Using Your Bee Block

Pollinators work diligently to keep our flowering plants producing fruit, vegetables, flowers and their seeds. Much of animal and human life is dependent on this cycle of nature, but both honey bees and wild native bees are declining due to loss of habitat, development, pesticides and lack of food (pollen).

Providing bee blocks is a way to attract native bees to your yard and fields to bolster dwindling populations. Different size holes attract different species.

**Bee Block Placement:** The most important factor in selecting a place to hang your bee block is protecting the tunnels from rain and wetness, and the slanted overhang roof is designed for that purpose. Nesting season is May through October. Bees need water, and they'll gather it from leaves if you water your garden regularly. Or, put water out in shallow dish.

1) A good place to hang the bee block is on a wall with an overhanging eave that will provide some protection from rain and wind, rather than on a fence post or tree. This also keeps the bee block more stable.

2) Hang the bee block at least a few feet off the ground.

3) Hang it where it will receive the morning sun (facing east) which will help warm the young while keeping it protected from hot afternoon sun (which can cause them to die).

**Background:** Most native bees are solitary nesters and don't live in colonies like honey bees do. 30% of the 4,000 bee species native to North America nest in small tunnels such as hollow plant stems and bore-holes left by beetles in dead trees.

**How Bees Nest:** A female builds partitions to divide the tunnel into a linear row of brood cells, brings in a nectar and pollen mixture of food, then lays an egg, seals off the cell, and moves on to the next cell. The following spring, adults emerge to start the cycle over again. Quite amazing!

**Where Are the Eggs?** Because a nesting female bee may not fill a tunnel completely, it can be difficult to know if there are eggs inside. If a tunnel is filled completely, the female will plug the hole with wet mud, leaf cuttings or other material to prevent predators such as invading insects or woodpeckers from attacking the young bees.

The mother bee lays female eggs at the rear and male eggs toward the front end of the tunnel (they're more vulnerable to predators), since biologically speaking the male bees are more expendable. Males emerge and wait for the females to crawl out in order to mate with them.

**Predators:** Because woodpeckers find bee larvae a tasty meal, you can wrap the bee block with hardware cloth over the winter, being sure to remove it before nesting begins. Another strategy is to overwinter the bee block in an unheated building such as storage shed. The cold won't hurt the larvae. Rehang the bee block in the spring.

**Sanitation:** Because the bee block concentrates a population of bees, it can become infested with parasites and disease spores after several seasons (May through October). Proper sanitation measures are important so that an infected bee block won’t continue to attract healthy bees which will then become ill. With proper care, bee blocks can be home to bees for a long time.

**Using Paper Bee Straws:** One strategy is to roll “bee straws” out of parchment or newspaper using dowels or pencils that fit the hole size, then insert the paper straws into the holes. Color the outer tip of the paper straw black, which apparently helps to attract bees.

At the end of the nesting season in autumn, carefully remove paper straws and store them in a dark ventilated container. The container's holes should allow for air circulation and be large enough for bees to emerge; holes near or on bottom of the container are best so in the spring bees can crawl out rather than expend precious energy flying
upward. Store this container in a refrigerator or in an unheated outbuilding over the winter, then in spring bring out the container and place near your bee block.

**Cleaning Bee Blocks:** During the winter, bee block holes may be re-drilled to clean out old material and submerged in a bleach to water mix (1:2 ratio) for five minutes to disinfect. Fresh paper straws can be inserted in the bee block for the new season.

**Learn More:** Regular maintenance of the bee block can prevent fungal diseases and pollen mites from killing infant bees. Portland-based The Xerces Society (www.xerces.org), a nonprofit dedicated to invertebrate conservation, is a good resource to learn more about pollinators, bee block maintenance and disease prevention.

Xerces suggests three maintenance and disease prevention strategies: use of paper straws, temporarily rotating nest blocks out of use, or using nest blocks with fewer holes to reduce density of populations. For more details, please refer to page 5 of their PDF article entitled Tunnel Nest Management (www.xerces.org/wp-content/uploads/2009/11/tunnel-nest-management-xerces-society.pdf).

**Did You Know?**

- There are about 20,000-30,000 species of native bees worldwide.
- Most native bees are very gentle and don’t sting unless grabbed or stepped on. Bees tend to be less aggressive the less social they are.
- Native bees often pollinate specific plants, resulting in larger fruits and seeds and higher yields. That means diversity of plants is good!
- The most bee-friendly flower colors are blue, purple, violet, white and yellow.
- Most wild bees collect only pollen, not nectar, so regularly visit low-sugar producing flowers. Lucky for us bees tend to collect only one type of pollen per foraging trip, ensuring good pollination, seed set and plant population viability.
- Grow flowering plants! Whether you grow in containers or a backyard garden, plant a variety so that three flowering species are blooming each season from early spring to late autumn. Use native species, and avoid pollenless cultivars and double petaled ornamentals.
- Protect nesting sites. Consider leaving some area of your yard wild with open sandy ground, brush piles, and tree stumps or snags—favorite nesting areas of pollinators.
- Don’t use pesticides, even organic pesticides. Avoid herbicides which reduce plant diversity. Bees need a variety of food (pollen) from diverse plants.
- Off-road vehicle use in sandy and other areas damages nesting sites.

**Resources:**

- Central Oregon: www.seedexchange.weebly.com, deschutesnativeseed.weebly.com/
- www.xerces.org
- www.nappc.org
- www.humanesociety.org/animals/resources/tips/bees.html
- www.nativebeeconservancy.org/
- www.flickr.com/photos/90408805@N00/collections/72157622508048613/ (Nico’s wild bees – photo collection of a host of different native bee genera)
- www.ucsusa.org/food_and_agriculture/what_you_can_do/the-climate-friendly-gardener.html

**Benefit:** Proceeds from the sale of this Native Bee Block benefit the Sierra Club’s Keep Waldo Wild campaign to permanently protect an additional 80,000 acres near Waldo Lake in Lane and Deschutes counties. To learn more about the campaign, visit oregon.sierradclub.org/groups/juniper/waldo/keepwaldowild.asp and like our Facebook page, http://www.facebook.com/KeepWaldoWild. Contact us at junipergrp@yahoo.com.