
MASON BEES

Mason bees are one of 4000 native North American bees. They are non-aggressive, very early pollinators that are better adapted to cold than honey bees and will fly during overcast skies and temperatures as low as 54 degrees. This means mason bees begin pollinating earlier in the season and work longer days. They collect more pollen than nectar, with a strong preference for fruit tree pollen because these are the trees in bloom when they are most active. Research has shown that 85-100% of their pollen can be from fruit trees. The males can't sting, the females can, but typically don't unless provoked.

Life of a bee

The bees usually start emerging from their nests with about three days of 55-60 degree weather – about the time the *Pieris japonica* starts blooming. Males come out first about one to three days before the females. Males can be identified by the little white clump of hairs on the top of their heads. One sign that the bees have emerged are little creamy white deposits on the edges of the bee nest blocks. Be sure to watch for resting bees on the ground near the nest boxes, for the first week or so, after they emerge from their nest.

House hunting

As soon as the females come out of the nesting blocks the males will mate with them. Then they are on the search for holes in which to nest. These holes can be natural holes found in the wild, in wood, in concrete, in siding of buildings (this is not damaging to the buildings as the bees do not create these holes), or in nest blocks provided for them.

To build a nest block drill holes in wood that are 5/16" diameter and approximately 11 ½ long (historically the recommended length of the hole was around 6", but that is now outdated information). Cardboard straws, closed on one end, grouped together and put in a PVC pipe or large soup can also work well. Paper liners are a good addition to either wood blocks or cardboard tubes to aid in cleaning out the nest blocks.

House placement

Place houses in a warm, dry, wind-protected site. The best location is a sunny wall under an eave, but down where the sun hits it early in the morning. It is not necessary to place the bee nest blocks in your fruit trees. They are apt to be too shaded. The bees will find the fruit trees if they are within about 300' of the nest block. Hanging the nest blocks on a fence may leave them too exposed to the weather. Remember: put them where you can enjoy them. They are fun to watch. Wherever you put your nest blocks, if you are planning on moving them, don't move them until September.

Process of cell creation

Once the female has found holes, she will start creating her nesting cells. She will collect mud and create a wall. Then she will collect pollen and nectar to put in the cell to feed the young larva. After enough trips to make a complete pollen/nectar packet, she will lay her egg. After that, she will close the cell with another wall of mud. The female is active for about 1-2 months, laying about an egg a day; then she will die. A female mason bee can lay up to 30 eggs in her lifetime.

The egg will hatch in about 1 week. The larva will take about 10 days to one month to eat the pollen/nectar packet the female left for it. Then it will create a cocoon and pupate into the adult bee.

This change takes about 1 month. They will stay in this bee form in the cells until the next spring when they will emerge and start the process all over again.

Getting Bees

The bees are native. If bee blocks are put out, eventually the bees may find them. If you want to “jump-start” your population you can buy bee cocoons. Be sure to store the bee cocoons in the fridge until you are ready to put them out.

To put them out, place them in a small box (like a box you would get checks in) with a small hole in the side (3/4 X 3/4 inch hole). The bees will emerge out of the cocoon and come out the hole in the box.

Notes of caution

Be careful with pesticides at the time the bees are active. If you have to spray, spray in the evening when bees have returned to nest. Avoid spraying blooming plants and avoid spraying when windy.

Problems

Three major problems with the Mason Bees are the pollen feeding mites, parasitic wasps, and birds. The parasitic wasp, a very tiny wasp, is active just after the bees have finished nesting. Protection from these wasps can be as simple as very gently putting nylon footies over the ends of the nesting tubes. Be careful not to jostle the nesting tubes. The footies can be left on until the next early spring. They must come off before the bees start to emerge.

The stockings will also protect the bees from the woodpeckers and jays that know there are little bees, aka bird food, in the holes.

Nest boxes should be cleaned yearly to minimize the pollen feeding mite. In late winter/very early spring, place old nest boxes in a larger cardboard box with a small hole in it. Place this box near new or cleaned nest boxes. The bees will come out of the old nest boxes and come out the hole in the box. They will re-nest in the clean holes. When the bee season is finished, the nest boxes in the cardboard box can be cleaned and prepared for the next spring.