

Mason Bees

Osmia lignaria

A Lynn Canyon Ecology Centre Information Sheet

There were no honey bees in North America until the 1620's when the colonists brought them to Jamestown, Virginia so they could harvest honey.

Mason Bee

The mason bee, *Osmia lignaria* is found in British Columbia's southern coastal areas and southern interior. Some other common names for the bee include: blue orchard mason bee, blue orchard bee, orchard mason bee and osmia bee. The mason bee belongs to the family Megachilidae which includes a large number of solitary bee pollinators.

Appearance

Mason bees are dark metallic green or blue but they look black. Female mason bees resemble black house flies. Males are smaller than the female bees and they have longer antennae and a tuft of light coloured hair on their heads. Mason bees have extremely hairy bodies. The bees are such effective pollinators because grains of pollen are easily trapped under the hairs. As the bees collect nectar they transfer pollen from one flower to another and pollination takes place.

Behaviour

Mason bees are found in wooded areas and along forest edges. They appear in early spring when they visit early blooming plants to gather nectar for food and to provision their nests. The bees are particularly attracted to cherry, pear and apple trees but they visit many other nectar and pollen sources. Mason bees are excellent pollinators because they are fast flyers and visit many flowers, even in bad weather. Mason bees are shy and fly away if they are disturbed. Although they are capable of stinging, mason bees rarely display defensive behaviour, even if their nests are threatened.

Mason Bee Nests

Mason bees are solitary bees but they tend to build their nests close together. Building nests close to one another increases the bees chances of mating and decreases predation pressures. Female mason bees create their nests in pre-existing tubular holes in wood. The females choose holes that are 7 to 8 mm in diameter. A mud plug is placed at the end of the nest and then the bee pushes up to 20 loads of pollen and nectar up to the plug. When enough food has been deposited the female lays an egg and seals everything up with another mud plug. The process is repeated for each egg until the tube is full and then the female seals the entrance to the nest with a rough mud wall. Often the cell nearest the entrance is left empty to discourage predators. Eggs near the entrance of the nest are in danger of being eaten by birds, so male eggs are laid near the front of the nest while the more important female eggs are laid near the back of the nest.



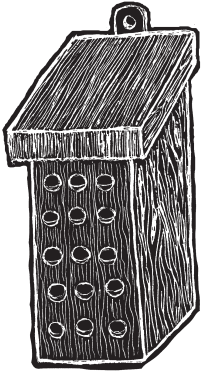
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Providing Homes for Mason Bees in Your Garden

Mason bee populations are limited by the availability of suitable nesting sites and food sources. Providing nesting areas may attract mason bees to your garden.



Wood Block Nests

- Use pieces of untreated pine or fir. Do not use cedar as it contains resins that repel insects.
- Nest blocks can be made from 2 x 4's or 4 x 4's.
- Drill holes 10 cm to 15 cm long with a diameter of 7 to 8 mm. Do not drill through the wood block; there should be no opening at the end of the hole.
- The holes can be drilled in straight lines or randomly all over the wood. The holes should be at least 2.5 cm away from each other.
- Secure the nest box in a sheltered spot in your garden that receives morning sun. Wooden blocks can be used year after year. The bees clean out the nest holes themselves or you can wash the blocks in a mild soap solution.
- Hang your nest box in mid-March and take it down by mid-July.

Soda Straw Nest

Suitable mason bee nests can be made from straws.

- Use large paper straws. The inside dimension should be 7 mm.
- Fold each straw in half to seal off the back of what are now two nesting holes.
- Bind the straws together with masking tape so they will not spring free.
- Fill a tin can or plastic pipe with the straws. Make sure the can or pipe is only open at one end.
- If possible make a little roof over the front to keep rain from flooding the straws.
- Secure the nest in a sheltered spot in your garden that receives morning sun.
- Hang your straw-nest in mid-March and take it down in mid-July.

Providing Mud

Mason bees require mud to make their nests. If a source of mud is made available near the nest box it saves the bees a lot of time and energy. Keep a small patch of soil moist or fill a small bucket or tray with wet soil.

Enjoy the Bees and the Blooms.

