Buzzword

Herefordshire Beekeepers' Association

December 2023

Beginners' course 2024

A good Christmas present. See page 2

(it sells out every year)

Introduction to Microscopy for Beekeepers

Two day microscopy course for the needs of beekeepers. See page 8.

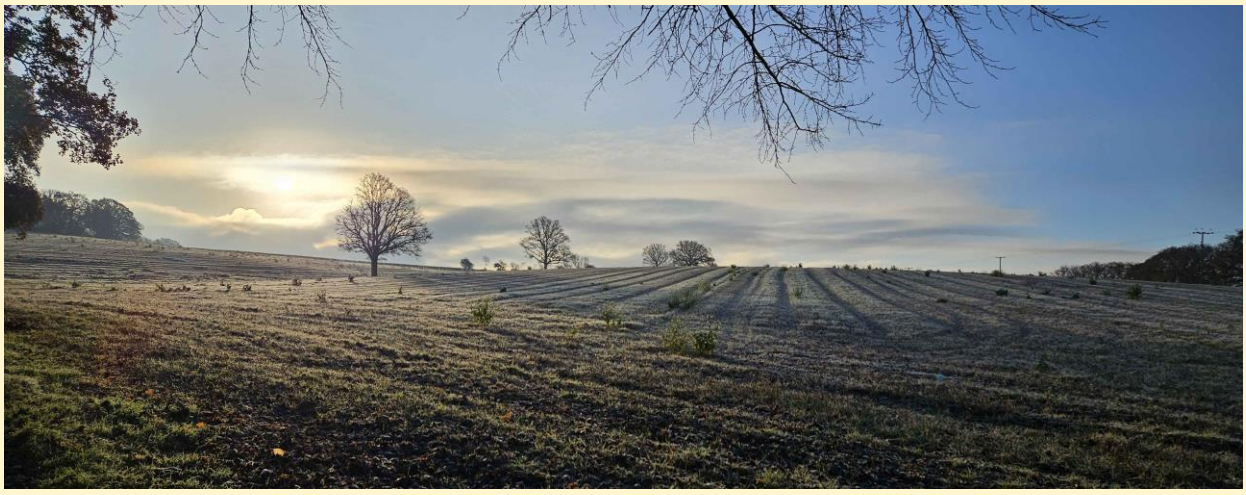
Almost sold out

Next Zoom session – 18th March

Hives in a bare cold landscape (Scott Hall). See page 4 for the thermal image of these hives.

As in previous years, there will be no January edition of Buzzword.

See you in February



Cold nights and frosty dawns are upon us. Does it help to insulate your hives? See page 3 for one view.

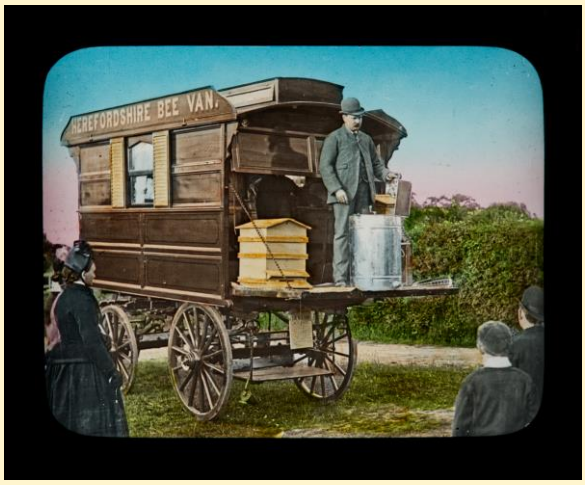
Beginners' course 2024

Five weekly Wednseday evening sessions at Holmer Parish Church Centre, and two Saturday practical sessions at the association apiary. Start: 6th March 2024 (dates provisional at this stage). Fee of £100 includes the latest edition of the BBKA Guide to Beekeeping and a year's associate membership of the HBKA.

