Planting a Bee Garden for Pollinators

Compiled by Kara Carleton, Program Coordinator, Idaho Master Gardener Program from The University of Illinois, ISDA, Bee Spotter (beespotter.org) and Montessa Young, UI Extension Educator, Washington County.

Inviting an array of bees into your own backyard is simple when you plant their favorite flowers. There are over 4,000 native bee species in the United States and over 400 native species in Idaho. The European Honey Bee is not a native species. All species of bees and other pollinator species are vital in our larger ecosystem, or gardens, landscapes, forests and food supplies.

By providing nectar and pollen as food and creating shelters in your garden space, you will create new habitat for bees, which is important, as their natural habitats become less and less abundant. Researchers have found that planting bee-friendly gardens in your community may increase the diversity of bees, even within the concrete-laden urban areas in which many of us reside. That’s great news for bee spotters! You will also increase the number of blossoms that get pollinated in your garden and landscapes. That equals more food and more flowers.

There are four elements needed to have a successful pollinator garden:

- **Choose plants** that are best suited for attracting bees in your region, and plant them in 3’ groupings.
- **Limit the use of insecticides** that are toxic to bees and other beneficial pollinators.
- **Provide shelter** in your garden from elements such as wind, rain, or cold.
- **Create habitat for the nest** of the pollinator to support the entire life cycle of the pollinator from egg to larva to adult.

**Choosing plants that attract bees**

Select a variety of flowers that are most attractive to bees and will bloom at different times throughout the year for a steady supply of nectar and pollen. The climate in your region, defined by the USDA plant hardiness zone map, will determine which flowers can survive and the timing of their flowering in your garden. Exotic plants that produce lots of nectar, like butterfly bush, are great for attracting bees and butterflies into your yard, but they often cannot support the entire life cycle of these insects. By opting for native plants, your garden will be attractive to adult bees that are foraging for nectar and pollen, but will also increase native habitat in your area for other wildlife, like caterpillars and birds.

When selecting flowers for your bee garden, it is important to recognize that flowers that employ **melittophily**, or bee pollination, often share particular traits that make them more attractive to bees. The suite of traits that are used by a flower to attract a specific group of animals as pollinators is called a **pollination syndrome**. These traits can include color, flower shape and size, the amount of nectar produced and the way pollen is presented. Plant your selections in 3’ groupings versus straight rows. This allows a better foraging site to accomplish pollen and nectar gathering while conserving energy.

**Limiting the use of insecticides**

Limiting the use of organic and synthetic insecticides in your garden ensures that bees that you have invited into the garden are not accidentally poisoned by pesticides not intended for them. Native bees are attracted to your garden by the nectar and pollen, but they come into contact with any other chemicals that may be present. High doses of insecticides can kill foraging bees outright. Even low doses can have adverse effects. Low doses of organic or synthetic insecticides can disrupt the innate orientation and navigation skills of the foraging bee, causing it to lose its way back to the nest. When the pesticide is brought back to the nest, it will be transferred to nest mates directly or incorporated into the honey, where it can alter the development in larvae into workers and queens, and
thereby affect future generations of the colony. Practicing integrated pest management in your garden is the best way to limit the use of insecticides.

Providing shelter from the elements
You do not have to uproot your current garden in order to attract more bees. Flowers that attract bees can be planted between existing flowers or potted and placed throughout your yard. Providing shelter for bees in the garden can be as simple as maintaining a garden full of spaces guarded from the elements. Keep in mind that a wide expanse of green grass or concrete does not offer protection from wind, rain and cold for a foraging bee.

Creating habitat for the nest
At first, you may not like the idea of attracting stinging insects into the garden. Keep in mind that stinging is a defensive behavior used for defending the nest against predators. If you have ever watched a bee when it visits a flower, you may have noticed that it is often too busy to even notice you! Foraging bees are happy and curious, moving from one flower to the next, in search of nectar and pollen. They are not looking for a fight.

While most people are not equipped to raise honeybees in their backyard, creating nesting habitats for native bees is surprisingly simple. That's because many native bees make nests in old pieces of wood, cavities or even in the ground. These nests can be easily replicated with a few supplies and tools. Leave mulch off some areas to allow sites for in ground nests. The addition of nesting sites for native bees to your garden will intensify your bee spotting experience beyond the average gardener. For more information on the construction of nests for wood-nesting, cavity-nesting and ground-nesting bees, check out the fact sheet from the Xerces Society.

