. Alexandros Papachristoforou, a Vita researcher, said: "It is amazing that this second line of honey bee defence has gone undetected for so long.

Beekeepers will be very surprised by our discovery and it is likely to cause a radical rethink of some long held beliefs. It will probably stimulate honey bee research in many new directions. For instance, many beekeepers have spoken of the 'grooming' behaviour of honey bees in helping to control Varroa populations. This grooming behaviour can now be interpreted as biting behaviour."

Dr. Papachristoforou described how the unexpected properties of 2-heptanone were discovered: "We were investigating wax moth control. Wax moths are a serious honey bee pest whose larvae consume wax and pollen, often completely destroying honeycomb. When exposed to 2-heptanone, which is produced naturally by honey bees, the wax moths appeared to die. However, on closer inspection, we realized that the wax moths were merely anaesthetised for a period of one to nine minutes.

This was quite unexpected, so our scientific team set up a series of rigorous experiments to find out what was really happening and came up with our remarkable discovery.

What is Queen Balling ?

The subject of balling the queen has long been a subject of discussion amongst beekeepers and still its reasons remain largely a mystery. There seems to be several different reasons and reading what little literature there is on the subject provides little clarity.

Some sources consider balling to be an attack on the queen and others believe it is protective behaviour. Observations suggest that both behaviours take place, depending upon the circumstances.

The characteristics of balling appear to include:-

- ◆ A sphere of 25 - 30 workers surround the trapped queen, forming a ball about the size of a large walnut. Odd clusters of two or three bees fighting each other may also be in the immediate vicinity.
- ◆
- ◆ During balling, a hissing sound is heard, and the bees are very agitated. A variety of reasons have been put forward to explain the initiation of balling including:-
 - Unseasonable disturbances, usually in the early Spring.
 - When a queen has recently been introduced, or premature examination of a new queen after introduction.
 - The queen acquiring a strange odour as a result of being handled.
 - A newly mated queen returning to the wrong hive.
 - During times of colony stress, poor weather, when stores are short, or during robbing
 - The queen being frightened.
- ◆ During uniting two colonies when sometimes both queens can be balled.

◆
Balling can also occur after the colony have superseded their queen. When the new queen emerges, the bees will kill the old queen by balling her, (clustering around her tightly so she gets too hot and dies). This is sometimes called the 'cuddle of death'.

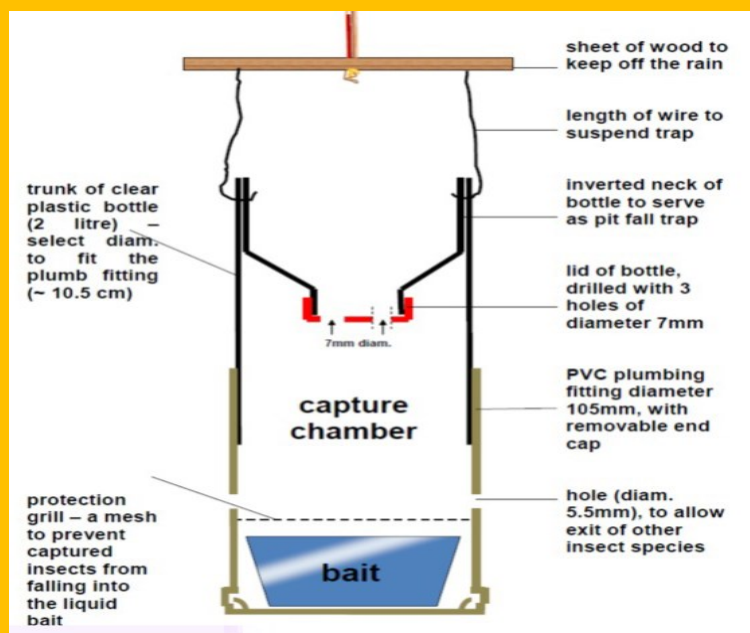
Some people believe balling behaviour could have its origins in nest defence as exhibited by the Tellian bee; where they attack a larger adversary, such as the tropical hornet which is a pest in Algeria, by surrounding it in a ball and killing it. Since most of our current bees have derived from or have the genes of the Tellian bee, it seems that this may be a possible explanation for the behaviour, but not necessarily the reason.

