Care Sheet for Mason Bees

Who are the Orchard Mason Bees?

The Orchard Mason Bee is the common name of a native bee *(Osmia lignaria* ssp.) that pollinates our spring fruit and nut trees, flowers and vegetables. This bee is non-social which means it does not live in a hive. In the wild, mason bees nest in hollow stems, woodpecker drillings and insect holes found in trees or wood. You will find mason bees active in your yard until early summer at which time they have laid a new bee for the following season. Mason bees are known as gentle bees and can be observed at close range without fear of being stung. Keep in mind this non-social bees do not produce honey.

What do they pollinate?

These bees are perfect for spring fruit and nut trees, blueberries, and virtually all flowers in your yard needing pollination.

How do you hatch the cocoons?

Your bees will arrive safely tucked away in their cocoons inside a small cardboard box. These cocoons have been inspected for pests and other bee aliments. Feel free to open the box to see your cocoons. Pouring them into the palm of your hand, you should see a combination of larger cocoons (females) and smaller cocoons (males). Cocoons **must** be stored under refrigeration to prevent them from hatching.

Return the cocoons to their carton/box, or you can transfer them to a slightly larger container. Be sure the container will allow some degree of air in/out.

If you are lucky your Mason Bees will have already hatched by the time you get them home. If so, place the box in the crisper of your fridge overnight, the Mason Bees can survive in the crisper of your fridge for a month without food or water in a sleep state. When the first blossoms appear, place the Bees in the baby Bee nursery around dawn, they will be groggy as you want them to wake in their new home. This way they will be connected to where they were born and return to the lay the next generation.

Conditions are not Optimal

If outdoor conditions are not optimal (meaning that daytime temperatures are consistently below 10^0C/50^0F, freezing conditions at night), store your bees in the refrigerator's crisper at 4^0C/39^0F. The cool dark environment of your fridge is an important factor in keeping your bees in a state of hibernation. You will also want to keep the container somewhat moist so that the cocoons do not dry out and kill the bees sleeping inside. DO NOT SOAK the container. The container can be lightly misted to achieve 70% humidity.

If you see hatched bees in the refrigerator, don't panic

If any of the bees (typically the males) hatch early, you can keep them in your fridge (the crisper). In this way they will not need a food supply to sustain them. If you warm them up they will need a suitable food source. We suggest a cotton-ball, soaked in equal parts of sugar and water, inside the container with the cocoons.

Conditions are Optimal, Use NIC's Bee & Bee Villa and Bee Bop Barn

When daytime temperatures have reached about 10-13^{0}C/50-55^{0}F or 10% of spring blooms are happening, you can place the box containing your bee cocoons (with the top open) outdoors. Preferably in a spot that gets the morning sun and is safe from the weather.
If you have NIC's Bee & Bee Villa or Bee Bop Barn, place the cocoons into the baby bee nursery
The nursery should then be closed (this prevents predator from hurting your bees). The bees will emerge from their cocoons, crawl out the hole in the front of the nursery. All bees will hatch within 1 week.

Mason Bee Coverage

We recommend 1000 bees per acre.

Bee friendly plants

Botanical Name	Common Name	Notes
	Trees and Shrubs	
Cercis occidentalis	Western Redbud	Eastern, Chinese and Mexican Redbud also available; may be useful
Cytisus scoparius	Broom	Several species available commercially; some have escaped and become a problem in California.
Prunus	Plum, prune, peach, nectarine, chokecherry	
Ribes	Current, gooseberry	
Rubus	blackberry, raspberry, thimbleberry	
Salix	Willows	
	Perennials and Annuals	
Amsinckia	Fiddleneck	wildflower
Brassica	Mustards	Annual; let them flower (bolt)
Clarkia	Godetia and others	Showy flowers; nice in a garden. Pollen may be too large for *Osmia* to collect, but nectar will be attractive
Hydrophyllum	Waterleaf	Wildflower
Nemophila exilis, menziesii	Baby blue eyes	
Penstemon	Beard tongue	Not the red flowered species. Purples, blues may be ok.
Phacelia	Phacelia	Used by Phil Torchio to rear *Osmia* in the greenhouse, so it must be a good choice.
Raphanus sativus	Radish	Let them bloom!
Salvia carduacea	Salvia, sage	Avoid reds, long-tubed flowers. Species grown as herbs may be especially useful.
Senecio	Cineraria, Dusty Miller	Daisy-like flowers. Some are vines or shrubs.
Taraxacum vulgare	Dandelion	Mow them while fruit trees are in bloom, let them flower after
Trifolium repens	White clover	
Vicia californicum	Vetch	

(Source: Krombein et al., 1979, Catalog of Hymenoptera in America North of Mexico. Vol. 2 Smithsonian Institution Press p. 2032.
Common names were taken from the Sunset Western Garden Book, 1995, and Peterson Guide to Eastern Wildflowers)

Please note: In addition to warmer daytime temperatures, there must also be sufficient pollen available (blooming trees/shrubs/flowers) for your new bees.

Tips

- Please do NOT use wood blocks with drilled holes. Your bees will fail within a few years due to pest buildup.
- Try to avoid holding your bees in hibernation past June 1st as they will begin to die in their cocoons or may emerge too weak to fly and forage.
- Pollen, mud, clean nesting material, and correctly located/positioned houses are all key factors for successfully raising your bees. The mud must be moist enough to form a ball.

Next Season

September/October your mason bee pupae for next season will be in your reeds. These reeds can be removed form the house and placed into a plastic container stored in a cold place such as an unheated basement or garage until next season. Next season place you reeds out into your house once temperature have reached optimal conditions.

Contact: Natural Insect Control, 3737 Netherby Road, Stevensville, ON, L0S 1S0
Phone 905-382-2904; Fax 905-382-4418; info@nicniagara.com
www.naturalinsectcontrol.com