

Mason Bee Blocks Instructions

By John Holbrook

Here's how to build a bee block, how the bees use the block, and what to do with the block at the end of the season.

Bee Block

Materials:

- 2 inch x 6 inch piece of dry larch or fir that is 12 inches in length
- Pencil
- Ruler
- Center punch
- Hammer
- Short 5/16 inch diameter drill bit
- 6 inch long 5/16 inch diameter drill bit
- blue painters tape.

Access to a drill press, power drill, and table vice.

Directions:

1. To start the block, select the best surface for nesting holes that is smooth, with few knots or splits.
2. Use the pencil and ruler to draw a line down the middle of the side, then starting 1 inch from the top, make a mark every 3/4 inch down the midline.
3. Turn the block over and draw a short midline from the top. Make a mark around 3/4 inch from the top. This will be the hole to hang the bee block on a nail.
4. Use the hammer and center punch to mark the center of the holes for drilling.
5. Take your block to a drill press and drill 5/6 inch diameter pilot holes using the shorter length drill bit. This will help keep the holes straight.
6. And drill the nail hole.
7. Once you've drilled the pilot holes, take the blue painters tape and wrap around the drill end of the 6 in bit. You want the bit to only go into the wood about 5 1/2 inches, so it doesn't drill through the back of your block.
8. Secure the block in a table vice.
9. Use a power drill with the taped 6 inch bit to slowly drill out the rest of the holes.
10. Hammer the sawdust out of the block.

Paper Straws

Materials:

- Regular printer paper that is cut to 2 1/4 inches wide by 5 1/2 inches long
- 3/16 inch diameter steel rod that is 9 inches long
- Needle nose pliers
- Scissors
- 2 inch nail.

Before you hang your bee block, you'll need to make the paper straws. These will be replaced each season.

Directions:

1. Place a single piece of the precut printer paper in front of you. On the back edge of the paper, start rolling it back and forth over the steel rod to form a permanent bend in the paper.
2. Continue rolling the paper over the rod until it eventually gets tucked under the steel rod, then roll the paper completely around the rod.
3. Hold the paper tight with the thumb and fingers at the top and bottom so the paper doesn't become loose around the rod.
4. Insert the paper wrapped rod into a hole in the bee block and push it all the way to the bottom of the nesting hole
5. Let go of the paper and stir the rod *clockwise* against the wooden hole to unwind the paper, pushing it against the sides of the nesting hole.
6. Test how tight it is by taking needle nose pliers and try to pull the straw out. If it's too tight, put the steel rod back into the nesting straw and unwind by going in a *counterclockwise* motion, keeping pressure against the walls of the nesting holes. Then test it again with the pliers. You want the paper straw to fit just right, not too loose and not too tight.
7. When all the nesting holes in the block are filled with paper straws, use a pencil to mark where the wood and paper meet.
8. Use the pliers to a straw wout about an inch then cut off the straw about 1/16 inch above the mark on the straw and push it back into the hole. The straw should rise a little less than 1/16 of an inch above the surface of the bee block.

After finishing your bee block, you'll need to find a good spot to hang it. The best place is under an eve of your roof so it's protected from rain, and is facing the morning sun to the east. This allows for the front of the block to warm up, but keeps the sides of the block -and the bees- from getting too hot.

Prepare cocoons

Materials:

- Needle nose pliers
- Two small boxes
- Roughly 2 1/2 x 1 1/2 sized paper box with lid
- Double sided tape
- Hole punch
- Power drill
- Taped 6 inch long 5/16 inch diameter drill bit

At the end of the season - sometime in the fall, you'll need to prepare the cocoons for winter and your blocks for next spring. If your block has been used by orchard mason bees, there will be mud plugging the holes.

Directions:

1. Carefully use the needle nose pliers to remove a paper straw from the block. Don't worry if you poke through the mud plug a little bit.
2. Slowly unroll the straw to reveal the cocoons separated by mud walls.
3. Gently remove the cocoons and clean off the mud wall if they are stuck to the cocoon.
4. Separate the cocoons by size. The female cocoons are larger than the male cocoons.
5. For storage, put the female cocoons in one small box and the males in the other small box. These can go in your fridge - not the freezer - for the winter. Keeping them cold will prevent them from hatching too soon.

Next Season

In the early spring, when flowers like dandelions and Daffodils have started to bloom, it's time to get your bees and block ready for the season.

1. For the block, use the power drill and taped 6 inch bit to quickly clean out the nesting holes in case any burrs have formed. Be sure not to go through the back of the block
2. Then roll and insert new paper straws like before.
3. Take the 2 1/2 x 1 1/2 craft box and mark how far the lid goes down on one short side of the box.
4. Right above this line, use the hole punch to make two side by side holes in the front. Put the lid back on and make sure it covers the hole.
5. Take a small piece of double sided tape and put it on the bottom of the box. Attach the box at the top front end of the bee block.
6. When you are ready to hang your block back outside, put the several male and female cocoons into the box taped to the block.
7. Now this is very important - once you're outside, slightly open the lid on the box to where the holes are visible. This way the bees can emerge from the box after they hatch. If its warm - around 70 degrees Fahrenheit, it won't take long for the bees to hatch.