

Clipping And Marking Queens

I. FINDING THE QUEEN

Finding the queen generally poses a problem for beginners, as it does for some of the more seasoned beekeepers who are not accustomed to examining their colonies on a regular basis. Perhaps the ability to spot the queen may be described as a gift, which comes with experience in the routine handling of bees, and certainly there would appear to be an acquired "knack" to it. It is generally much easier to find the queen in a colony with a small population of bees, such as a weak nucleus or a mini mating-nucleus. In well populated hives it can be very difficult to find the queen, due to the number of bees in the hive and larger brood nest.

ADOPT A STANDARD PROCEDURE

When looking for the queen it is best to adopt a standard procedure which can, as a rule, be incorporated into other manipulations, such as routine swarm inspections or evaluations of colony development; brood, disease, stores, etc. Quite often the queen will be spotted in the course of those normal inspections, so it is a good idea to always be prepared to capture her on sight.

1. Use a minimal amount of smoke when opening the hive; this will reduce the possibility of causing the queen to run.
2. Start with the first frame outside of the cluster, remove it slowly, and work towards the middle of the cluster.
3. Scan each frame for the presence of the queen; also keep a sharp look out for eggs as each frame is removed from the brood chamber. If eggs are found, this will confirm the presence of the queen. After scanning each frame it can be placed in an empty nucleus box or hive body.

LOOK IN CONCENTRIC CIRCLES

It is a good idea to have a set method of scrutinizing each frame as it is lifted out of the brood box. It is always safer to hold the frame directly over the brood nest in case the queen drops off onto the ground where she could get lost or stepped on. As you removing the frame it is easy to spot the queen, look down the edge, her abdomen

will stick out more than the workers, allowing you to spot her. Holding the frame by the lugs with both hands, let your eyes travel along the top bar from left to right, then down the right side bar, from right to left along the bottom bar, and then up along the left side bar. Following this procedure let the eyes move inwards towards the center of the brood frame in ever decreasing concentric circles. Turn the frame around and treat the opposite side in like manner and do the same with each brood frame in succession.

THE HIDING QUEEN

There should be little need to deviate from this routine search procedure as one progresses through the brood nest, except to more thoroughly investigate a heavy clump of bees, or if there is a hole in the comb. One may need to check the other side again in case the queen has darted through.

With some practice the beekeeper becomes quite adept at this scanning procedure and can move through the brood chamber very quickly. One becomes familiar with the sort of places where a queen might hide, such as depressions in the comb or spaces between the comb and the side bars or the bottom bars. Some queens have a habit of remaining motionless in a comb crevice for quite a while. If the queen has not been found after the first run through the brood box, a decision must be made as to whether to search further or to put the hive back together and wait until the next inspection.

THE RUNNING QUEEN

One can only work backwards through the brood box, again examining each frame in turn. If she is still not found the next procedure is to remove the brood frames into a spare brood box, where they are placed in pairs with a space between each pair. Thoroughly examining the walls and floor of the old brood box for the presence of the queen, if she is still not found, the next step is to lift each pair of brood frames and open them out like a book. If the queen is present, she will usually be found on an inner frame surface where she would naturally have sought refuge from the light. Running queens are the most difficult of all to find, but as long as the queen is confined to one box it should make it easier.

When she has the run of two or more boxes it can be difficult to find her. In that case, take off the top box or boxes and place them on the upturned hive top with a queen-excluder between them, and then search the bottom box first.

Occasionally the queen may be found on the underside of the hive top or queen-excluder, especially when too much smoke was used at the entrance, many a queen has been lost at this stage. **It is a good habit to examine each item carefully as it is removed from the hive for the queen.** To the novices it may seem like a lot of work, which may not be entirely necessary.

II. CLIPPING THE QUEEN

Many beekeepers may think that clipping queens is beyond their capabilities. It may take few times before you developed enough confidence to tackle this job by yourself. However after it has become an integral part of your seasonal beekeeping management practice, you'll derive quite a deal of satisfaction from clipping and marking each individual queen. It will simplify your management of this particular hive for the duration of that queen's lifetime.

