

# An Intuitive Guide to the Gentle

## Mason Bee

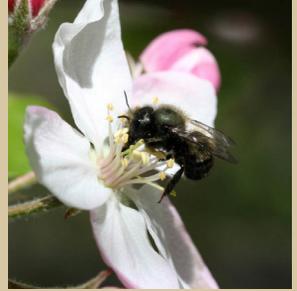
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# Pollination

## Why your yard needs Mason Bees

Your spring fruit and nut blossoms need pollination. With fewer bees available today, you will benefit from increasing those in your neighborhood and can do so easily through raising gentle Mason Bees.



These wonderful bees pollinate plums, cherries, apricots, nectarines, apples, peaches, pears, kiwis, blueberries, walnuts, hazelnuts, etc.

Your annuals will have more seeds to reproduce for the following year.

Solitary bees, like the mason bee, are a wonderful educational tool for friends and family.

They provide a natural bee balance to your yard that may be missing with recent honey bee and bumble bee losses.

A healthy yard has bees buzzing...

Does yours?





# Mason Bees

## Fun Facts

At first you might mistake the spring mason bee for a fly! They have similar coloring, but their eyes, long antenna, thick furry legs, four wings and a hairy body look very different!

Unlike the honey bees, they produce no honey!

The spring mason bee is a solitary bee. Each female is a queen and has no helpers. They are native bees throughout the US and Canada.

These bees are extremely gentle, only stinging if their life is threatened.



Females are slightly smaller than honey bees, have a short antennae and they carry the pollen on their hairy bodies. They live about 4-6 weeks.

Males emerge first, have a longer antenna, are smaller, have no stinger, and live only 2 weeks, just long enough to mate!

These bees are not destructive! They use existing holes as nesting material: reeds, paper tubes, or wood trays.

Each female “owns” her own hole. She will gather pollen and nectar, lay an egg, and then seal that chamber with a bit of gathered mud. A tube might have 5-6 egg chambers!

Since they are solitary bees and are not part of a hive, they are only active in the spring- typically between late March and early June.

# Mason Bee Requirements

What you need for success

Spring pollen for food!



Fruit trees



Most spring perennials

Clean nesting material for the Bees



EasyTear  
Tubes/Reeds



Wood Trays



Drilled Blocks of  
Wood  
(not  
recommended)

# A Mason Bee house to keep holes dry

Starter



Raindrop



## House placement

Your mason bee house should be placed on a sunny warm morning wall, under an overhang if possible, and about 5-7' above ground so you can watch the mason bee activity. They are fun!

## Mud

Good mud is silty clay that has moderate moisture content

## Fall cocoon harvest

Collect your cocoons from the nesting material in the fall. This reduces pests and ensures that more Mason Bees survive through hibernation. Collection also lets you with plan what is needed for the spring season.



Thousands of gardeners rely upon our newsletter to know when to do what during the year! Sign up for Bee-Mail through [www.crownbees.com](http://www.crownbees.com)

# Time Table

When to do what

**January** – Inventory your harvested Mason Bee cocoons and count the tubes/reefs to ensure you have enough (about one hole for each cocoon.)

**February** – Buy your mason bees, nesting materials and mason bee houses from your local garden retailer. Begin early spring ‘bee flower’ seed starts. Paint or stain your Mason Bee house so that it is cured before use.

**March/April** – Place straws containing cocoons into your Mason Bee house (or your loose cocoons in an Emergence Box [see page 10]) when day temperatures are about 50-55°. Arrange nesting material in a “messy” fashion. Place sticks between tubes/reefs to help mason bees find their hole. Put Bee Attractant between the nesting material. Ensure that you have adequate mud nearby. Near the Mason Bee house, dig a 6-9” hole and mound the dirt next to it.



Male bees emerge and mate.



Female bees emerge, mate, pollinate and lay eggs.



January

March

April



**April/May** – Enjoy watching the busy nesting females! Keep an eye out for hungry birds, squirrels, or rodents. Placing a small piece of ½-¾” hardware cloth over the front of your nesting house will deter these predators. If half of your holes are filled by late April, you may need to buy more!

**June** – Remove spring nesting material (reeds/tubes) from the yard. This prevents pests from getting to the developing larva and killing them. Place nesting material in a vented container in your garage, shed, or barn.

**September/October** – Harvest a portion of your cocoons. Be aware of which pests are affecting your dormant mason bees! See [www.crownbees.com](http://www.crownbees.com) on what to look for and how to care for your hibernating cocoons. For best survival, cocoons should be stored in a Mason Bee Humidity Chamber and tucked in your refrigerator.

**December** – Share your excess cocoons with friends. Teach them how to introduce gentle bees to their yard for a balanced ecosystem.

Larva eggs hatch, spin cocoon, begin metamorphosis.



May

June

Jul-Sept

Oct-Feb

Adult bees in cocoon hibernate.



# Pests!

They are bad and must be controlled

## Pollen mites

A pollen mite exists to eat pollen. They piggyback on your mason bees and are scraped off with the gathered pollen. Pollen mites eat the pollen before bee larva can, which starves the larva. In spring, emerging bees exit throughout these pollen mites spreading them through the hole to damage even more egg chambers the following year. Many mason bees are so loaded with the mites that they can't fly.

## What to do

Provide clean nesting material each year. Don't use drilled blocks of wood, as you won't be able to prevent the spreading of pollen mites. Harvest your cocoons in the fall!





## Monodontomerous (Parasitic wasp)

Parasitic wasps arrive in late May and begin inserting their eggs into mason bee egg chambers. If the wall of the nesting material isn't thick enough, the mono will lay their eggs throughout the tube. A month or so later, you'll find holes their larva left when exiting the tube. At this point, it is too late for many of your mason bee larvae.

