

HONEY BEE PESTS

Braula coeca - an update

Peter Sunderland

Iceni Microscopy Study Group icenimsg@gmail.com

13th February 2022: I have been asked to write an update of my article of March 2021 on Braula coeca.

FIRSTLY, I would like to apologise to those that tried to respond to the Iceni Microscopy Study Group email address. Unbeknown to us there was a fault on the website. The messages that came through were mainly from England, Scotland and Wales and one other from Europe. As a result we **did** have a donation of *Braula coeca*, which made the members of the Iceni Microscopy Study Group (ICMSG) very pleased indeed. We were lucky that a long-standing beekeeper in the Orkney Islands harvested some *Braula coeca* and sent them by post in white vinegar, the preferred storage option. We have formed a relationship with this individual who, like us, would like to study the lifestyle of the *Braula*. For us as a bunch of amateur beekeepers, we have collectively set ourselves the goal of developing a hive infected with *Braula coeca* with the aim of making it into a full colony here in Norfolk, England.

One of the members of the ICMSG has made an exhibition box where you can lift up a frame individually and put glass on both sides - "sealed". This presents us with two problems. The first problem we are working on is the premise that if we use drone foundation we hope we can remove and destroy any varroa present. In order to preserve the *Braula* we do not intend to use any chemicals at all. In the past we have used this exhibition box for other exercises and we would like to put a frame in and when it is sealed put it into a freezer and freeze it hard. We then uncap with a bread knife as neatly as we can, then when it is thawed out and gone soft we put it on the lawn and, using a watering can, pour on water from a height of about 1½ metres, which hydraulically cleans out the cells. The larvae are left on the lawn and the birds love them. We then wait a few

weeks and put it back. We do this three or four times a year; it is very time consuming but it does work. We use the same method to find male varroa (they live in the brood food at the bottom of the cell so they can't be seen with the naked eye). We perform the male-varroa-finding process over a metal tray because it makes them easy to find; you cannot find them in the grass.

Our second problem is that most animals that live in a dark environment shy away from light, which makes filming difficult. At a brain storming-session one member postulated the idea that we could use ultra violet light. Fortunately we have within the ICMSG members who are photomicrography and filming experts.

Another important point: We would have to have a rotor system to monitor activity worthy of filming. We would like to appeal to any of the readers who have experience in this field to contact us with any ideas in this regard.

Finally, we as a group were disappointed not to get any enquiries from Russia or further afield. If people donate *Braula* we will make slides for them in return. We would like to get samples of all the other species of *Braula*, four known at present, from around the world.

The latest news to share with you all is that there is a new microscopy group starting near Ipswich in Suffolk, England. The new group is an out-reach group of the Quekett Microscopical Club in London. The group is called the Anglian Microscopy Group (AMG) and the inaugural meeting is on the 21st May 2022. Three members of the AMG want to join the *Braula* project and we welcome their input. The meetings are supported by the Quekett and they are free of charge.

To learn more visit

www.quekett.org/about/groups/anglian



Three *Braula* images taken from the donated *Braula* which was sent to us from the Orkney Islands.