



**JANUARY  
2020**

# Aberdeen and District Beekeepers' Association (SCIO)

*- promoting the study and development of apiculture, and advancing the heritage, culture and science of beekeeping amongst its membership and throughout the wider community*

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**FUTURE ARTICLES**

**Book Review**  
( Ian Mackley)

## MEET THE ADBKA COMMITTEE MEMBERS

### Jamie EVANS-committee member since 2019

I have been keeping bees since 2017. A few years prior to that I picked up a book on them at a friend's house and was so fascinated I had no choice but to attend the winter lecture series and then get a few bees for myself. Since then it has got completely out of control with more than ten hives, and I'm not sure what I did with my time before bees.



I enjoy reading as much as I can on the subject and trying new things – so a priority has been to build up to enough stocks to try different things. I also enjoy the challenge of maximising the honey crop and to that end had my first go at taking bees to heather in 2019, and I find making bit of equipment an interesting part of the hobby. Finally I am a keen brewer of beer so have been trying my hand at mead making, with varied results.

**Jamie Evans**

## JANUARY 2020 APIARY DEMONSTRATION REVIEW

We were very fortunate with the weather on Sunday afternoon on the 5<sup>th</sup> of January considering the time of year, not so cold that the bees were in a tight cluster, not windy and not wet either. Many of the 36 folk who came along to our first meeting of 2020 were new to beekeeping so this was a good opportunity to for them to see the Crathes apiary as well as to meet other club members and to ask questions about bees and the club.

Malcolm Watson gave us an excellent talk about the life cycle of varroa and how this pest can impact on our bees. Although varroa has spread throughout most of the country their numbers can still be controlled using various techniques as part of an integrated pest management plan. Today's demonstration focused on using oxalic acid sublimation to treat a hive, so Malcolm showed a range of equipment that can be used and then went on to speak about the risks that oxalic acid poses to the beekeeper. He then demonstrated the technique on a hive using all the health and safety measures he impressed on us.

On arrival at the apiary bees from all of the hives were flying which was reassuring and also such a lovely sight to see. By the time that the talk was over, the temperatures had dropped a little and most of the bees had gone back inside. They don't always cooperate so well.

A quick check of hives showed that most of the roofs and the crown boards were damp so we swapped them out with dry ones from the store which just shows, you can never have too much spare equipment.

**Naomi Adams**

## THERE'S A HOLE IN MY QUEEN EXCLUDER!

Beginners' hive packages often come with a slotted steel queen excluder, and on a National hive - which is square in plan - the excluder can be positioned in one of two orientations. It is taught that such excluders should be oriented such that the rows of slots are perpendicular to the frames. This always looks somewhat counter-intuitive, so why is it recommended? The reason usually given is that in this orientation there is more area through which bees can pass than if the excluder slots are parallel to the frames. Of the half dozen beekeeping manuals I own, only Wedmore's 'Manual of Beekeeping' specifically states the excluder slots should be perpendicular to the frames, but explains that this is because 'it [the excluder] is less liable to distortion on removal if then stripped off the frames', which I don't really understand. The Haynes Bee Manual includes several clear photos of perpendicular orientations but is otherwise silent on the matter, as are the other manuals, including 'Hooper'. I have an old Langstroth slotted steel excluder, which can only go in one orientation (as the hive is rectangular) and that is with the slots perpendicular to the frames, so that adds some credence to 'perpendicular is best'.

Let's do the sums and see!

My Thornes National slotted steel excluder has 54 rows each of 19 slots.

The slots are 19 mm long and 4.4 mm wide. Allowing for semi-circular ends, each slot thus has an area of 79.4 mm<sup>2</sup>. Let's call that 0.8 cm<sup>2</sup>. The total aperture area of the excluder, or 'maximum hole' is thus;

0.8 cm<sup>2</sup> per slot x 19 slots per row x 54 rows = 821 cm<sup>2</sup>

As an aside, the excluder is 46 cm square so has a total area of 2,116 cm<sup>2</sup>, of which 821 cm<sup>2</sup>, or only 39% is 'hole'.

