

## **Fun with Orchard Mason Bees**

You too can become a bee keeper with mason bees! It's easy to get started with this native pollinator. The orchard mason bee (*Osmia lignaria*) is a small solitary bee which lives in thin reeds or holes left behind by other insects. They are typically non-stinging and since they don't live in swarms these bees are easy to keep as "pets", providing excellent pollinating services in early spring. Anybody with apple or pear trees would especially benefit from a population of orchard mason bees close by. Because of their gentle nature, mason bees are easy and fun to watch as they go about their business- a great activity for kids too! Here is a rundown on the orchard mason bee:

### **Life cycle**

The orchard mason bee emerges early in the spring when daytime temperatures rise to about 50 degrees consistently. This usually coincides with fruit tree bloom. The males emerge first and stay close to the nest site waiting for females. When the females do emerge, the first thing they do is mate. Soon after the males die and the females start work on their nests for the year. They begin by finding a suitable hole, and then start to gather pollen and nectar from nearby flowers as food for their young. The pollen is deposited into the back of the nest hole one load at a time until a suitable store is gathered, then the bee lays an egg on top of the mass. She can actually decide the sex of each egg being laid, and almost always lays female eggs in the deepest, and safest, part of the hole. Next she gathers mud to make a partition in the hole for protection and to mark the start of the next nesting chamber. She continues this process for a few weeks until her natural death. By summer the eggs have hatched within their respective cells and the young larva survives on the food stores set out by its mother. The larva then begins to spin itself in a web which it will hibernate in throughout the fall and winter and make the transformation into a bee. Then next spring when the bees wake up they fight their way out of the mud cells and start over!

### **Pollination**

Orchard mason bees are amazing pollinators. Unlike honey bees that have leg pockets for pollen storage, a mason bee must stuff pollen into stiff hairs on her abdomen. This less sophisticated method leads to much better pollination because on each flower she tries to stuff pollen into the hairs, but some inevitably falls out, likely pollinating the flower. While a honey bee typically pollinates about five percent of the flowers it visits in a day, it is estimated that a mason bee pollinates ninety five percent. And on top of that the mason bee visits more than twice as many flowers every day!

### **Propagation**

This is the fun part for the gardener! You can easily help the mason bee along by providing suitable nesting sites within easy reach. Good nesting sites are sometimes few and far between in nature, so when you present the bees with lots of good options they are more than willing to move in. Housing can be a simple block of wood with holes drilled horizontally, the bees seem to prefer a 5/16ths hole, or you can choose from a variety of nesting systems for sale. One system involves a thin paper tube that slides into a sturdy cardboard tube. The thin tube is replaced every year while the thick tube provides

protection from predators. Regardless of the system chosen, placement is important. A south or east facing wall of a structure is ideal. Make sure it's an area that receives direct sunlight and is protected from rain. Well below the eave of an east facing wall is perfect. In October protect your nests by storing in an unheated building such as a shed, or just stick them in the refrigerator for a safe winter away from predators.

Winter is the perfect time to get your mason bee habitat set up for the next season. Stop by Portland Nursery for live hibernating starter bees in tubes, as well as necessary supplies. And as always, please call with any questions!

**For more information:**

The Orchid Mason Bee, 2<sup>nd</sup> Edition, By Brian Griffin

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