A great way for newcomers to get into beekeeping (and a great Christmas present). Also for those who have just started beekeeping and want to learn.

https://www.herefordshirebeekeepers.org.uk/product/beginners-course/

Bee Vans

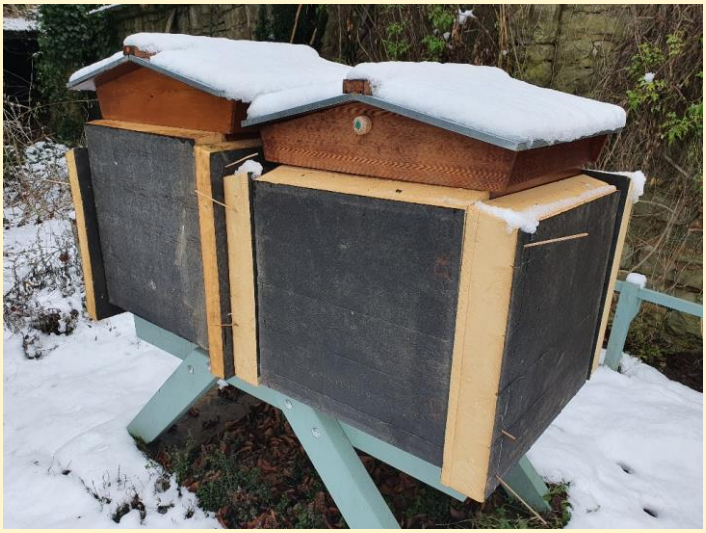


Those of you who also subscribe to BeeCraft may well have spotted an interesting article in there about the Berkshire bee van. In the late 19th century horse drawn vans were used in various counties to bring instructors, sample equipment and magic lantern shows to the rural populace, many of whom depended on beekeeping to supplement their somewhat meagre (if not down right miserly) incomes . The aim was to improve their beekeeping, and thus their incomes. Herefordshire BKA led the way with this, and here is a picture of the original Alfred Watkins bee van.

Steven Herbert, who wrote the BeeCraft article, acknowledges Mary Walter for the the information she supplied about the Herefordshire van.

Hive Insulation

I insulate my hives, have done for years.



The reasons for this are simple. During the winter there is little activity by the colony. Flights are few, save where nature calls. Brood rearing is much reduced. Almost all the energy expended is used to keep the cluster warm, and almost all that energy comes from the colony's stores; honey they have produced, syrup they have taken down and put away, or fondant sitting just over the clutter (if I have got the fondant placement right). If you can reduce the energy expended on keeping warm then that will reduce the stores consumed, as well as increase the chances of colony survival.

Our wooden hives are made from 19mm / ¾" thick cedar walls. Typically, feral bees will look to locate the colony in a dead tree, with much thicker walls and, very importantly, much, much thicker protection overhead. Thermally, the British National Standard hive is a disaster. Polyhives are, of course, much better for conserving heat, but I do like the aesthetics of wooden hives in the summer.

The idea of insulating beehives goes back a long way, The straw of a thick skep probably worked better than thin wood. Double skinned hives, such as the WBC, were designed to accommodate an insulating layer between the walls. The Warré hive has a thick layer of wood shaving under the roof. For many years beekeepers have put a 'quilt' above the crown board, but a few bits of hessian, typically, provide poor thermal protection.

Minds wiser than mine have been applied to this subject, in particular, that of Derek Mitchell. Derek was a professional consulting physicist (full disclosure, I did a degree in physics, but a *very* long time ago) with little interest in bees. However, his wife is a beekeeper, and a few years ago he was intrigued by the clearly appalling thermal properties of the standard wooden hive. So, he started building both physical and mathematical models of tree cavities and hives. He concluded that indeed, the standard bee hive is pretty poor, and in 2016 published a paper on the subject: http://dx.doi.org/10.1007/s00484-015-1057-z (paywall, but ping me if you would like a copy).

