

# New Queen Confinement Cage - Uses Are Many

Max Kuhn  
OMB Master Beekeeper Student

# Possible Uses for the QCC are Many

- *This* Queen Confinement Cage is new.
- New in theory and new in practice.

While queen confinement is an *old* practice, it has always included taking the queen out of service in the hive and/or taking her out of the hive entirely. Both are problematic. Now for the first time, the queen can remain in her colony and continue with all of her normal duties while being confined. This opens the door to many new possibilities.

Though the need for a tool like this has been known for a very long time, the actual tool has not existed. So uses like Mite Control, Swarm Management, Queen Grafting have gone untested until now. How will you use this? What ideas do you have?

No matter how you want to use the QCC, you will probably need to go through the following steps.

# Attaching the QCC to a Brood Frame

For most known uses of the QCC, it will be necessary to attach the QCC to a brood frame. Choosing *which* brood frame becomes your first decision. I use almost all, deep, Langstroth style, frames as pictured here. If you use a different size, you will need to use that size QCC. If you use a style other than Langstroth, like Top Bar or Warree, this QCC probably won't work without modification. But change is how we move forward.



# Using the QCC to create Brood Breaks

I use the QCC to help control the Varroa Mite population. For that purpose, I need a frame of drawn comb with openings in the comb allowing the queen easy access to both sides of the frame. These openings are visible along the bottom of the frame in the photo shown here. I leave the queen in the QCC for 24 days allowing all brood in the colony to emerge. The exception being the brood on the frame inside the QCC. The queen is encouraged to lay eggs and continue to raise brood on that one frame. After 24 days I remove this QCC and Frame from the hive. I then treat the colony with Oxalic Acid Vapor. Next I return the queen alone to her colony. That colony is now void of all, or almost all Varroa. The mite laden brood frame inside the QCC is transported to a remote location where the load of mites on that frame can do no harm. It is treated multiple times until all capped brood have emerged.

Other options do exist for this frame, the brood contained on it and the Varroa Mites housed there in. What is your choice?



# Connecting QCC to Frames

The two QCC pieces can be attached to the brood frame with rubber bands; but Nails, Zip Ties or Wire might be better options. Just remember this is a temporary arrangement and disassembly will be necessary to remove the queen.

The next photo shows how I have used rubber bands on the edges. It has worked, but the bees have eaten through some bands.

The photo also shows two green “Zip Ties” in the upper left corner of the frame. This is a “patch” closing a gate where the queen entered into the QCC from a Queen Catcher.



# Gate into QCC

Each QCC consists of two identical panels made from plastic Queen Excluders, repurposed to use on the QCC. Each of these plastic panels is surrounded by a wooden frame, much like a picture frame.

On one of these panels I have cut a hole to form a “Gateway” into the QCC. The hole or gate is made by cutting and removing only one horizontal rib between two vertical ribs. A Queen Catcher, (as shown) with the queen inside is placed over the gate and the queen allowed to enter the QCC. Once she is inside the cage, the opening or gate is closed with the two small “Zip Ties”. As shown in the above photo. New Zip Ties are required with each use.

This procedure is recognized as a primitive process, as is the QCC itself. But remember this is the initial state and will undoubtedly be modified, streamlined and improved as usage increases and time goes along. This design is yours to improve.



# Once the Queen is Inside

Once the queen is securely inside the QCC, it is ready to be placed into the hive. By returning the Queen to her colony in this manner, no further action is required. Egg laying, brood rearing, and foraging will continue as normal and honey production should not suffer.

I like to place the QCC into the top brood box, near the center, as it makes it easy to remove or to check on, should the need arise.

The photo here is of a QCC having been removed from a colony. It shows the space where it had resided, below the QCC. I take out two frames to make room for the QCC. Normally I find empty frames near the outside edges to remove. These frames are returned to the hive when the QCC is removed.



# Loaded with Mites!

My experience has shown the brood frame inside the QCC at time of removal will be loaded with mites. Preparations should be made to treat the target colony immediately upon removal of this frame.

Also, decisions should be made well before removal what will be done with this single mite laden frame. Most of the mites in this hive are contained inside the capped brood cells of this one frame. Waiting there to become a mite bomb for the neighborhood if allowed to go free. To date, I have moved these to a remote location, placing them in NUCs and treating them. But other options exist. Choose what option fits your needs and capabilities.

The photo here is of a QCC with a brood frame having just been removed from a hive after 24 days inside. The queen still on the frame waiting to be returned to her colony.



# What to do with this?

This photo shows the typical amount of bees and brood found on a frame having just spent 24 days inside a QCC.

## Plan ahead for what you will do with this.

- Shake the bees back into the colony and freeze the frame?
- Use the frame and bees to start a NUC?
- Give it to a neighboring Beekeeper?

What ever you decide, remember to  
“Treat it as the Mite Bomb it is!”

***FUN TRIVIA:*** Can you find the Queen?



# Where to From Here?

- So if you want a Queen Confinement Cage like this one, you will probably need to build it. But don't worry they are easy to build and inexpensive. Directions for building them will appear on a variety of websites soon. The first website will be that of Lane County (Oregon) Beekeepers Association ([lcbaor.org](http://lcbaor.org)) and should be there by the end of November, 2019. In addition to the websites, a completed QCC will be given to each bee club associated with Oregon State Beekeeper's Association. To be placed in their club library, to be viewed, measured, and/or photographed to facilitate replication and promote discussion. Each club will be contacted soon regarding this opportunity.
- For now, start thinking about how you will use this new beekeeping tool. I suggest creating a Brood Break in some or all of your hives this coming Summer to aid in the fight against Varroa. If in doubt about how to do this, discuss it with a veteran beekeeper. Or ask your bee club to give a training class on "Creating Brood Breaks".
- Good Luck and Happy Beekeeping. Max Kuhn, OMB Master Beekeeper Student.