Brother Adam also stated that balling is an 'everyday occurrence' with the Tellian bee, so normal rather than abnormal behaviour. E.B. Wedmore in his book 'Manual of Beekeeping' says the following about balling. 'When balling, the bees form a ball with the queen at the centre. Balling is accompanied by a distinctive hissing sound in the note of the colony. The ball will become tighter if the beekeeper endeavors to break it by hand or by the application of smoke, and the queen will probably be damaged or even suffocated.'

The ball can be broken up by dipping in water, but this will not resolve the reason for the balling behaviour.

Balling remains one of those beekeeping mysteries, but because it often occurs in the Spring it is best to cause minimum colony disturbance at this time of year.





Make your own Asian Hornet Trap

The Asian Hornet, *Vespa velutina*, is an aggressive predator of honey bees and other beneficial insects. Adult hornets are highly mobile; the rate of spread across France is approximately 100 km/year. There is now great concern that this exotic insect will reach the UK, either by hitching a ride on imported goods or simply by flying across the channel.

An NBU fact sheet explains fully how to make a trap, what bait to use and how to report any captures of an Asian hornet. Hanging this simple device in your apiary will allow you to monitor for pest arrival and, if necessary, help to protect your colonies from attack. This should be especially effective if used in spring.

The construction only is reproduced here:

Tools and materials you will need

- Clear plastic drink bottle with screw cap lid (2 litre) NB. check diameter is as close to 10.5 cm as possible. Most will be 10 cm or less;
- PVC “soil and vent access plug” plumbing fitting (standard diam. 10.5 cm), with removable end cap;
 - Disc of wire mesh (diam. 10.5 cm; mesh size ~3 mm)
 - Small sheet of wood or plastic (approx 20cm x 20cm);
 - Length of wire, e.g. old coat hanger, (approx 60 cm);
 - A small plastic cup or bowl to hold bait mixture;
 - PVC adhesive;
 - A pair of scissors;
 - A drill with 2 drill-bits, diams. 5.5 mm and 7 mm;
 - A sheet of fine sand paper;
 - A saw;
 - ◆ A pair of clippers or pliers.

How to make the trap.

For the trap entrance, use the saw to cut the top off the bottle about 2.5 cm below its shoulder. Using the drill, loaded with the 7 mm drill bit, make three holes into the screw cap of the bottle. Screw the drilled cap back onto the bottle top and fix in place with glue. The size of these entry holes is important as they are just wide enough to permit passage of Asian hornets, but narrow enough to exclude larger native European hornets that may be attracted to the trap's bait.

The capture chamber comprises the body of the plastic bottle and the PVC plumbing fitting. Cut the bottom 3.5 cm off the bottle and discard. Cut the wire mesh into a circular disc (diam.~10.5 cm) and place this snugly into the plumbing fitting as shown in the diagram (protection grill). Glue into place. At 5mm above the grill, drill a ring of smaller holes (diam. 5.5 mm). These will serve as exits for smaller non-target insects accidentally caught in the chamber. Use sandpaper to smooth the inner and outer edges of the holes. Insert the body of the bottle to a depth of 5cm into the plumbing fitting and glue into place. Invert the neck of the bottle, insert into the bottle's body, but do not glue into place. The bait cage consists of the space inside the plumbing fitting formed under the protection grill. The bait cage can be opened and closed by removing/replacing the plumbing fitting's removable cap. The overhead guard consists of a wooden board or plastic sheet (20 cm x 20 cm), placed 15 cm over the top of the open trap. Suspend the trap itself from the roof using two lengths of the wire, each about 15cm long.

Don't forget to make a hole in the centre of the wood through which to put a suspension wire needed to hang up the finished trap.

In Praise of the WBC Hive.