Since then, he has been doing more and more research, amongst other things demonstrating the consequences for aspects of bee health from a poorly insulated hive (cold hives are good for Varroa). He has embarked on a PhD on the subject and has published in various bee and academic journals. His list of academic publications can be seen here: https://eps.leeds.ac.uk/mechanical-engineering/pgr/2457/derek-mitchell#journal_article_div

In the last few days he has published a short article online here: https://www.sciencealert.com/honeybees-suffer-unnecessarily-in-human-made-hives-study-finds. It summarises the findings about bee clusters he published in the Journal of The Royal Society Interface in November. In short, what some beekeepers have been saying for the last 119 years, that the outer 'mantle' of the cluster insulates the core of the cluster, turns out to be rubbish. The North American practice of deliberately using thin-walled hive in order to induce clustering is a good recipe for killing bees. (This might also be a small contributary factor to the much higher overwintering colony mortalities in the North America compared to Europe.)

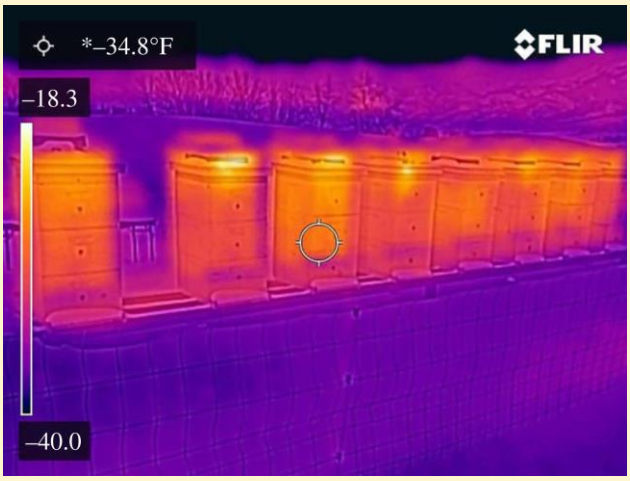
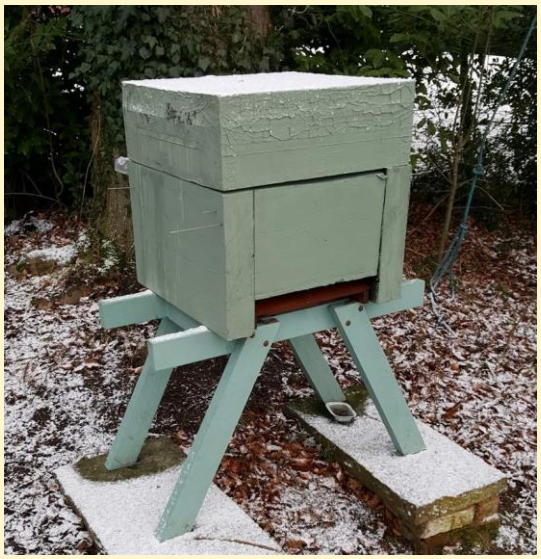


Figure 4. Hives in a bare landscape via infrared (FLIR C5, Scott Hall). From:

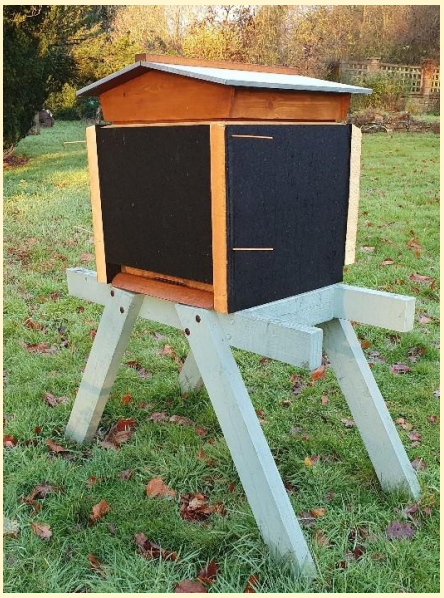
Mitchell D. 2023 Honeybee cluster—not insulation but stressful heat sink. *J. R. Soc. Interface20*:



So, for the first winter, for my first colony of bees, I built a huge great insulated box around them. In retrospect, this was OTT. You can also buy hive cosies from the usual beekeeping suppliers, but they are expensive for what they are and not that effective.