The Modified National hive in the experiment had eleven Hoffman frames and a 9mm plywood dummy board.

### *Parallel*

With the queen excluder installed with the rows of slots parallel to the frames, 14 rows are usable and provide an aperture area of:

0.8 x 19 x 14 = 213 cm<sup>2</sup>, or only 26% of the maximum 'hole'.

### *Perpendicular*

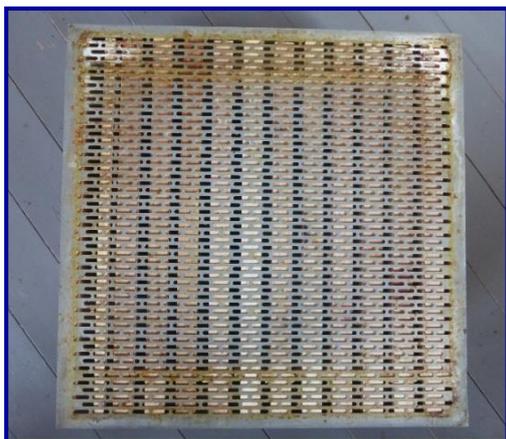
With the slots perpendicular to the frames, the effective area of every slot which is partially open to bees was calculated. This was done for two adjacent rows as there is a two row pattern that repeats laterally 27 times. The effective 'hole' area in two rows was calculated to be 9.6 cm<sup>2</sup>. For the whole excluder, the aperture area is thus:

9.6 x 27 = 259 cm<sup>2</sup>, or 32% of the maximum 'hole'.

So there we have it! The perpendicular orientation provides just over 20% more hole area through which the bees (and air for ventilation and dehydration) can pass. I was (a) expecting the advantage to be more than that and (b) surprised how little (less than one third) of the maximum possible hole area is available in either configuration.

All of the above applies to a frameless, slotted steel excluder and perhaps to plastic equivalents. Wire rod excluders are generally preferred as they are said do less damage to the bees' wings and legs as they pass through, are less stuck down by propolis and provide a significantly greater 'hole' area for ventilation and bees to pass through. I calculated the total aperture area of my wire rod excluder to be 1,048 cm<sup>2</sup>, which is nearly 30% more than the slotted excluder at 821 cm<sup>2</sup>. All of the wire rod excluder 'hole' can be accessed by the bees in any orientation so the useful hole area is a massive four to five times greater than a slotted excluder.

## The “correct orientation”



Wire rod excluders are often at least double the price of slotted steel or plastic excluders and a bit harder to clean. They are usually mounted in a wooden frame with a bee space on one side. With bottom space hives such as the National, the excluder should be installed with the bee space on the lower side of the excluder. This has the effect of allowing the bees to roam freely above and below the excluder, which they can thus cross almost anywhere. The orientation of the wire rods relative to the comb frames would therefore seem to be of no consequence. I have a mixture of types of excluders and stick to the perpendicular orientation for all of them, so by habit I get it right when it matters.

So the best answer to ‘which way round should my slotted queen excluder go on my National hive?’ is probably ‘get a wire excluder!’

Ian Mackley

## PROFESSOR DAVID EVANS' TALK



On the 4th of December many of us had the pleasure of attending a talk by Professor David Evans. However rather than his day job of apian virology he was appearing in Blackburn as his alter ego Dr Bodgit to talk to us about his leisure activities of skip raiding and woodwork in the pursuit of keeping bees cheaply.

In his talk titled “Measure twice, cut once, swear often” David was keen to emphasise that he doesn’t use any fancy tools - just a hand saw, hammer, tape measure, cordless drill and a bread knife, along with a ready supply of plasters for when the latter inevitably slips. There is no room among the stockpiles of other people’s rubbish for table saws or band saws in his garage, although he did confess to the extravagance of a nail gun.