I know that if I were a bee, I would rather live in a WBC hive than in any other type. I hasten to add, that whilst WBC's are fine for the hobbyist, with a few hives, they are not ideal for commercial beekeepers or those who wish to transport their hives on a regular basis.

Some historical background

The National hive, so popular in Britain nowadays came into being during World War II as a result of severe timber shortages, and should be regarded in the same way as dried egg and utility grade underwear; one of the unfortunate exigencies of austerity.

The WBC hive is a double walled hive developed by William Broughton Carr in the 1880's from an earlier design of Mr. T.W. Cowan.

Both of these men were giants of beekeeping in the latter part of the 19th century. W. Broughton Carr is also credited with inventing the metal frame spacers, or metal ends, still in use today and the invention of shallow frames for supers. Lee's of Uxbridge, a well known beekeepers' suppliers until the 1980's, added the finishing improvement in 1920 by making the lifts 'telescopic' i.e. with sloping sides to allow them to fit over each other easily. (After World War II, foreign designs such as the Langstroth and Dadant also appeared in Britain.)

The WBC has an inner brood box and supers, not unlike a National but made of lighter timber, and an outer weatherproof set of 'lifts' with an air space between them and the inner boxes, rather like a cavity wall. It is the classic English beehive of 'chalet' appearance, with a gabled roof. The WBC, like the National, takes B.S. frames with a top space so frames can be easily exchanged. The WBC has ten frames in the brood box and supers. National brood boxes and supers will fit inside WBC lifts, although WBC innards are cheaper, being made of lighter timber.

Disadvantages

WBC hives are more expensive, due to the double walls. The trick is to buy good second hand equipment. WBC roofs tend to lift off more easily in a gale. This is easily fixed with the traditional brick on top. Poor W. Broughton Carr knew nothing of aerodynamics when he designed a roof that looks so good but is a perfect aerofoil! There is more woodwork to shift when examining the hives but WBC lifts make useful temporary stands when taking a hive apart with lots of supers. (Bees in WBC hives tend to fill lots of supers!) WBC hives are much more difficult, but not impossible to transport. The last two disadvantages make WBCs unsuitable for the larger operators or commercial beekeepers. The things I like I am sure WBCs are warmer in Winter and cooler in Summer and keep out the damp better. Remember persistent damp is by far the worst of the elements of the British weather from the bees' point of view. You can fit a nucleus box on top of a brood box, when uniting and yet be inside the weatherproof outer layer under the roof. I really like the infinitely variable entrance slides as opposed to the limited choice of entrance afforded by the National. These can be made to take the standard mouse guard for Winter. The generous flight board makes it easier for bees landing with a heavy load and for the beekeeper to see what is coming in.And, of course they look so much better in your apiary than a collection of 'old boxes' which many hives seem to resemble.



Wide Spacing as a Varroa Control.

Over the last few years there have been a number of articles in Italian beekeeping magazines about the use of wide frame spacing to control varroa. A presentation was made on the subject by Dr Tiziano Gardi at the Dublin Apimondia.

His presentation was on a 3-year project, financed through an E.U grant, completed in August and submitted to the Italian Ministry of Agriculture, Food and Forestry. The objective was to evaluate the effects of the "Spaziomussi Bio-Technique" in colonies of *apis mellifera ligustica* and its ability to reduce varroa destructor numbers, (Spaziomussi is a method of spacing frames devised by a Mr Mussi). 855 hives with wide frame spacing were set up in 15 apiaries in 6 provinces in Italy; the resulting observations in colonies were significant and were as follows.

- a. An immediate increase in the drop of both mature and immature mites.
- b. A lower tendency to swarm and in the 3rd year practically no swarming was experienced.
- c. No deformed bees were found.
- d. A more compact brood pattern was observed.
- e. Healthier bees, a result of the reduction in virus infection and chalk brood.
- f. Honey yields increased on average by 22%.

The report concluded that from the above observations and the accompanying data, Mr Mussi's spacing method is effective.

In the U.K 35mm spacing is the norm and the nearest we have to the wider spacing used in the Italian trial is by using Manley frames or B.S using castellation and 10 frames both give a 41mm spacing.