What I now do each autumn is put slabs of insulation round each hive, cut to fit. The insulation I use is the standard stuff that builders use, technically polyisocyanurate (PIR). Typically, this is sold under the name of the manufacturer, such as Kingspan or Celotex. You can get it at any builders' merchant, or if you are mean, like me, you can beg scraps from skips and building sites. A few years ago, I bought a pallet load of second quality insulation from Seconds and Co in Presteigne. Since then, there was a fire at the factory in Ludwigshafen where they produce the chemical needed to make PIR, so prices went up.

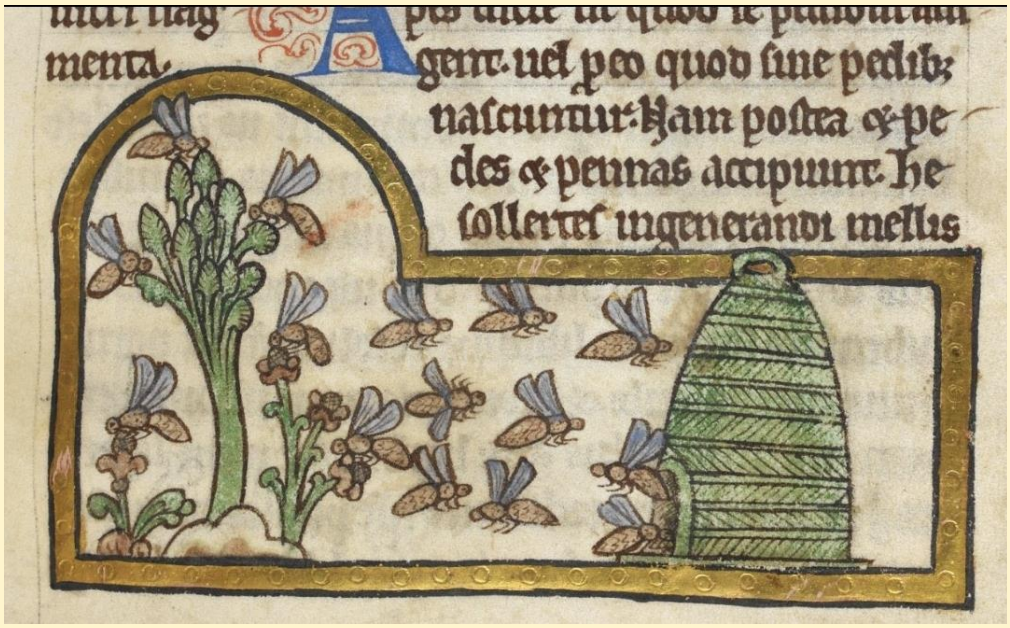
I have tried gluing the slabs together, but then you have an issue storing them over the summer. It is lot easier just to use slabs, cut to size. I find they can be kept together merely by sticking bamboo skewers through them.



I use a minimum of 50mm / 2" thick slabs of PIR round the sides. On top of the crown board, beneath the roof, I aim for 75mm – 10mm / 3" to 4", as that is where most heat risks being lost. You may need to use an eke or two to accommodate this, but they are easily knocked together with four bits of ~20mm thick wood.

Roger Gill

Saint Isidore of Seville



Isidore (born: around 560 AD, snuffed it: 4th April 636 AD) was the bishop of Seville. In iconography, his attributes include a pen and a beehive.

He was a great writer and most famous amongst his works was his *Etymologiae*, perhaps the first attempt to bring together all known knowledge, the first encyclopaedia. Hence the pen and hence his being associated with software engineers, computer users and the internet.

As to his association with bees, there are various legends. One states that whilst he was in his cradle a swarm of bees came and placed a trickle of honey on his lips. Another suggests that when he was a boy his father saw a swarm of bees around him, as if he were a beehive.

