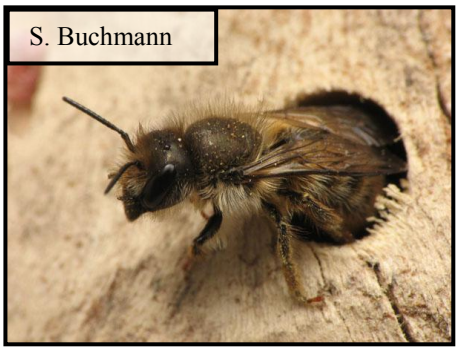
Bee Condo Maintenance Guidelines

Pollinator Partnership Canada, Wildlife Preservation Canada, and Pollination Guelph are providing the following list of maintenance activities to be considered when supporting healthy bee nesting environments in constructed structures.

Incorporating bee condo maintenance into current landscape management plans is an efficient way to maintain the structures as these activities can be conducted as part of standard landscape maintenance. Bee nesting substrates include many possible materials that each require some minor maintenance to prevent disease or mold from harming the bees or damaging the structures.


S. Buchmann

All structures:

Bee condos can come in many shapes and sizes. However, they all have some maintenance activities in common.


V. MacPhail

They should be checked on a monthly basis from April through October to ensure that predators of bee nests have not damaged the site. These include raccoons, skunks, jays, woodpeckers, other birds, and ants.

If predators are a problem, you can place a wire screen (e.g. chicken wire cage) around the opening to the bee nests, keeping the mesh at least 3"/7.5cm away from the holes. This would prevent beaks and paws from being able to reach and eat the baby bees.


V. MacPhail

Remove and brush away any cobwebs, bird or wasp nests, leaves, or other debris that could block nest entrances, attract pests, or encourage mold growth.

Do not place nesting blocks indoors during winter months as this will negatively affect the development of the nesting bees: keep structures outdoors.

Although some protection from the rain is good, the nesting sites do not need to be protected from the elements; indeed, it is best if the nest entrances receive morning sunlight (i.e. be east or south-east facing) so that the bees can warm up in preparation for flight.

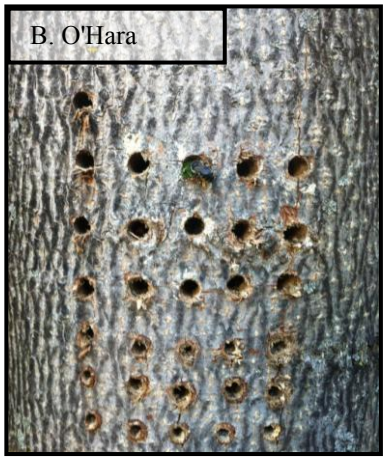
It is important that the nesting sites are not moved from spring through early fall as this can dislodge baby bees from their food, killing them. If they need to be moved or removed, it is best to do it after the first hard frost or before the first flowers bloom when the bees are likely to be hibernating. Nests should be secured so that they do not move or spin in the wind.

All nesting sites should be a minimum of 8"/20cm deep. This includes holes drilled in wood and bundles of twigs and stems; soil nesting sites should be even deeper. Shorter nests may result in a skewed production of male and female bees, which will harm the populations in the long term.

Replacement nesting sites (i.e. logs, twigs, etc.) should be obtained from nearby areas. Woody materials should not be transported from known areas of insect infestation (e.g. Emerald Ash Borer, Asian Longhorn Beetle), and care needs to be taken to avoid transporting the seeds of invasive plant species, particularly if the stems of that species (e.g. *Phragmites* reed) are used.

If there is any possibility of baby bees being present inside nesting sites being removed from the bee condo structures during maintenance, the materials should be placed in a dark box (e.g. shoe box) with a single hole punched in the box. This will allow the bees to emerge and leave the box but not allow new bees to nest in the materials. This box can be placed in an out-of-the-way area outdoors and left until the bees have emerged.

Drilled wood:



General: Ensure that mold or other rot has not occurred. If mold is present drill out the nesting tube to clean. If a large area of the surrounding wood is moldy or rotten, replace the entire affected area.

Fall and spring: Many bees "cap" their nest tubes, covering the opening with mud or leaves. When the bees leave these tubes, a small exit hole will be visible at the end. These previously occupied nests can be cleaned by drilling out the hole.

Every 3-5 years: replace all the wooden structures to ensure there is no build up of diseases, pests, etc.. This is in addition to the annual cleaning out of holes.

Stem/twig bundles:
General: Ensure that mold or other rot has not occurred. If mold is present dispose of the affected nesting materials. If there is a concern that nesting bees might be in affected materials move them out of the main structure and place under nearby shrubs, trees, or on a brush pile nearby.

Fall and spring: Replace any damaged or previously occupied tubes.

Every 2-3 years: replace all of the stems and twigs to ensure there is no build up of diseases, pests, etc.. This is in addition to the annual maintenance.

Any type of dead stems with a hollow or pithy stem can be used for nesting tubes. Example species include goldenrod, Queen Anne's Lace, sumac, teasel, cattails/reeds, elderberry, parsnip, rose, raspberry, and currants. One end of the twigs should be closed (e.g. by a knot or stem node) so that the tube has only one opening; the female bee will often plug the front entrance with mud after she finishes nesting.

Pack the tubes in the box tightly so that the tubes remain horizontal and will not fall out if moved. Tubes should end just before the edge of the box.

Soil:
Ensure that areas of soil designated for bee nesting are open and not covered by excessive leaf litter. Avoid mulch in these areas as bees cannot dig through it to reach the soil. This soil should also not be worked up (i.e. the soil should not be disturbed through the use of spades, hoes, gardening claws, etc.) as this can bury and/or kill the bees.

For more information on building or maintaining your own bee condos:

www.pollinatorpartnership.ca
www.wildlifepreservation.ca
www.pollinationguelph.ca