With our National Brood Boxes that have 11 frames, to create a similar arrangement, take one frame out. This leaves you with ten. Put a wide plastic spacer on the first frame followed by a narrow plastic spacer on the second etc. So your ten frames now have alternating wide and narrow spacers in the box.

If it is the success it claims it is, why have we not been told about it before. A colleague has done it for several years and says it is effective.

Why not give it a go in ? Results please to the editor at the end of the season.

THE DISAPPEARING BEEKEEPER.

We all come to beekeeping in different ways. I came back to it! As a child and schoolboy I helped my father (a yeoman farmer) and a neighbour (the Chief Constable) with their respective bees. Please forgive the job descriptions but both imply these two worthies had a comfortable living. In particular I recall taking bees to the heather sitting in the back of a SWB Landrover towing the trailer loaded with WBCs. And, dare I say it, spreading a small cloud of stray bees through the county city. I don't know if any pedestrians were attacked but the Chief (CBE, MC+bar) just kept going! So this was all enjoyable and normal. Then real school (public) and university and a career followed so to bees I gave not a thought except for those happy memories. With retirement (or partial) my daughter thought (bless her) I needed something else to do - so she bought me for Christmas (did not ask) a WBC because they looked pretty. She also ordered a nucleus and in effect it was *Un fait accompli* So the beginners course (back to school) and then the apiary visits and the arrival of the nuc. Fortunately I have not looked back and all this was six years ago. I give many thanks to all the teachers of the NBKA so I look at it as follows and I ask myself the following question.

Why did I persist? Knowing the problems both practical and academic when others have fallen by the wayside and others have flourished and maintained their enthusiasm (dare I say more than I)

Well, in my early reading I found one comment intriguing "Do not redesign the hive in your first year." But it was tempting! What sustained my interest was the reading - all the usual standard books but also books such as Wessex Tales by Thomas Hardy (see The Three strangers and the comments of a farmer's wife about mead and honey) and the gentle humour of the 'Beekeeper of Whirlow' by the Rev Tinkler Edward and his teaching on the lore of the honey bee has really stayed standard and not radically changed. The British standard frame WBC hive was being introduced and there is comparison between "old" and "new" beekeeping.

I have continued to be fascinated by the whole process of learning and trying to understand beekeeping. I remain ready to defend our bees against all comers both natural pests and man applied chemicals. I would also continue to encourage potential beekeepers by the reassurance that it can be done so that both the bees survive and we can reach a equilibrium and our stock of beekeepers is maintained.

Himalayan Balsam a threat or an asset ?

A leaflet published by Rotary International in Great Britain and Ireland appeals for help in eliminating Himalayan Balsam, pointing out that ... '... it obliterates other natural growing wild plants, and reduces the amount they are pollinated. On river banks it can kill off the vegetation growing there and, then, when it dies back in the autumn, exposes the river bank, leading to erosion.'

The leaflet does however provide a nice balance by going on to say ... There is a beekeeping lobby which feels that Himalayan Balsam should be allowed to continue to grow ... as it is much visited by both bumble and honey bees...'

'From a biodiversity and conservation point of view a balance has to be struck between helping sustain insect populations with balsam and other species, and the obliteration of native plant communities by large stands of Himalayan Balsam.' 'While it is illegal to actively distribute balsam seeds, it does not preclude the option for beekeepers to have some balsam in their gardens, providing it does not spread outside their boundaries'.



Recipe (21) 'No Need to Bake' Chocolate Cake



2 tablespoons **Honey**
8 ounces Digestive Biscuits
(crumbed)
2 ounces Butter
4 ounces Plain Chocolate
2 ounces Marshmallows
(quartered)
1 ounce Chopped Nuts

Melt butter, chocolate and honey together over a low heat.
Stir in the biscuit crumbs and nuts and finally, the marshmallows.
Press into a lightly greased 7 inch tin and refrigerate until completely set.

Turn out and cut into about 12 pieces.

