Inviting Bees to Your Garden

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The best of the pollinators

If you are interested in gardening for bees, you most likely already know how important they are for our gardens and ecosystems. Over 70% of the world's plants depend on the pollination services of bees and a third of our food comes from plants needing pollination. Planting a lush and inviting garden for bees can also provide forage and nesting for many other species as well as being a source of delight and a sense of well-being for ourselves.

Bees are the best of the pollinators because they are looking for both nectar and pollen. Their hairy bodies are built to carry pollen, and they can also move quickly from flower to flower.

About 20,000 species of native bees have been identified worldwide. Of those, around 4000 species live on our continent. In Washington State alone, we have at least 600 species! That sounds like a lot of possible guests in our gardens. In addition to their large numbers, they come in a wide range of sizes, shapes and colors. Many are tiny and hard to identify. Some are easily confused with other insects. How can we address the needs of so many bees? Knowing about native bees in general can help us meet this challenge.

Honeybees, brought to this continent by colonists over 400 years ago, live in highly visible hives. Native bees do not live in hives. Bumblebees, one of our more common natives, might live in colonies of a hundred or so, but most native bees are solitary. Each female bee builds and provisions her own nest and cares for her offspring. About 70% of native bees live underground. The rest, sometimes called wood dwellers, live in hollow stems, dead snags or empty beetle nests. These bees are not easy to see.

Native bees emerge and forage seasonally. Bumblebees can usually be seen from late February until fall frost. A common bumblebee in the valley is *Bombus vosnesenskii*. Mason bees come out in spring to pollinate fruit trees for a few weeks, then hibernate. Other species come and go in spring and summer and into autumn. Some bees to look for in the valley are sweat bees, leafcutters and carder bees.

Native bees are called generalists if they forage on a variety of blooms. Others, who prefer specific flowers, are called specialists. In addition, different size bees have different tongue lengths which affects their choice of blooms.

Size also affects how far bees can fly to forage. Our beloved non-native honeybees can fly several miles, but tiny black or brown native bees might fly only 500 feet.

Native bees are particularly important in our ecosystems. Having evolved with native bees, native plants have developed special colors, patterns, scents and even UV signals to entice bees to visit them.

Megachilidae on a yellow flower. *Photo provided by Virgene Link-New / WSU Skagit County Extension Master Gardeners.*

With this information in mind, let's look at some guidelines for creating bee gardens. Our job is to provide a healthy habitat with food, water and nesting sites.

Start with a sunny location with good soil and drainage. Think about layering your garden as you would see in nature, using trees, shrubs, perennials and groundcovers. Choose a diversity of nectar and pollen-rich plants, including native plants. One resource suggests incorporating as much as 75% native plants in your garden.

A great strategy for providing food for bees over a long period of time is to overlap bloom times from late February until frost. Plant several species that bloom at the same time. To make foraging easier, especially for tiny bees, group at least three of each plant species together in a clump about 3-feet in diameter. Winter heather is a good choice to greet bumblebees when they first emerge in late February.

Providing a variety of sizes and shapes of blooms addresses differences in sizes of bees, tongue length and flower preferences. Pay attention to the colors of the flowers. Bees are attracted to blue, purple, violet, white and yellow blooms. Consider leaving some clover and dandelions (yes, dandelions). Bees love them.

Leaves with pieces cut by leafcutter bees. *Photo provided by Virgene Link-New / WSU Skagit County Extension Master Gardeners.*

Herbs, heirloom plants and cottage style flowers are good in your bee garden. Be careful about hybrids and ornamentals. They often have little to offer in the way of pollen. For example, sunflowers that have no pollen have been developed for the florist industry. Invasive species to avoid include knotweed (*Polygonum*) and butterfly bush (*Buddleia davidii*). There are many plant lists for bee gardens.

Locating nesting sites and forage close together is helpful, especially for small bees. For bees that tunnel, leave some bare soil without mulch in a sunny, well-drained location. During fall cleanup, leave some hollow stems, like Joe Pye weed for the "wood dwellers." Bumblebees appreciate good-sized clumps of grass for a winter nest. In spring, bumblebees have been known to nest in birdhouses!

Bees appreciate a source of clean water as simple as a shallow bowl of water with small stones or marbles for perching. Try floating a small, lightweight piece of wood in a birdbath or similar container.

A healthy habitat for bees means no pesticides. Ask your nursery staff if they buy plants treated with pesticides or uses pesticides on their premises. If so, consider finding another source for your plant purchases.

Fall and winter are good times to plan a bee garden. Inventory what you already have, and research new plant ideas. Start small and expand gradually. Be patient. Invite them and they will come.

Resources:

- The Bee Friendly Garden. Kate Frey and Gretchen LeBuhn. Ten Speed Press. 2016.
- Xerces Society for Invertebrate Conservation. Portland, OR. www.xerces.org
- "Pollination and Pollinator Protection." WSU Home Gardener Bulletin. FS174E, https://pubs.wsu.edu.