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Solitary Bees

Many bees and pollinators are experiencing declines, causing concerns about the impact on food production and eco-systems. Solitary bees comprise the majority of bees, yet they are often unnoticed pollinators and are outstanding pollinators.

Solitary bees that make nest in cracks and crevices, such as Mason bees, leaf cutter bees or wool carder bees, can be encouraged to live around home gardens by providing bee houses that have nesting tubes or crevices. Leafcutter and Mason bees are not aggressive and only the females have a mild sting that is only used if they are handled.

Mason bees are an early season pollinator

Mason bees (*Osmia*) are normally active from early March until the end of June. They emerge from cocoons when early blooming plants start flowering, for example crocus, scilla, vinca, skunk cabbage, and snow drops.

Males emerge first from the nest needing nectar-producing flowers right away and wait for the appearance of females. The females will emerge later, and they will require both nectar- and pollen-producing blooms. Once mating has taken place the males die.

As each of six to ten eggs is laid, a cache of pollen is deposited as a food source for the emerging larva. Each egg is in its own compartment, separated by a mud barrier from the next, so that there is no competition for food among the newly hatched larvae.

Eggs that develop into females are laid first in the deepest part of the cavity and those destined to be males are at the outer edge. Then the outermost opening is plugged with mud, which forms a tight, secure cover over the eggs. It is for this reason that this bee is called a "mason bee."

The Leafcutter Bee is a productive pollinator for summer gardens and flowers.

Leafcutter Bees (*Megachile* spp.) are cavity dwelling bees that lay their eggs in existing holes, in soft, rotted wood or in the stems of large, pithy plants and are most active May to late August. The leafcutter bee cut and carry in her legs bits of leaf like the non-fibrous rose or lilac leaf to the nest to seal each egg.

They line the nest with the leaf fragments they collect, provision each cell with a mixture of nectar and pollen, lay an egg and seal the cell. Finished nests may contain a dozen cells or more. The young bees develop and remain in the cell overwintering as full-grown larvae. There is only one generation a year.

Placement of your Bee House

- Select a bee house location that receives early morning sun to awaken and warm your bees.
- If summer temperatures can be very hot, ensure house is in afternoon shade for your leafcutter bees.
- Hang bee house on a wall, fence, or flat surface about 5-7 ft above the ground.
- Locate the house within 100 - 300 ft. a pollen and nectar source because mason bees do not fly long distances



Mason Bee



Leaf Cutter nests in bee house



Mason bee on Bee house