Recipe (22) Micro-waved Honey Cake



4 ounces **Honey**
2 ounces Dark brown sugar
3 ounces Butter
6 ounces Wholemeal Self
Raising Flour
4 fluid ounces Milk
1 Egg
1 teaspoon ground Cardamom
0.5 teaspoon Mixed Spice
0.5 teaspoon Bicarb of Soda

Using the microwave you'll have a home baked cake in next to no time.

Grease and line a 2 lb microwave loaf dish.
Put honey, sugar and butter into a suitable bowl and cook on 'High' for 2 to 2.5 minutes until the mixture is bubbling.
Sift together the flour, spices and soda.
Stir into the melted honey mixture with the egg and milk.
Transfer to the prepared dish and cook on high for about 8 minutes.
Note - The mixture should be springy to touch but slightly sticky.
Set aside for 5 minutes by which time a cocktail stick inserted into the centre should come out clean.

HONEYBEES TIME FORAGING TRIPS TO EXPLOIT DAILY BLOOMING.

Gardeners know that plants open and close their flowers at set times during the day. For example, the flowers of catmint open between 6:00 a.m. and 7:00 a.m.; orange hawkweed follows between 7:00 a.m. and 8:00 a.m.; field marigolds open at 9:00 a.m. But plants cannot release their scent in a timely manner simply in response to an environmental cue, like the lowering of the light levels. To coincide with the appearance of the nocturnal insects, the plant has to anticipate the sunset and produce the scent on a circadian schedule. Flowers of a given species all produce nectar at about the same time each day, as this increases the chances of cross-pollination. The trick works because pollinators, which in most cases means the honeybee, concentrate foraging on a particular species into a narrow time-window.

In effect the honeybee has a daily diary that can include as many as nine appointments — say, 10:00 a.m., lilac; 11:30 a.m., peonies; and so on. The bees' time-keeping is accurate to about 20 minutes. The bee can do this because, like the plants and just about every living creature, it has a circadian clock that is reset daily to run in time with the solar cycle. The bee can effectively consult this clock and “check” off the given time and associate this with a particular event. They live by sets of instructions that are familiar to computer programmers as subroutines — do this until the stop code, then into the next subroutine, and so on.

Bees have an innate ability to work out the location of a food source from its position in relation to the sun. They do this even on cloudy days by reading the pattern of the polarization of the light, and pass this information to other bees. In the dark of the hive, they transpose the location of a food source in the horizontal plane through the famous “waggle” dance into communication in the vertical plane of the hive.

Honeybees can tell their sisters how far away the food is up to a distance of about 15 kilometres. For good measure, they can also allow for the fact that the sun moves relative to the hive by about 150 an hour and correct for this when they pass on the information. In other words, they have their own built-in global positioning system and a language that enables them to refer to objects and events that are distant in space or time.

German scientists in the early part of the last century called this ability of bees to learn the time of day when flowers start secreting nectar and visit the flowers at appropriate times *zeitgedächtnis*, or time sense.

But the species of flowers in bloom, say, this week, is likely to be replaced by a different species at a different location next week or the week after. The bee needs a flexible, dynamic appointments system that it continually updates, and it has evolved an impressive ability to learn colours, odours, shapes and routes, within a time frame, quickly and accurately.

While the initial dance by a returning scout bee informs her sisters of the location and distance of food plants and the quality of their nectar, bees that visit the food source learn to synchronize their behaviour with daily floral rhythms, foraging only when nectar and pollen are at their highest levels. At other times, they remain in the hive, conserving energy that otherwise would be exhausted on non-productive foraging flights.

Although most animals, including humans, cannot sustain long-lasting periods of activity without circadian rhythms, honeybees have developed a marked flexibility in their circadian rhythm that depends on the job they are doing. Whereas a particular circadian determined behaviour is usually fixed to a certain phase of the cycle, in honeybees the circadian rhythm is dependent on the job the bee is doing.