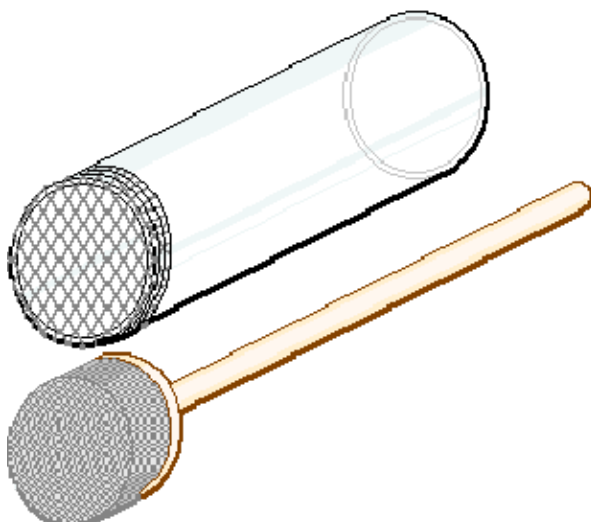
EQUIPMENT

Scissors

A good quality pair of **scissors** is necessary and usually cost about \$7.50. If taken care of they should last for years. It is a good idea to stick them in a piece of polystyrene in the workbox. Tie a red flag or ribbon marker to one handle, when they are dropped on the ground in the heat of the moment, this will help to find them or you can buy a key chain with a bungee cord.



A round marking cage known as the "**crown of thorns**" or **Baldock cage** is a very useful piece of equipment also, but this is very easy to lose and again it is better to have a red flag tied to it with a piece of string. It is pressed gently onto the comb, over the queen entrap her and allowing any attendant bees out. The circle of spikes should be stuck into a square of polystyrene to prevent them from sticking into people's knees etc.



The tube cage, this is better when using the glue and numbered discs, as you can take the queen away from the hive and buzzing bees to mark her, with this cage you can also clip one wing at the same time. The cage consists of a 1 3/16" (30 mm) glass or plastic tube about 3 1/8" (80 mm) long with a 3/16" (5 mm) sq. elastic mesh stretched over one end and held in place with a rubber band, a 1 1/8" (28 mm) plunger covered on the top with a 3/8" (9 mm) thickness of soft plastic foam. To use it the queen is captured in the open end of the tube and the plunger inserted into the mouth of the tube, to hold her captive. Cover the brood box to keep the bees happy while you take the queen away to mark her, prepare the glue and disc then push the plunger up to trap the queen against the mesh with the dome of her thorax through a mesh hole to mark her. If you also wish to clip a wing, you can twist the plunger slightly and one wing tip will poke through the mesh, cut off about 3/16" (5 mm) and the job is done. Withdraw the plunger about 1" (25 mm) the queen will walk about un-harmed wait a few minutes to let the glue or paint dry, pull the cover off the brood box place the tube along a seam between the frames, pull the plunger out, and let the queen walk out and down on to the comb.

GLOVES

When using the heavy leather beekeepers gloves or gauntlets it is necessary to remove one or both gloves to catch and clip the queen. This is probably the main reason why many beekeepers are reluctant to either clip or mark their queens. Most beekeepers do not relish the prospect of removing a glove to catch the queen. As well as that it takes so long to remove the glove that they lose sight of the queen and when this happens it is surprising how difficult it is to find her again. The older these gloves, the clumsier they become, as it is almost impossible to remove propolis from them and when they get wet they become hard and unyielding, making it difficult to grasp small objects. The other thing is that if one has to remove the gloves and there is a fear of being stung, this is likely to increase the danger of damaging the queen. Having tried out a variety of gloves, the thinnest of household gloves are the best for general beekeeping manipulations. Inexpensive, disposable, and readily available, they can be purchased at any supermarket or even small country grocery shop for under \$3.00. They are washable and even hard

propolis flakes off with cold water. Bees seem to have difficulty in piercing the rubber gloves with their stings. Provided the proper sizes of gloves are worn, it is possible to have sensitive feeling with the fingers.

CATCHING THE QUEEN

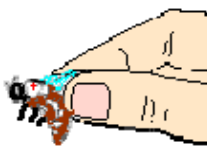
In the early part of the year when queen clipping is in progress it is a good idea for the beekeeper to have an assistant or else for two beekeepers to work together, so that when a queen is found one person can hold the frame and watch her while the other prepares the necessary equipment for clipping and marking. One method is to catch the queen from behind by both wings as she walks across the comb with the thumb and index finger of the right hand. She is then transferred to the left hand where she is gently held by the thorax between the thumb and index finger while her abdomen is being supported on the ball of the third finger. With practice it is even possible to gently imprison the forelegs between the thumb and index finger and so keep her from wriggling around or lifting a foreleg when she feels the scissors beneath her wings.



Karl Jenter manufactures this plastic device that resembles a clothes peg, they call it 'queen pliers'. They have soft sponge areas for gripping the queen's abdomen and small, stubby, silicone rubber tubes that grip the sides of the queen's thorax. It is spring loaded and the 'grip limit' can be set using the thumbscrew. It's a part of the "Jenter Queen Rearing System".