In his great *Etymologiae*, he wrote about all sorts of animals, including bees, explicitly acknowledging what Virgil had written about bees;

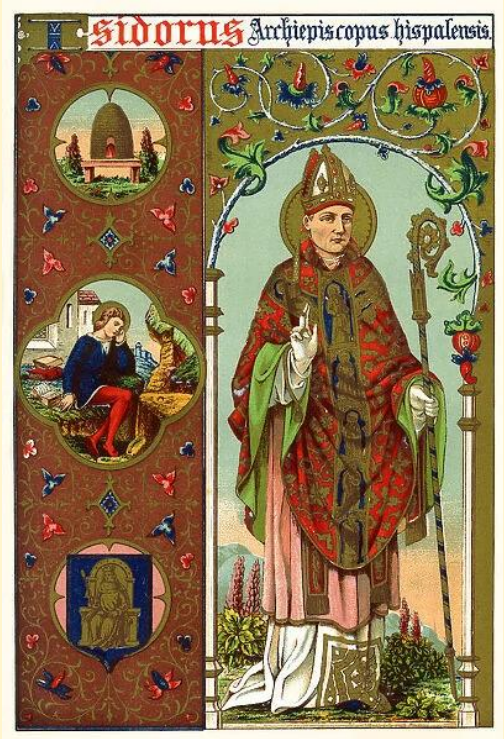
> Bees (*apes*)are so named either because they cling to each other with their feet (*pes*), or because they are born without feet. They develop feet and wings afterwards. These animals, skilful at the task of creating honey, live in the places assigned to them. They construct their homes with indescribable skill, build their honeycomb from various flowers, build cells of wax, and they replenish their forces with innumerable offspring.

They have armies and kings; they wage battle; they flee away from smoke and they get upset when annoyed.

Many people claim from their experience that bees are born from the carcasses of oxen. The flesh of slaughtered calves is pounded to create these bees, so that the 'worms' are created from the putrid gore, and the 'worms' then become bees. Specifically, the ones called bees originate from oxen, just as hornets come from horses, drones from mules, and wasps from donkeys.

The Greeks name those larger bees that are created at the edges of the honeycomb 'costri'. Some people think they are the kings. They are thus named because they rule the hive, or 'castra'. The drone is larger than the bee, and smaller than a hornet. And drones are so called because they eat what is produced by others, … for they eat food that they have not worked for.

Vergil writes about this in his Georgics: (4.168): *They drive the drones, a lazy herd, from the hives.*



The picture above is taken from a medieval bestiary produced in England, probably Durham, at the beginning of the 13th century, and which incorporates great chunks of Isidore's *Etymologiae*. It is currently in the British Library, which at the time of this newsletter going to press, is still under siege from a cyber attack. Once the BL has recovered, then the manuscript can be found at BL Royal MA 12 C XIX f45r. For the Latin palaeographers amongst you, the text shown reads:

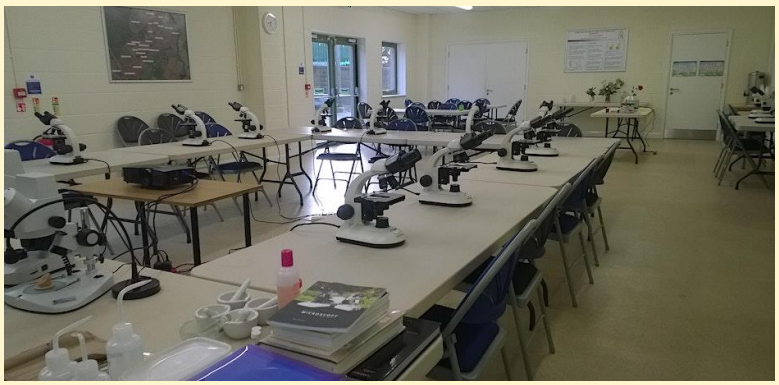
Apes dictae, vel quod se pedibus invicem alligent, vel pro eo quod sine pedibus nascuntur. Nam postea et pedes et pinnas accipiunt. Haec sollertes in generandi mellis…

Roger Gill

Introduction to Microscopy for Beekeepers

Two day microscopy course for the needs of beekeepers

23rd/24th March 2024, Royal Agricultural University, Cirencester GL7 6JS



Using both compound and dissecting microscopes and covering their use for different beekeeping application with practical examples of honeybee anatomy, disease diagnosis, and pollen identification.

