



# 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 does 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 ailments. 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

## Conditions are not Optimal

If outdoor conditions are not optimal (meaning that daytime temperatures are consistently below 10°C/50°F, freezing conditions at night), store your bees in the refrigerator's crisper at 4°C/39°F. 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, they will need a food supply to sustain them. A suitable food source is 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°C/50-55°F or 10% of spring blooms are happening, you can place the box containing your bee cocoons (with the top open) outdoors with into the baby bee nursery (loft space in NIC' Bee & Bee Villa and Bee Bop Barn). Place the carton with the top or lid open or removed. The nursery can 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
<b>Trees and Shrubs</b>		
<i>Cercis occidentalis</i>	Western Redbud	Eastern, Chinese and Mexican Redbud also available; may be useful
<i>Cytisus scoparius</i>	Broom	Several species available commercially; some have escaped and become a problem in California.
<i>Prunus</i>	Plum, prune, peach, nectarine, chokecherry	
<i>Ribes</i>	Current, gooseberry	
<i>Rubus</i>	blackberry, raspberry, thimbleberry	
<i>Salix</i>	Willows	
<b>Perennials and Annuals</b>		
<i>Amsinckia</i>	Fiddleneck	wildflower
<i>Brassica</i>	Mustards	Annual; let them flower (bolt)
<i>Clarkia</i>	Godetia and others	Showy flowers; nice in a garden. Pollen may be too large for <i>Osmia</i> to collect, but nectar will be attractive
<i>Hydrophyllum</i>	Waterleaf	Wildflower
<i>Nemophila exilis, menziesii</i>	Baby blue eyes	
<i>Penstemon</i>	Beard tongue	Not the red flowered species. Purples, blues may be ok.
<i>Phacelia</i>	Phacelia	Used by Phil Torchio to rear <i>Osmia</i> in the greenhouse, so it must be a good choice.
<i>Raphanus sativus</i>	Radish	Let them bloom!
<i>Salvia carduacea</i>	Salvia, sage	Avoid reds, long-tubed flowers. Species grown as herbs may be especially useful.
<i>Senecio</i>	Cineraria, Dusty Miller	Daisy-like flowers. Some are vines or shrubs.
<i>Taraxacum vulgare</i>	Dandelion	Mow them while fruit trees are in bloom, let them flower after
<i>Trifolium repens</i>	White clover	
<i>Vicia californicum</i>	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 May 1<sup>st</sup> 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 reed. These reeds can be removed from 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 your reeds out into your house once temperatures have reached optimal conditions.