



# Cumbria Bee Times

Editor: Ian Gregory, Mount View, Carleton, Carlisle, Cumbria, CA1 3DZ  
Telephone: 01228 524054, email: [iangregory550@gmail.com](mailto:iangregory550@gmail.com)

(Views expressed in this newsletter are those of the editor and do not necessarily represent those of the CBKA)  
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This issue's cover picture shows a drone being ejected from a hive. The picture was sent to me from Piers Manson of Whitehaven Beekeepers and was taken by Chris Wood of Beckermeth, a non-beekeeping friend of Piers. Chris is a keen photographer and shot this picture whilst Piers was showing him around his apiary. The drone is certainly getting the rough treatment now that the breeding season for bees has finished and there is no more use for the male of the species. Not only is he being forcibly ejected from the hive, one of the worker bees is also trying to bite his wing off to make sure that he cannot return. Drones are raised in cells that are larger than those of the worker bees, which the Queen can recognise in the darkness of the hive and lay an unfertilised egg. The drone doesn't have a father but he has a grandfather! From the laying of a drone egg to emergence from the cell is 24 days and 37 days before the drone is mature and ready to mate with Queen. Whereas the Queen emerges from the cell after 16 days and is mature and ready to mate after 20 days. If you are going to raise Queens these times for the development of drones is of serious consideration. Drone eggs need to be played at least 17 days before the start of raising Queens. Unfortunately the time for the development of the drone in the cell is favourable to the breeding cycle of the varroa mite which can result in poorly developed drones not being able to fly properly and mate with Queens. One method of controlling varroa is to provide drone foundation which is removed when the cells have been sealed but before the drones hatch out. If you have chickens the grubs can be fed to them! However, drones are essential to the health and survival of the bee colony but by the end of August they become a drain on the bee society as it is too late for Queen rearing and the

drones will just eat essential stores that will keep the colony alive over winter. Many thanks to Piers for sending me the picture and to Chris Wood for granting permission to use it in the Cumbria Bee Times.

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There are many aspects of beekeeping that are controversial. We all have our different approaches to the subject which create endless hours of discussion such as which way the frames should be in the hive; The Warm Way or the Cold Way. Then there is the subject of frames. It has always mystified me that when there are 11 frames in a hive, they have always been sold in tens, even when the recognised standard was a dozen! Then when you come to ordering some the different descriptions can be mind boggling. Hopefully the following article, which is extracted from the Thorne Beehives Beekeepers News sent to me by John Harris, will help.

### Frames Explained

One of the most frequent questions about frames. What is SN1 and how is it different to SN4? What is the difference between SN frames and DN frames? What is a Manley frame? What does Hoffman mean? The variety of frames can be overwhelming so hopefully we can explain without confusing things further!

So, to start with, we will deal with the frames that are exclusively used for National or WBC hives, called British Standard frames. These are the most common frames in the UK as the National is our most popular hive. Frames for a Smith hive are very similar in that the actual frame space is the same but the lugs are just slightly shorter. In a standard brood body for a National or WBC hive,

you need **DN** frames. If it helps, you can remember this as Deep National. In a super you need **SN** frames and this can be remembered as Shallow National.

The variations in frame are due to a slight difference in width of top bar and whether or not the side bars are self-spacing or not:

**Self-spacing** is also referred to as Hoffman (named after Polish beekeeper, Julius Hoffman), where the side bars stick out from the top bars and then taper towards the bottom. On one side the side bar is flat and the other is pointed. This means when they are placed into the hive next to each other, the frames space themselves. (This is important because it keeps the correct bee space, meaning the bees can get around the hive easily without leaving so much space that they build brace comb).

**Non-self-spacing** side bars are the same width as the top bar, meaning they cannot space themselves and require other means of spacing such as plastic or metal ends or castellations.

Narrow top bars are the most popular but the wider ones are used as well to stop brace comb being built in between frames. The following table outlines the different parts of each British Standard frame.

SN1	Super frames with narrow top bar and flat side bars. Need castellations or spacers.	DN1	Brood frames with narrow top bars and flat side bars. Need castellations or spacers.
SN2	Super frames with wide top bar and flat side bars. Need castellations or spacers.	DN2	Brood frames with wide top bar and flat side bars. Need castellations or spacers.
SN4	Super frames with narrow top bar and Hoffman side bars.	DN4	Brood frames with narrow top bar and Hoffman side bars.
SN5	Super frames with wide top bars and Hoffman side bars.	DN5	Brood frames with wide top bars and Hoffman side bars.
		14" x 12"	14" x 12" brood frames with wide top bars and Hoffman side bars (only type of frames for 14" x 12" brood box).

As you can see, the SN frames are the same as the DN frames, the only difference being that the side bars on the DN frames are longer to make a deeper frame.

Hoffman side bars are also found in Langstroth, Commercial and Dadant frames which means these frames are automatically self-spacing. Manley frames are a type of frame for the super and we do these for British Standard hives (National or WBC), Langstroth, Commercial, Dadant or Smith hives. The main difference on these frames is that the side bar is wide all the way down, not tapered like the Hoffman side bars. They also have broader bottom bars. These differences are said to encourage the bees to draw out the wax further and be easier to uncap

the frames, as it gives the beekeeper a solid support to lean on. As the bees can draw the wax and honey out further, it also means less uncapping as you need fewer frames per box.

### Preparing the hive for winter: cover it, but not too much!

Like our homes, hives need to be well-ventilated both in summer and in winter. A lack of ventilation generates a damp cold, which can compromise the colony's health (by favouring the development of pathogens that cause digestive issues). When winter approaches, the bees themselves seal unwanted openings with propolis. The colony, acting as a cluster, then maintains the hive at a constant temperature of 20°C, thanks to the bees' movements. But bees don't only generate heat: they also breathe, producing moisture that must escape. If the hive is too well-sealed, the moisture cannot get out. The condensation on the hive cover attests to this. In some climates, it is necessary to wrap the hives for the winter, with specially designed covers, but these covers are not necessary for milder winters. In all cases, a ventilation opening should be left, even if the temperature drops below -20°C (-4°F).

In addition to good ventilation, it may be necessary to protect the hive with mice prevention measures: entrance reducers or deterrent blades at the entrance to the hive.

### Cumbria Autumn Convention

The Autumn Convention, organised by Cockermonth Beekeepers Association was held on 10th September. Attended by about 30 beekeepers it was a great success with two excellent speakers: Keith Bartlem, a Bee Inspector from North Yorkshire spoke about Thermoregulation of the Honey Bee Monarchy or Republic (an intro into Queen Cells) In Russia the Queen bee is called Mother!

The second speaker Tony Jefferson, also from Yorkshire, gave two talks on Selective Bee breeding and Simple Swarm Control.

Many thanks to Cockermonth Beekeepers for organising this annual event at such reasonable costs.

### Dates for your Diary.

**12th November 2022 Cumbria Honey Show**