Adult worker bees perform a number of tasks in the hive when they are young, like caring for eggs and larvae, and then shift to foraging for nectar and pollen as they age. However, if the hive has a shortage of foragers, some of the young nurse bees will switch jobs and become foragers. The job transition, whether triggered by age or social cues, involves changes in genes in the honeybee brain; some genes turn on, while others turn off.

Young worker bees less than two weeks of age who typically nurse the brood around-the-clock display no circadian rhythms.

Older workers (more than three weeks) typically perform foraging activities and have strong circadian rhythms that are needed for the time compensated sun-compass navigation and timing visits to flowers.

Recent research in Israel has shown that when young worker bees are removed from caring for the brood and placed in individual cages, they rapidly show circadian rhythms in their behaviour. Newly emerged bees isolated in individual cages typically show circadian rhythms in locomotor activity when at 3-14 days old, ages at which most bees in the hive perform around-the-clock nursing activities as mentioned above. Older foragers who revert to nursing duties switch back to around-the-clock brood care activity similar to that of young nurses in typical colonies

POLY BEEHIVES ---- THE FUTURE?THE FUTURE?THE FUTURE?THE FUTURE?

Imagine a hive that requires minimal maintenance, out-performs traditional materials and doesn't rot.

Imagine also that it is cheaper than its timber equivalent...

Poly hives have been around for a long time now, certainly 15+ years, perhaps considerably longer on the continent and in the USA. In the past, they needed to be produced in huge numbers for efficiency and British National sizes were unavailable for many years due to a lack of demand/volume. There are now several manufacturers and stockists of our more common sizes. The early ones got bad press because they were made from a lightweight polystyrene.

I have had mine now for three or four seasons, two nucleus boxes and a Langstroth Jumbo hive. If you have not handled them, you may be surprised by the density of the polystyrene - it is not the small beaded packaging type. I have not tried this but you can test it's strength by standing on the hive. It is recommended to paint poly hives to protect them from UV light and to extend their life. Any water-based paint can be used - I didn't have any suitable dregs at home, so bought a tin of masonry paint so that everything could match. A small tray and roller made short work of it. Don't paint the insides, just the externals. A 5L tin goes a LONG way! The other significant advantage of painting them is that it camouflages the hives which, in bright white, would otherwise stand out in the corner of a field. etc.

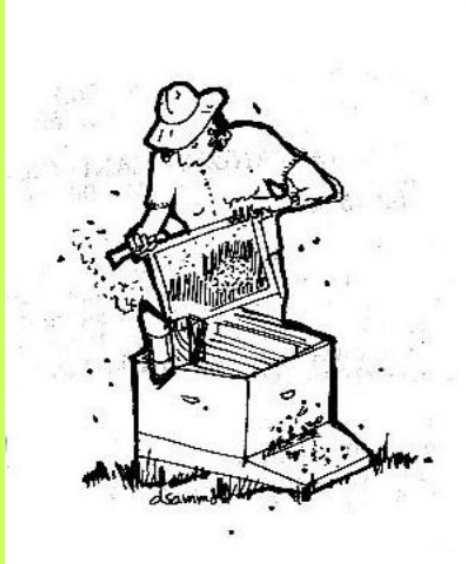
When looking at buying poly hives, ensure that there are no location lugs between the brood boxes and supers. They look like a good idea but are a pain, and prevent you sliding the super into its final place.

I have had several seasons with my poly hive, so I can offer the following insights:

