

Building homes for solitary bees

<https://resonatingbodies.wordpress.com/resources/building-houses-for-native-bees/>

<https://resonatingbodies.files.wordpress.com/2010/05/easy-diy-bee-condos1.pdf>



Homes for native bees by: Lincoln Best



Greg Corman



Sarah Peebles

Easy DIY bee condos

Bee condos attract tunnel-nesting solitary bees and wasps*. About 30 percent of Canada's 800+ native bee species nest alone (as individuals) in old beetle bores (in wood), pithy stems and other cavities, and readily take to homes provided for them (the rest live in the ground). Easy DIY condos can include the following basic guidelines: you can make them from blocks of wood or adobe, amended logs, bundled hollow sticks, as free-form sculptures, or some sort of cross thereof (lifecycle illustration below).

1. Find or cut a piece of wood which hasn't been chemically treated or experiment with other materials which are chemically inert (some bees also nest in brick and mortar, door locks, abandoned shells and other small vacant cavities).
2. Size: at least 5 inches long by 5 inches deep, though not necessarily rectangular
3. Drill or otherwise create nesting holes which are closed at one end (don't drill all the way through). A range of hole sizes is best for biodiversity: a 3/8th inch wood bit and other drill bits larger and smaller (approx. 3, 4, 6, 8, 10mm metric accommodate most bees found in Canada, except the Virginia Carpenter Bees which excavate your lawn furniture and old wooden structures). Ideally, smaller holes should be 3-4 inches deep, larger ones 5-6 inches deep. Holes should be smooth on the inside, with roughly 1/2-inch between holes. Bundles of bamboo and other hollow stems are also good, so long as one end is closed.
4. If you want to decorate their new home, you could use milk paint, artist's acrylic paint (water-based), or latex house paint, as long as it doesn't have anti-fungus additives. Stick to water-based glues. Those products dry quickly and are pretty innocuous chemically. Yarn, recycled cloth, felt, paper, hair, old toy parts...use your imagination!
5. Creating a roof to shield your little abode is a good idea. Dryness is essential.
6. You can choose to insert straws or rolled butcher paper into each hole, as parasites and fungus commonly make problems over time (thus keep an eye on your materials for #4).
7. Attach a hanger to the roof or the backside and suspend from your house, or, affix to a stake, fence or tree (minimum 2 ft up to avoid ants, etc.; maximum probably no more than 8 ft height to avoid strong winds). Greasing the pole or table legs will help keep ants and spiders out.
8. East or SE – facing locations which have ample morning sun are most successful.

"Nests for Native Bees" (2 pg.) and "Tunnel Nest Management" (easy pathogen control, 6 pg.) are essential reading from the Xerces Society for Invertebrates Conservation. Innovative bee condos from around the world are showcased at the Hymenoptera Housing Project group (on the Flickr photo sharing web site). Lifecycles projects Vancouver Island display smaller condos (which primarily cater to only the mason bee): www.lifecyclesproject.ca/resources/bee_average/about.php

For more complicated condos which allow you to observe the developing and emerging bees/wasps, see plans by Peter Hallett, and, “deluxe log” and other designs by Sarah Peebles, both on this site. These involve grooves cut with a router.

*Note: cavity-nesting bee homes will usually also attract solitary nesting wasps, their evolutionary predecessors. Fear not! Unlike some social bees and social wasps which have stores of tasty resources and young to defend (and work together), solitary bees and wasps do not sting unless stepped on or squished – you can watch them up close, they really don't care! Wearing a long-sleeved shirt and pants and a hat, though, is a good idea to avoid accidentally trapping them in your clothes or hair.

CAUTION: Please do not move your bee/wasp homes to new localities, or sell or give away used condos. Avoid buying bees online or elsewhere. The idea is for people to cultivate and nurture their *local* beneficial insects. Long distance trade/commerce and issues with hygiene create serious pathogen control issues and other problems facing pollinators cultivated by people and wild pollinators (including honey bees and commercial bumble bees; scientists are concerned about the effects of commercial bumble bees on wild bumble bee populations in regions of the U.S.A. and Canada, including Ontario). These concerns must also extend to solitary bees if we are to maintain a healthy local ecosystem.