Using the Cloake board method to raise queens

by Rusty from Scientific Beekeeping (From honeybeesuite.com)

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The Cloake board, invented by Harry Cloake of New Zealand, is a piece of beekeeping equipment used to raise queens. The Cloake board method of queen rearing is popular with newer beekeepers because it allows the beekeeper to raise queens with a minimum of equipment and very little disturbance to the hive.
Cloake boards are available in various configurations, but basically they consist of a wooden frame that provides an additional entrance. The frame is grooved on the inside so a metal tray can be slipped in or out. On the bottom of the frame is a queen excluder. Or, on some types, the queen excluder is separate and is placed below the Cloake board.

The Cloake board system requires the use of grafted larvae, which is a separate subject. But for those who want to know how these boards work, here is a summary.

1. When you are ready to raise queens, select a vigorous colony with two brood boxes:

1.1. Separate the two boxes

1.2. Turn the lower box 180 degrees so the entrance is in the back

1.3. Close this entrance completely

1.4. Make sure the *queen is in the lower box*
1.5. Make sure some frames of uncapped brood are in the upper box

1.6. Install the queen excluder and Cloake board *without the metal tray*, with the entrance facing forward
1.7. Put the upper brood box above the Cloake board

1.8. Close up the hive and wait about 12 hours

What happens and why: Now you have the queen sequestered in the lower box. The bees will soon reorient themselves to the new entrance, which is just above where the old entrance used to be. Young nurse bees will migrate up through the queen excluder to attend to the uncapped brood.

2. After 12 hours, you will separate this colony into two parts—a queenless upper colony and a queenright lower colony:

2.1. Start by sliding the metal tray into the slot in the upper entrance

2.2. Open the lower entrance in the back

2.3. Allow the bees a day to adjust to the new configuration

What happens and why: Now the foragers from the lower box will leave out the back entrance, but when they return to the hive, they will use the upper (front) entrance. But the presence of the metal tray prevents them from going back down to the lower box. So they stay in the upper box which soon becomes crowded with bees.
A *very* populous—but queenless—hive is exactly what you want for raising queens. The more bees the better.

3. After a while, the bees in the upper box will recognize they are queenless, and they will be eager to build queen-rearing cells:

3.1. The next day, open the upper box and remove any supersedure cells the bees may have started

3.2. Remove one of the frames of uncapped larvae and put it in another colony

3.3. Install a frame of grafted larvae in the center of the box

3.4. If there is no nectar flow, feed the colony with sugar syrup and pollen

3.5. Close the hive for 24 hours

What happens and why: During this waiting period, the bees (we hope) will accept the larvae you grafted and start building up the queen cells. This is called a “cell builder” colony. These potential queens need to be well fed, so if the colony is lacking honey or nectar, make sure it has syrup and pollen. If there are many frames of uncapped larvae in the upper box you may want to remove these and replace them with plain foundation so the nurse bees will focus all their attention on the queen cells.

4. After 24 hours, the queen cells will be underway. Rejoin the two colonies to form one large, queenright “cell finisher” colony:

4.1. Remove the metal slide from the Cloake board

4.2. Leave the queen excluder in place

4.3 Block the rear entrance of the bottom brood box

What happens and why: The combined populations of the two brood boxes now work together to finish raising the grafted queens.

5. The ripe queen cells are removed from the cell finisher

5.1. Remove the queen cells from the cell finisher once they are capped and place them in individual nuc boxes or queenless splits

5.2. Remove the Cloake board and queen excluder to fully re-join the original colony

What happens and why: Once the cells are capped they no longer require attention from the nurse bees. The queen cells need to be separated from each other before they hatch, or the first one out will kill the rest. Queens hatch about 11 days after grafting.

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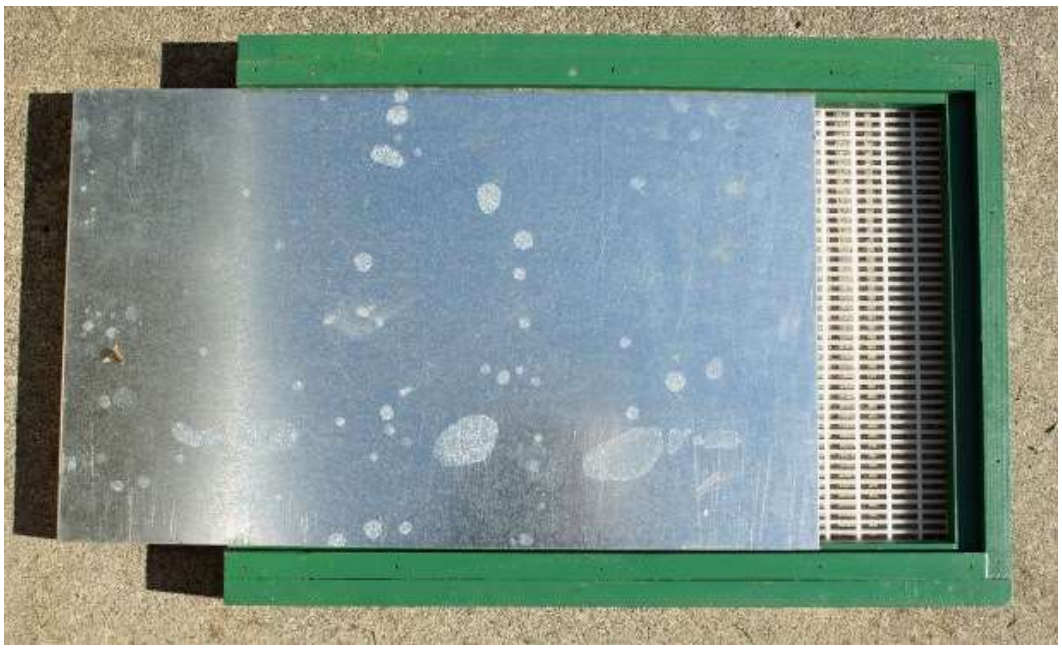

Cloake board showing tray and queen excluder. Photo by the author.