

## Orchard Mason Bees (*Osmia lignaria*)

### CARE INSTRUCTIONS

#### Things to Know:

- Mason Bees are naturalized in Canada
- Pollinate in early spring (great for fruit trees & blueberries)
- They are a solitary bee; they do not build hives: females use mud to line their nests
- They are small: not as big as a honeybee, and black in colour
- Are cute & friendly (very unlikely to sting), considered "gentle bees"
- They are some of nature's most efficient pollinators –many times more efficient than imported honey bees



#### Meeting the Needs of your Bees:

- A place for the bees to hide (nearby debris, log pile)
- A place for the females to build a nest for their young (A bee house or chalet such as what we offer, or build one yourself)
- Material to seal her cocoons inside the nest (exposed soil: best if silty, fine, and claylike)
- And of course, flowers that are in bloom in the spring (May 15-April 1)! No blooms will mean your bees will leave.

#### When They Arrive:

- Your bees will arrive in mid-May. **They will emerge immediately.** Please ensure that the bees are placed outside as soon as you get them.
- Placement: open one end of the small box that contains the cocoons and place it 4-6 feet off the ground in a sunny but sheltered location, facing south-southeast.
- If you have purchased a chalet or house for the females to lay eggs in, or are installing one of your own making, place the cocoon box nearby, or inside on top of the nesting tubes, and replace the predator guard.
- There is no need to remove the cocoons from the box.
- Your bees will need a place to gather mud; uncover a patch of soil nearby for them; several inches deep to the mineral layer.
- Once you have your house or lodge in place, leave it alone throughout the summer, even if things look empty. Jarring the nests can kill the developing bees.

#### The Mason Bee Life Cycle:

**In Late Spring** the bees are still in hibernation, waiting for the weather to warm up. You'll receive your bee cocoons in May (when our bees emerge in northern Alberta: this aligns with fruit blooms around Edmonton), which is the tail end of their natural hibernation cycle. If you are in a warmer place, such as Vancouver, wild mason bees might wake up earlier. Other species of bee are different.

**In Spring-Summer** gravid females hunt for nesting holes (small tubes) and begin to lay both fertilized and unfertilized eggs into the nesting holes along with a lump of pollen and some nectar for the developing offspring to feed on. Each egg will be sealed off with mud into its own little compartment inside the tube holes. The unfertilized eggs serve as a decoy for potential parasites and predators. Help your bee mothers out by planting spring flowers for them to feed from and not disturbing the tube nest. Dandelions are highly beneficial at this stage.

**Throughout the Summer**, the larvae develop and consume the stashed provisions, whereupon they enter the pupal stage. Protect your bee nursery from dangers like wind, rain, and predators if you can.

**In Fall and Winter** the young bee has become a fully developed adult and enters hibernation inside of its cocoon, still in the tube, for the duration of the winter. The idea is to survive cold months on their fat reserves alone.

**The Following Spring**, the cycle repeats itself. New mother bees do not like to lay new eggs in old, used tubes, so she will look for new ones. If you cleaned your cocoons out in the fall/winter, the holes will be re-used.

#### Keep in Mind:

Your bees are driven by their needs. If they have what they need in the vicinity of their emergence (especially nectar sources and shelter), they will stay. If not, they may range in order to find it. Either way, you may not see too much of these shy creatures, but you have contributed to helping out both your local ecology and the populations of potentially threatened organisms.

**If you are interested in pursuing mason bees further (such as breeding and hibernating them successfully!), please call or email us to get a copy of the advanced instructions or purchase a copy of the (extremely comprehensive) book "Pollination with Mason Bees" from our website. This helps us reduce the amount of paper we are using!**

*Butterfly Wings N' Wishes acknowledges that we operate on Treaty 6 territory, a traditional gathering place for diverse Indigenous peoples whose histories, languages, and cultures continue to influence our business, our way of life, and our community.*

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What to look for in a mason bee block:

*For a nest to be habitable for western Canadian mason bees, there are two key things that matter: tube diameter and depth. Mason bees need tubes with an internal diameter of 7.5 mm, and at least 6 inches in length: shorter tubes may be used by desperate females, but only males will be laid. Narrower, or wider tubes may be rejected by the bees. Often called a Bee chalet, 'Barn, 'Bee house,' or something along those lines: this is not actually where the bees live, but only where the female lays her eggs. Adult bees may shelter in it temporarily, but do not live in it permanently, so you will need to provide other shelter for them (log and debris piles work great).*

**Be aware that commercial bee houses are often not appropriate for our bees.** Big commercial box stores do not necessarily manufacture their houses for any specific species: and though these houses may work for some types of bees, there is no guarantee that they will be compatible with the species you have bought. Bees are specialists, and if it is not what they need, they will reject it.

The bee houses we sell are recommended. They are designed by entomologists at Beediverse and manufactured in western Canada, each one handmade specifically for the needs of our bees. Exercise caution when buying houses elsewhere: and use the measurements listed above.