NATIVE BEE HOMES

MOLBAK'S BUTTERFLY GARDEN AND MICROSOFT POLLINATOR PATIO

TUNNEL-NESTING BEE HOMES

There are many different materials and methods for making tunnels suitable for gentle native bees: holes drilled in a wood block, hollow reeds, bamboo, paper straws, or channels cut into wood planks. The method or materials are not as important as following certain guidelines for making successful homes (The Xerces Society, 2011, pp. 140-147).

- *Provide tunnels with a variety of sizes.* Diameters between $^{3}/_{32}$ and $^{3}/_{8}$ inches (2.5–10 mm) will support a diversity of pollinators. Mason and leafcutter bees will use the larger holes and small carpenter bees will use the smaller ones.
- *Make sure tunnels are long enough.* At least 3–5 inches deep for smaller tunnels, or 5–6 inches for larger tunnels. The mother bee can choose the sex of the egg when she lays it, and she reserves the first one or two cells closest to the entrance for male young, so deeper tunnels ensure there are enough cells for female young.
- *Tunnels must have a back*. Insects will not use tunnels open on both ends. If the house is installed against a wall or fence post, that will help.
- *Place homes in dry, undisturbed locations.* Homes must be protected from wind and rain at all times or else they will mold. Place houses facing east or south to receive warmth from morning sun.
- *Keep houses small.* Bee or insect "condos" that cover several square feet may look elaborate and beautiful, but they facilitate the spread of disease and mites. Multiple small homes, spaced apart, are better than one giant home.
- *Prevent parasites and disease by replacing or cleaning homes regularly.* The most successful bee homes are ones that can be easily cleaned. In late fall, remove the tubes or cocoons with larvae inside (they are capped with mud or other materials) and store in a safe, dry place. Depending on the type of home, replace the tubes or reeds, thoroughly clean the reusable channels in wood planks, or put up a new home if it's a wood block with drilled holes. In early spring, put the larvae in an emergence chamber (a dark, dry box with a hole near the bottom where the bees emerge) near their original location.

BUMBLE BEE HOMES

In early spring, bumble bee queens seek out old rodent nests, grass clipping piles, and abandoned bird houses to build a nest. Artificial bumble bee homes can be old bird houses or other wood boxes, or even half-buried teapots (The Xerces Society, 2011, pp. 147-149).

- Locate a warm, dry, safe location. Under decks, sheds, or stoops may be good but place the nest at least 10 feet from paths or areas where people spend time.
- Install in late winter or very early spring, when queens are looking for nesting sites.
- Nesting materials can be soft unraveled yarn, dry straw or grass clippings, or upholsterer's cotton upholstery (not cotton balls).
- Entrance tube or hole should be ¾ inch or wider.

DO-IT-YOURSELF BEE HOME INSTRUCTION RESOURCES

The United States Department of Agriculture: Agricultural Research Service [USDA ARS] website contains instructions on how they recommend preparing nesting blocks for tunnel-nesting bees (USDA ARS, 2016).

The Xerces Society has many resources for natural and artificial bee homes. **NESTS FOR NATIVE BEES** is a short fact sheet that covers many different types of homes for native bees (Shepherd, 2008), and **MAKING MORE ROOM** provides information for supporting pollinators in Oregon and Washington (Shepherd, Vaughan, & Black, 2006).

The Xerces Society's book, **ATTRACTING NATIVE POLLINATORS,** contains detailed information on building and maintaining tunnel-nesting homes and bumble bee homes (The Xerces Society, 2011).

WORKS CITED

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