



Build a Mason Bee House in 5 Minutes

It is [National Pollinator Week](#), and I figured a way to commemorate this was to build a mason bee nest box (more on this in a little bit). For Missoulians, a great way to celebrate this is at Thursday night's [native plant sale](#) with information about pollinators-including mason bees.

Unlike non-native honey bees that nest in hives with many others, native mason bees are solitary and each female builds her own nest. I think it's cute that although these are "solitary" bees they all nest right next to each other in communities, but evidently they have it worked out so they maintain their own identity. Anyway, they nest in cavities in logs, snags and decadent trees from woodpecker or wood boring insect holes. They also nest in hollow reeds and canes (like raspberries). As a result of the loss of native plants, removal of dead or dying trees, etc... many suspect that they are nesting site limited and by providing artificial nest sites (houses) we can help their populations.

Mason bee houses have been around for a while but I've been reluctant to build a house for them. Maybe it's because I liken these houses to butterfly houses (that don't work and cater toward yellow jackets). Or maybe it was because I thought by providing snags in the yard and or borer hole-filled aspen; we were providing more natural places for mason or other solitary nesting bees. So I did some research and in addition to a surprising amount of literature on the topic, I came across a great literature review that evaluated the efficacy of intervention (people trying to help out bees) on bee conservation: Bee Conservation: evidence for the effects of interventions Lynn V. Dicks, David A. Showler & William J. Sutherland Based on evidence captured at www.conservationevidence.com.

Here is a brief summary:

Yes, mason bees do use the nest boxes (so they have a leg up on butterfly houses). However, in one study in California, introduced European earwigs and introduced European leafcutter bee species used the boxes, and in one instance these introduced species were more common in the houses than native bees.

What about plastic nest cavities or using plastic straws?

Nest boxes with plastic-lined, plastic or paper tubes were worse for bees than houses with simply bored wood nest holes. The main reason was mold and even increases rates of parasitism. This is not surprising that just drilling out wood holes more naturally mimics a natural hole in wood. Don't use plastic or straws.

But the big question: Does this help populations on a larger scale, that is does it boost local populations? In reviewing several studies, the answer is unfortunately not really. The results were mixed, in some studies it seemed to help for a while in other studies there did not seem to be an effect. Kind of disappointing.

Despite the less than exciting results, I decided to go ahead and build some and see for myself. If nothing else, they are pretty fun to have in the garden and I am looking forward to checking on them and learning more about mason bees. But really, the thing that I think put me over the edge is I learned that these make great flicker feeders. I figured this out inadvertently since all the descriptions I read about making mason bee houses involved a phrase like “cover with chicken wire to keep birds out”. At first I was puzzled, since I knew no birds could get into the 5/16” diameter hole. But then I figured out what keeping birds out really meant.

This is the second installment of building things for your wildlife garden in 5 minutes (click [here for the first- a suet feeder](#)). This bee house is a great project to do with kids or just with the kid inside yourself. This is also a great project to make out of scraps you have on hand already, or a great use for recycled materials commonly found at [Home ReSource](#).

Materials:

- 1/4” peg board*
- 4"x4"x 12” or so
- 1"x6"x18”*
- 5/16” drill bit
- Drill
- Saw
- Screws
- clamps*

*optional



Step one

Cut 4x4 to size, cut the top at an angle to help shed water



Step 2

Use pegboard as a template for holes, align on 4x4, and drill 5/16" holes, about 3" deep (if you are using a 4x4- just don't drill all the way through the wood). The bees really don't care if the holes are nicely arranged, and really you could skip this step of putting on a template, but I think it looks nicer.



Now, if you want, you are done. But, there is more if you are interested. . .

Step 3

Install top and back with screws- having the back on this allow for easy mounting on walls or posts.



Now, you are done (again). All that is left is to install, and here are some tips:

- Place 3-5 feet off the ground
- Place east or south-east facing in a place where you can easily observe it
- East is best so the little fellas can get all warmed up quickly by the morning sun
- Once you install them, don't move them until the winter
- You can place several in various locations in your yard or give to neighbors for their yards
- Try to place near a source of mud



Maintaining your bee house:

- Your bee house will not require much maintenance. However, parasites potentially could be a problem.
- To prevent this, you will need to clean out the house when the bees are not using them about once every three years. There is only a small time period each year when there are not eggs or young bees in the box and if you do not clean out at the right time, you will kill the immature bees in the holes. Having multiple boxes and staggering the cleaning process each year will minimize the chances of destroying all your bees for a year.
- To clean the boxes, bore out the holes, squirt chlorine bleach into the holes, then rinse repeatedly until all the chlorine is removed. Allow to dry thoroughly.
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