Topics covered include:

- The basic theory of light microscopes
- Setting up and using compound and stereo (dissecting) microscopes
- Pollen identification
- Identification of the floral composition of honey
- Honeybee anatomy and dissection
- Adult bee disease diagnosis

This laboratory-based course is intended to provide participants with basic set-up and usage skills and confidence with microscopes. Prior knowledge of microscopy is not required, but some understanding of beekeeping will be helpful,.

The £75 course fee includes microscopes, consumables, course handouts and refreshments, but no lunch.

Led by Marin Anastasov NDB who manages 30 colonies in Gloucestershire and teaches beekeeping at all levels from Basic to NDB, both locally and nationally.

https://www.eventbrite.co.uk/e/introduction-to-microscopy-for-beekeepers-tickets-732667677747?aff=oddtdtcreator

If this becomes fully booked but you are still interested, let us know and we will look at setting up a second course later in the year

Bob's Beelines

The weather in November has been very wet, but also very mild. The bees have been quite active, but be aware when they are active, they are using up their winter stores. So please keep a check on the stores and put candy on before Christmas if necessary. Make sure the roofs are waterproof and your mouse guards are in place. Some members have reported mice getting in. Don't forget the green woodpecker will be looking for food when the weather starts getting very cold and frosty, so put wire netting around your hive to keep them out. Also get your equipment ready for next year.

Happy Christmas and Prosperous New Year to all Members

Bob and Kath Cross - **01886 880 554**

Topical tips – December

After the warm autumn, winter has finally arrived. Time to curl up by the fire with a good book, and make plans for the new season. There are so many beekeeping books to choose from, but I enjoyed Tom Seeley's books: *Honeybee Democracy* and *The Lives of Bees*, as well as books by Jürgen Tautz: *The Buzz about Bees* and *Honey Bees*.

Last year was difficult, the cold spring inhibited timely inspections and the bees took advantage by making early swarm preparations. Although I had a good crop of spring honey, the summer was disappointing with cool wet weather and little opportunity for the bees to gather enough nectar for themselves let alone excess for the beekeeper. I started feeding early, and it was difficult to persuade the bees to store enough for winter. Several colonies took a brood break during the summer, and some of the new queens failed to mate successfully. I did try queen rearing again, but with poor results this year, a New Year resolution will be to do better next year. Another resolution will be to plant more for the bees in the garden, and encourage as many wild flowers as possible in our patch of ground.

I hope our members have a very good Christmas and a happy beekeeping season in 2024.

Mary Walter

Committee Members

Chairman : Tony Ravenhall **Vice Chairman** : Deborah Smith

Secretary : Janelle Quitman **Treasurer** : Roger Gill

Membership Sec. : Steve Utley

Committee:, Rob Williams, Janelle Quitman, John Moxley and Val Lilwall,

LAN CO-ORDINATORS

North LAN: Mary Walter

East LAN: Simon Durrant

South LAN: Val Lilwall

PATRON: Councillor Ellie Chowns

To contact a member of the committee please look on our website for the appropriate email address: https://www.herefordshirebeekeepers.org.uk/

The Herefordshire Beekeepers Association is a Charitable Incorporated Organisation, Registered Number:1174917. Members of the committee are also trustees.

Further details at: https://beta.charitycommission.gov.uk/charity-details/?regid=1174917&subid=0

If you have contributions to propose for this newsletter, please contact **Kirsten Ellerby** at: news@herefordshirebeekeepers.org.uk

If foul brood is suspected, contact our current Regional Bee Inspector (RBI),

- Andy Wattam Tel: 07884 791009

andy.wattam@apha.gov.uk

Or, *during the season*, a Seasonal Bee Inspector (SBI)

- Liz Gardner Tel: 07867 351610

elizabeth.gardner@apha.gov.uk

or

- Bronwen Hopkins - Tel: 07796 433 626

bronwen.hopkins@apha.gov.uk