*Brood Frames showing tongue depressors and barbecue skewers*



*Deep Crown Board with Perspex window*

For cheap materials top tips were to get offcuts from anywhere that sells wood, shower doors from skips as a ready supply of free perspex and discarded For Sale signs for any correx requirements

Dr Bodgit brought a few items he had made earlier to demonstrate what can be achieved with these low cost materials. Of particular interest to the audience were hive floors with underfloor entrances which can be made for a fraction of the price of commercially available equivalents, however David noted his most significant ongoing savings come from his foundation-less brood frames. Using these In conjunction with his trusty homemade wax melter he can avoid the purchase of foundation even though he is keeping pathogens to a minimum by melting 30% of his brood frames each year. David also covered DIY endeavours which he considers not to be worth the hassle - namely homemade queen excluders, extractors and brood boxes/supers.

Many of David’s projects can be found on his fascinating blog - <http://theapiarist.org>, and his twitter feed @The\_Apiarist is well worth following. Many thanks to David for an informative and entertaining talk.

Jamie Evans

## MEMBERS EVENTS

### FEBRUARY

**Tuesday 11<sup>th</sup>**  
**at 7p.m. at Kinellar Hall**  
**Talk-Poly vs Wood Hives**  
 by Joan Gilbert-Stevens

**Tuesday 25<sup>th</sup>**  
**at 7.30p.m.**  
**at MacRobert Building, King St.**  
**Evening Class Begins**

### MARCH

**Sunday 15<sup>th</sup>**  
**at 2p.m. at Kinellar Hall**  
**AGM plus Talk-**  
**Going to the Oilseed Rape**  
 by Graeme Sharpe

**Saturday 21st**  
**at 10.00a.m. at Westhill Library**  
**SBA Exams**



### EMBROIDERY

*Would you like the  
 ADBKA Logo  
 on your bee suit or  
 clothing of your  
 choice?*



Names can also be added.

Embroidered Logo - £7.50

Embroidered Name - £6.00

Embroidered Patches - £7.50

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**Aberdeen Bee Supplies**  
**Jock McGregor** is the local agent for  
**Thorne Beekeeping Equipment.**  
 Contact him on **01224 790468**  
 or e-mail:  
[aberdeenbeesupplies@hotmail.com](mailto:aberdeenbeesupplies@hotmail.com)

## BEE CABIN HONEY EXTRACTION SERVICE PRICES 2019

Sticky floors, sticky work surfaces, sticky everything, why not take the easy option and let us take care of the sticky mess for you, simply drop off your supers and collect later all jarred no fuss no mess.

### **FRAMES ONLY:**

£1.95 per frame additional 55p per frame for heather honey customer provides container (bee Cabin can supply at additional cost). Minimum of 6 frames per extraction

### **FRAMES AND JARRING:**

£1.36 per Jar – 1 lb, 12oz, 8oz (Jars included in price). Additional 24p per jar for heather honey Minimum of 6 frames per extraction

### **CUT COMB:**

Cut and packaged £2.00 per frame

### **JARS ONLY:**

1 lb, 12oz, 8oz, 4oz and 2oz all available

An additional charge is levied on Heather honey as it is difficult to extract, Due to its high viscosity it requires additional processing that other honeys don't.

Other than wireless cut comb, all frames being extracted of honey at Bee Cabin are spun either radially or tangentially therefore only wired foundation should be submitted for extraction. During extraction a frame from time to time can break and fall apart, this is purely due to the age or poor assembly of the frame, in these circumstances Bee Cabin will not be held liable for any such damage.

## WARNING TO ALL BEEKEEPERS

As the winter is half its way through and the amount of storage in every colony may come to the end, just keep an eye on the stores in each colony by hefting the hive or checking the fondant / candy.

## FOR ASSOCIATION SUPPLIES

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