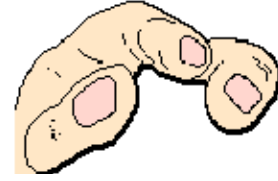
CLIPPING

Step by step (assuming right handed)



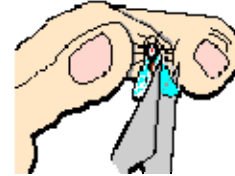
Using your right hand, pick the queen off the comb using thumb and forefinger to grip both pairs of her wings... as shown left. An even more detailed description of the 'picking up' method is given on the page [Picking up Queen Honey bees](#).

Then point the forefinger of your left hand at your right shoulder, keeping your hand up towards your face at a comfortable distance for good vision. (Illustrated at right.)



Offer the queen towards the tip of your left index finger and she will grip it with all six legs. Now gently close the tip of the left thumb and the side of the second finger onto the queens legs. You may now release the grip of your right hand (left picture).

Dab on your **marking paint** or glue your **numbered identification disc** in place.



Then while the paint dries... do the clipping operation.

Great care should be taken so that damage does not occur to the queen while she is being clipped and marked. **Never handle a queen by the abdomen**, as it is very easy to damage this most vital part of her anatomy. When about to cut the wing or wings, with the blade of the scissors in position beneath the wings, pause for a moment and look carefully to ensure that one of her legs is not being cut off as well. If this occurs the queen will be superseded. The queen uses her forelegs as a caliper to measure the diameter of each cell before she lays in it. This determines whether a fertile female egg or an unfertilized male egg is laid, depending on whether the cell is a worker or a drone cell. The early part of the year is the best time to clip queens, but one should always be sure that the queen being clipped is a laying one. If there is any doubt as to her being mated it is safer to just mark her, and leave the clipping for a later date. **When marking young freshly mated queens, it is safer to use the "crown of thorns" cage to imprison them as they are very liable to fly when handled.**

MARKING

There are a variety of queen **marking paints** available from the bee appliance suppliers; paint markers, jars of paint and small colored or numbered disk. You can also buy craft paints that are nontoxic and come in small jars from most hardware stores or Hobby store. You will need to make a marker to apply the paint to the queen. Take a small finish nail, stick the sharp point in to a small cork, use the head of the nail to dab the paint on the queen. There is an international color code which suggests a different color for every year.

- ♻️ **White for years that end in 1 or 6.**
- ♻️ **Yellow is used when a year ends in 2 or 7.**
- ♻️ **Red if a year ends with a 3 or 8.**
- ♻️ **Green when 4 or 9 is the last digit.**

☼ **Blue if the year ends in a 5 or a 0.**

There is a phrase that helps you memorize this...

What You Rear Green Bees?

Then all you have to remember is 1, 2, 3, 4, 5 and you will never need to consult the book again!

A little spot of queen marking paint is applied to the thorax of the queen from one of the special paint bottles or with a marking pen. Where it is necessary to ensure that individual queens can be identified, a combination of different colors may be used or even special numbered disk can be glued on the thorax. After clipping and marking it is better to place the queen in a well-aired matchbox for a couple of minutes to settle down in the dark while the paint is allowed to dry and she recovers some of her composure. The matchbox is then placed face down on the brood comb. The cover is gently removed leaving the queen confined on the comb beneath the drawer of the matchbox. She is then in her natural environment in the darkness, and quite often after a few minutes when the drawer of the matchbox is lifted she is laying eggs in cells. Very often if the queen is released on to the comb direct from the hand, she will start rushing about quite frantically, and because of this unusual behavior a worker bee can pounce on her and sting her.

ADVANTAGES OF MARKING AND CLIPPING

Not only does marking and clipping help you find the queen in a well populated hive, if for some reason the marking comes off, the clipped wing is a sure sign that you found the old queen. **In an African bee area it is very important that you are able to tell if your queen has been replaced, a clipped wing is the only way you will know.** Records should be kept of when the queen was clipped and marked, then it is always possible to determine her age by checking your record book on that hive. It is possible to ascertain if and when she has been superseded, or if she has attempted to leave with a swarm, in which case she is usually lost. The fact that a swarm can not leave without her, gives the beekeeper a few days to get to the swarming colony before the emergence of the first virgin queen. One of the greatest advantages of marking queens and recording their ages is that you know exactly how long they live

Florida Department of Agriculture and Consumer Services “Better Management Practice (BMP) for European Honey” requires Clipping and Marking of queens.