### What to do

Remove your nesting material in early June to prevent "mono-intrusion". Harvest your nesting material in the fall and feel for "squishy" cocoons. A healthy mason bee is a more firm cocoon. Open the squishy cocoon and observe numerous mono-larva. Dispose of them!



## Birds/squirrels/rodents

Your mason bees throughout the summer, or winter if they're left outside, are tasty treats to most foraging animals. You can't stop them from grabbing a mason bee in flight, but you can make your mason bee house harder to penetrate.

### What to do

Place 1/2-3/4" hardware cloth over the front of your nesting house. Try to leave a 3" space between the front of the nesting material and hardware cloth/chicken wire.



# Products

## Guidelines on what to buy

### Mason Bees

Available at your local garden store retailer or from [crownbees.com](http://crownbees.com). About 5-7 nesting females can pollinate one blossoming fruit tree. Your bee population will live about 4-6 weeks, and should pollinate many blossoms over that time.

Ensure that you are buying healthy, pest-free cocoons. You should purchase, as a minimum, 10 cocoons. There should be 4 big ones (females) and 6 little ones (males). Black/brown “strings” on the cocoons are larva feces, which is normal.

How have the cocoons been cared for? They should have been refrigerated from October to the spring release for healthiest mason bees.

Crown Bee cocoons are sold in small brown cartons with holes already cut through the side walls. Use this as our emergence box for releasing the spring mason bees. The label covering the hole is thin enough for the emerging bees to chew through.

Your Mason Bees will hibernate until you put them outside. However, the cocoons should be placed outside for bee emergence before May 1st or the bees may die.

The emergence box of cocoons should be placed on top of your nesting material when the daytime temperatures are about 55 degrees.



## Nesting material

Available at your local garden center, or directly from [www.crownbees.com](http://www.crownbees.com). Mason bees need clean holes in which to lay their eggs. Old holes create pest buildup and you wind up losing more mason bees to pests each successive year.

Each hole is owned by one nesting female Mason Bee. You will want a nesting hole for each cocoon as a rule of thumb. Ensure that the nesting material can absorb moisture from the pollen and is not wrapped in plastic.

**EasyTear Tubes** –These are just the right size for spring Mason Bees. They are easy to see if a bee has used it (if you can see through the back hole, it has not been used) and are easy to open for fall cocoon harvesting!



**Reeds** –Due to the variety of hole sizes, it's easier for a mason bee to find her own hole in reeds. They are very easy to open with a butter knife during harvest.



**Wood trays** –Although expensive at first, these reusable trays do not need tubes or inserts. Just harvest cocoons in the fall and clean out the holes with a stiff brush. Use the cinch straps to bind them together each year. The cardboard backing can be replaced annually.

## Mason bee houses

Your nesting material should be kept dry and sheltered from wind and rain. As long as the house is functional and durable, the design choice is yours! Consider where your cocoons will be stored for spring emergence.

**Starter houses** – If you are just starting out, begin with a small number of nesting holes. Learn about mason bees and become successful producing more each year. Straws and reeds should have 2-3” of overhang. The house should have a slight downward tilt to ensure rain exits. Roughly one hole is needed per cocoon. You also may attract wild mason bees!



Some Mason Bee houses have optional Bee Observers where you can see the Mason Bee and larva in action.

**Wood Mason Bee Houses** – look for good 2-3” overhangs and consider what your cocoons will emerge from (a simple paper cup will suffice!) Project how many bees you may need and the quantity of tubes/reefs it can hold.

Most wood houses are sold naturally without stain or paint, though you might finish it to last longer. To protect your wood house, store it out of the weather after the Mason Bee season.



## Books & Accessories

**Mason Bee Attractant** – Recent research conducted by commercial mason bee pollinators has concluded that spring nesting females are attracted to specific nesting scents. The commercial mason bee industry is now using this attractant.

Through collaboration and experimenting, Crown Bees has developed an innovative method to capture these natural nesting smells and preserve them for you.

With the use of the Mason Bee Attractant, your mason bees will have a higher probability of nesting in your tubes/reeds/trays. Downwind wild mason bees of the same species will look to nest in these holes as well.

Two scent-laden cloths are included in a cellophane pouch to preserve the freshness of the attractant. It is recommended that one bee attractant cloth be placed inside the Mason Bee House at the onset of the mason bee season, and the second cloth be added about two weeks later.

The cloth is 100% cotton, and blue (a color preferred by spring mason bees).



**Mason Bee Humidity Chamber** – Bee Scientist recently conducted a study that concludes: “mason bees stored in a constant 39-40° temperature have best survival rates than those left to variable winter temperatures.” A normal refrigerator is about that temperature (36-40° )

However, modern refrigerators are frost free with extremely low humidity (about 20-25%), which will dry up your hibernating bees. The Mason Bee Humidity Chamber is the right size for tubes/ reeds and keeps loose cocoons from coming in contact with water. If a small bit of water is added monthly, the ventilation holes keep the moisture content between 60-70%.



**Mason Bees for the Backyard Gardener**, by Sherian Wright- Mason Bees for the Backyard Gardener contains wonderful color photographs and illustrations.

Step-by-step instructions get you started, and let you choose between an almost no-work method to a more involved method of winterizing your bees.

In an era when people are asking “What’s happening to the bees?” this book is indeed timely, by focusing on a bee that requires no special equipment for its “beekeeping” criteria.

This book contains information on: • What they look like • Why they’re important • How to find them • How to manage them • How to create a habitat





# Crown Bees™

Your complete Mason Bee Resource



For more information on raising mason bees, frequently asked questions, basic mason bee requirements, or to sign up for Bee-Mail, a monthly newsletter designed to inform you when to do what activity, please visit

[www.crownbees.com](http://www.crownbees.com)

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