Mason Bees

Becoming a bee rancher

MASON BEE

Honeybee

Bumblebee

Taxonomic Classification	Honeybees	Bumblebees	Mason Bees
Kingdom	Animalia	Animalia	Animalia
Phyllum	Arthropoda	Arthropoda	Arthropoda
Class	Insecta	Insecta	Insecta
Order	Hymeoptera	Hymenoptera	Hymenoptera
Family	Apidae	Apidae	Megachilidae
Genus	Apis	Apis	Osmia

Characteristics of Mason Bees

Mason bees are solitary bees as are 90 %of all bees.

There is no queen, and no hive.

There is no “division of labor”, all females are fertile.

Mason bees are docile and rarely sting.

Mason bees live in pre-existing sites such as hollow reeds or nail or beetle holes.

Mason bees rarely fly more than 300 feet from their nests.

Mason bees do not make honey.

They thrive on fruit trees, berries, rhododendron, dogwood, Eastern Red Bud, dandelions and clover - they are early Spring pollinators.

They do not prefer pansies, petunia, daylily, New Guinea Impatiens, begonia or peony.

WHY CHOOSE MASON BEES

Mason bees are native to the U.S. Honeybees are not.

Mason bees pollinate a wide variety of plants (apple, cherry, pear, almond, peach, kiwi, nuts, berries and early spring blooming flowers).

One mason bee can pollinate as much as 100 honeybees (this statistic was repeated in all the literature, in different formats - for example “2 to 3 times better at pollinating than honey bees - Laura Klahre, Ted Talk) and “an estimated 99 % of flowers landed on by mason bees get pollinated - 2000 per day, vs. about 15 per day for honey bees” - Mason Bee Revolution).

Mason bees will fly in the cold, and rain; honeybees will not.

Honeybees are susceptible to Colony Collapse Disorder (CCD).

Taking care of mason bees takes approximately two hours a year.

SPRING
Bee rancher chores

Put mason bee house where it faces the morning sun.
Put the house at eye level.
Holes should be 8 mm in diameter.
General rule is put the cocoons out when it is 50-55 degrees for three consecutive days; do not worry about night time temperatures.
Put the cocoons on top of or behind nesting holes - you can put them in a small paper cup.
Provide approximately one nesting hole for each cocoon.
Generally you want 6 males to 4 females.
Make sure emerging bees have enough to eat - within 300 feet of flowers
Provide mud- females separate the cocoons and cap the tubes with mud, hence the name “mason”.
Put chicken wire in front of nesting holes, to keep out birds; do not but your bees near a bird feeder.

Spring
What the bees are doing

The male bee cocoon, which is smaller, hatches first.
The males wait for the females which can take up to two weeks.
After mating the male dies.
The female forages for pollen. She puts pollen and nectar in the nesting cavity, lays an egg, and seals off the cell.
She continues doing this until the chamber is full, then goes on to another tube.
Females lay approximately 15-20 eggs.
She makes 11-35 foraging trips to collect enough pollen and nectar for one baby bee.
After approximately 6-8 weeks, the female dies.

Mason bee emerging from tube

Mason bee with filled tubes

Summer
Bee Rancher Chores

Leave the reeds in place outside, but put them in a mesh bag which guards them against wasps and other pests which may invade the cocoons.

Summer
What the Bees are Doing

The larva hatch and eat the food.
After 10 days they spin a cocoon then pupate.
They are at this point fully formed bees which will emerge the following spring.

Autumn
Bee Rancher Chores

It is now time to harvest the cocoons - (October to December).
Handle the cocoons gently, but remember that they are water proof.
Open the nesting tubes - you will see the cocoons, the frass (larva excrement) and the mud partitions.
Using something flat (a nail file, flat screwdriver) remove the cocoons to a shallow dish.
Discard cocoons that have small holes in them (caused by mini-wasps).
Clean the cocoons in 0.05 bleach solution (1 T of bleach to 8 cups of cool water).
After one to two minutes, rinse the cocoons in cool water.
Roll them gently in a towel to dry.
Your cocoons are ready for winter storage.

Winter
Bee Rancher Chores

Put the cocoons in a ventilated container such as a Humidibee.
Keep the container in the refrigerator, in a crisper (39-40 degrees F, with 50-75% humidity).

Do not keep apples in the same crisper - the ethylene gas will kill the bees.
Keeping the bees in the refrigerator protects the bees from predators and from fluctuations in temperature.
Check the container every few weeks to make sure that the pad below the foam is damp. Add water as necessary - usually 1 T a month.
If cocoons get moldy, put them in a paper bag and close the top (mold spores have a harder time penetrating the paper bag).

Wait until Spring, and start over again.

Congratulations, you are a bee rancher!

References

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Click on “About” and then “Mason Bees”
Sells supplies and cocoons

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