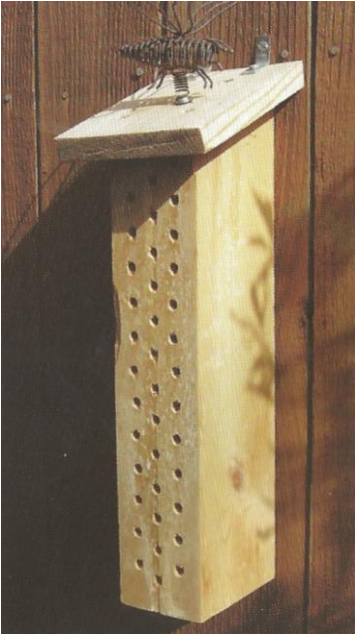


Make a Solitary Bee Nest Block

Adapted from the Xerces Society and UMaine Ext Bulletin 7153



Bees are “keystone organisms” in most terrestrial ecosystems and are essential for maintaining the integrity, productivity and sustainability in those systems: the forest understory, pastures, fields, meadows, roadsides, many agricultural crops, fruit orchards, and backyard vegetable and flower gardens. Without bees, many flowering plants would eventually become extinct. Without the work of bees, many fruit- and seed-eating birds and some mammals, including people, would have a less varied and less healthy diet.

Maine has more than 270 species of native bees, almost all of which are solitary. This means they do not live in colonies; each female lays eggs and provisions her own nest. Many solitary bees are wood nesters using old beetle holes as nesting sites. A female bee lays eggs in the hole or “tunnel” from back to front, each provisioned with a pollen ball. Emerging larvae use the pollen for food and develop in to mature bees at which time they emerge (male eggs are laid last and emerge first) to reproduce – and feed and pollinate.

Help create habitat for native wood nesting bees by following these simple instructions:

1. Use a block of **untreated, seasoned** pine or spruce: 2”x4”x6” / 4”x4”x6” or 2”x6”x8” / 4”x6”x8”
2. Drill holes in block using a sharp bit so that insides of holes are smooth. Include at least 2 sizes of holes in your block.
 - For smaller bee species use 4” deep block: Drill holes 1/8”, 3/16”, & 1/4” all the way through the 4” dimension.
 - For mason and blue orchard bees use 6” deep block: Drill holes 9/16”, 5/16” & 7/16” all the way through the 6” dimension.
3. Make holes 3/4” on center and 3/4” from edge of block. If you are using a 4” block, stagger them as in the picture at left.
4. Attach a backing board (bees will only use holes that are closed on one end) with screws for easy removal. Add a shingle or another piece of wood as a “roof” to shed water.
5. Mount nest blocks on a building, fence, tree, or post about 4’ or 5’ from the ground and positioned to receive morning sun while being shaded from hot afternoon sun.
 - Attach a 2’ piece of 1x2 to the backing board so that it extends below the nest block, then attach the 1x to post or building, or
 - Use angle irons to attach (see picture).
6. Blocks should be placed near food sources in early spring.
 - For yard or garden, place stakes in garden 3 - 10’.
 - For agricultural or orchard operations, place stakes 10 - 25’ apart with nest blocks facing field or orchard.
7. A variety of bees may use the nest block throughout the season. Each nest (hole or tunnel) is comprised of up to 16 cells and is capped at the end with masticated plant material or mud. Each cell contains one egg provisioned with a pollen cake as food for the larval bees; bees mature in the tunnels and then emerge. Some bees will hatch out in a matter of weeks; others may need to winter over.
8. If the block has capped holes at the end of the season, it contains dormant adult bees that will not emerge until spring. You may overwinter your block in an unheated building to reduce predation/freeze-thaw. Remember to place it back outside in very early spring before bees emerge (maybe when we turn the clocks ahead)!
9. Once a year, after all bees have emerged, remove backing board and clean holes by re-drilling. Immerse the block in a 10% bleach solution to disinfect. Rinse, and let dry before using again. (Or not!)
10. Alternatively, holes may be drilled in fence posts, standing dead wood, etc.

Twig bundles



Wood-nesting bee sites may also be made by cleaning the pith from bamboo, elderberry, or any other hollow-stemmed woody plant, leaving one end sealed. Bundle stems together with string or twine and place 4-5’ off ground near food source.