1. Spring build up compared with a wooden hive is noticeably quicker.
 2. The hives therefore become larger quicker and do show signs of wanting to swarm a little sooner. This is an advantage if you want to make splits or using the colony for queen rearing.
 3. Bees in poly hive uses less winter-feed than wooden equivalents.
 4. My bees have been treated with oxalic acid over winter with no noticeable effect on the hives.
 5. Weak colonies have survived over winter in poly where they would have had no chance in wood. It is probably bad beekeeping practice to have not united with another colony but sometimes life gets in the way.
 6. They are ideal if you are moving hives from location to location- put a couple of straps around them and off you go - mine has a couple of recesses for straps to go.
 7. I have never known a roof to blow off. I do put a block pavior/brick on top to add a bit of weight, just in case.
 8. National poly hives are compatible with the wooden parts, so if you want to use poly brood and wooden supers, you can. It also allows you to utilise your existing kit. Other sizes would need checking because you come across variants in hive sizes - Jumbo Langstroth that take Dadant sized frames but less of them.
 9. Price - a poly hive comprising a brood box, floor, roof and two supers is £90. The "standard quality" wooden equivalent is £101. There are greater bargains still to be had if you go away from BS sizes and onto Langstroth.
 10. If they need any assembly (some manufacturers hives do, some are one piece boxes) then this can be done by even a small child and requires no tools. It can be done in the living room whilst not interrupting the sleeping baby - imagine doing so with a wooden hive...!
 11. Lifespan of poly is in excess of 15 years. Timber hives, if treated and stored correctly may be nearer to 50 years. But I can live with 15 - £90 over 15 years is less than a couple of pounds of honey a year.
 12. I may buy or make more wooden supers, but any other kit that I now buy will be poly. 13. Poly can be left out in all conditions, so there is no need to find dry storage for them. They do not rot, and do not soak up water like wood. They can be stored on the ground if necessary.
- Obviously with poly hives it is not possible to sterilise them with a blowlamp. They can be sterilised easily by scrubbing using a suitable disinfectant - I have used 'Virkon S', but others will be available.
- Some care does need to be taken when using poly hives. If you leverage frame ends against the polystyrene, it will damage it. Dropping a box from height onto a corner will risk cracking or damaging the boxes (can be repaired with a suitable glue). In three or four years, my boxes look as good as when they were received.
- I have a couple of the 4-in-1 nuc boxes, which I find handy for all of the benefits above, and because they will take both frame sizes that I use. They can be used without modification, but would be far better with the ply divider replacing with a thinner one to avoid the side bar of a National frame going tight against it. I have never quite got around to changing it though. In these, whilst it may not be good practice to do so, I have over-wintered a small nucleus colony. I believe that it would not be possible to do in a wooden nuc box.

If you are looking for another hive, I urge you to give the poly kit a try.

HIVE WATCH



We hope that your colonies have successfully survived the winter. In the next few weeks our bees will be engaged upon raising the new brood that will be increasing daily. As beekeepers we have to ask ourselves, 'are we ready to meet the demands of our bees?' The first demand will be for new frames in the brood chamber to replace those that have become darkened with use. These may well have been moved to the ends of the brood box in the autumn to ensure they are devoid of brood and hopefully, any remains of pollen and honey. If we have not already done so, any old frames should have been cleaned and sterilised in a solution of soda crystals. Or, we have made up some new frames that await sheets of wax foundation. Once fitted with foundation keep them in a warm place to retain the freshness of the wax. Old wax foundation that has lost its aroma, can be restored by dissolving $\frac{1}{2}$ cupful of soda (washing soda), to one gallon of hot water. Allow to cool. Then, with the foundation already in their frames, immerse and leave for about 15 minutes. After this time, remove and shake off the surplus liquid and place directly into the hive. Do not leave then to dry beforehand. Alternatively, trade in the old foundation for some new. Now that the days when the cost of ten sheets of foundation were the equivalent of half a week's wages are behind us, trading in must be the best option

Holidays

Tired with the noise and pollution and the same old Costa Holiday????? Then why not try a different Costa Holiday.

Come to Costa Geminiano

An Italian Rustic Farmhouse in the mountains of Emilia Romagna Province of Parma

The property is situated at 650 metres above sea level on the edge of a small quiet village amid beautiful unspoilt Countryside. The nearest town Bardi is 12km away.

Accommodation comprises of 3 double bedrooms and 1 single bedroom. Self catering with meals can be arranged if requested. Guaranteed no Internet, no TV, no en suite bedrooms, no discos and frilly duvets- just the sounds of birds, cockerel alarm call and bees. Bring your own veil and walking boots for exploring the countryside.

*Price per week 650 euros. Short stay B & B @ 30 euro per night
Interested, need to know more ring Jenny on 0039052576169*