<table>
<thead>
<tr>
<th>Flowers</th>
<th>Bee visitors</th>
<th>Color</th>
<th>Season</th>
<th>Origin</th>
<th>Flower type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Blue Lobelia (Campanulaceae)</td>
<td>Bumble bees Anthophoridae Halictidae</td>
<td>blue</td>
<td>late summer into fall</td>
<td>native</td>
<td></td>
</tr>
<tr>
<td>Wild Lupine (Fabaceae)</td>
<td>Bumble bees Anthophoridae Megachilidae Halictidae</td>
<td>blue</td>
<td>mid to late May</td>
<td>native</td>
<td></td>
</tr>
<tr>
<td>Lead Plant (Fabaceae)</td>
<td>Long-tongued bees Short-tongued bees</td>
<td>purple</td>
<td>early summer</td>
<td>native</td>
<td></td>
</tr>
<tr>
<td>White Wild Indigo (Fabaceae)</td>
<td>Bumble bees</td>
<td>white</td>
<td>May to July</td>
<td>native</td>
<td></td>
</tr>
<tr>
<td>Partridge Pea (Fabaceae)</td>
<td>Honey bee, Bumble bees Anthophoridae Megachilidae Halictidae</td>
<td>yellow</td>
<td>summer to fall</td>
<td>native</td>
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<tr>
<td>Hardy Ageratum (Asteraceae)</td>
<td>Honey bee, Bumble bees Anthophoridae Megachilidae Halictidae</td>
<td>blue</td>
<td>summer to fall</td>
<td>native</td>
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<tr>
<td>Stiff Goldenrod (Asteraceae)</td>
<td>Honey bee, Bumble bees Anthophoridae Megachilidae Halictidae Colletidae</td>
<td>yellow</td>
<td>August to September</td>
<td>native</td>
<td></td>
</tr>
<tr>
<td>Flowers</td>
<td>Bee visitors</td>
<td>Color</td>
<td>Season</td>
<td>Origin</td>
<td>Flower type</td>
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<tr>
<td>Showy Goldenrod (Asteraceae)</td>
<td>Honey bee, Bumble bees, Anthophoridiae, Megachilidae, Halictidae, Andrenidae</td>
<td>yellow</td>
<td>July to September</td>
<td>native</td>
<td></td>
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<tr>
<td>Coneflower (Asteraceae)</td>
<td>Honey bee, Bumble bees, Anthophoridiae, Megachilidae, Halictidae, Andrenidae</td>
<td>purple</td>
<td>June to October</td>
<td>native</td>
<td></td>
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<tr>
<td>Wild Bergamot (Lamiaceae)</td>
<td>Honey bee, Bumble bees, Anthophoridiae, Megachilidae, Halictidae, Andrenidae</td>
<td>pink</td>
<td>July to September</td>
<td>native</td>
<td></td>
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<tr>
<td>Columbine (Ranunculaceae)</td>
<td>Bumble bees, Halictidae</td>
<td>orange</td>
<td>April to May</td>
<td>native</td>
<td></td>
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<tr>
<td>Horsetail Milkweed (Asclepiadaceae)</td>
<td>Long-tongued bees, Short-tongued bees</td>
<td>white</td>
<td>early to late summer</td>
<td>native</td>
<td></td>
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<tr>
<td>Butterfly-weed (Asclepiadaceae)</td>
<td>Long-tongued bees, Short-tongued bees</td>
<td>yellow-orange</td>
<td>June to August</td>
<td>native</td>
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<tr>
<td>Common Milkweed (Asclepiadaceae)</td>
<td>Long-tongued bees</td>
<td>pink, white</td>
<td>June to August</td>
<td>native</td>
<td></td>
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<tr>
<td>Prairie Milkweed (Asclepiadaceae)</td>
<td>Long-tongued bees, Short-tongued bees</td>
<td>pink</td>
<td>June to July</td>
<td>native</td>
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<tr>
<td>Joe Pye weed (Asteraceae)</td>
<td>Long-tongued bees, Short-tongued bees</td>
<td>mauve pink</td>
<td>July to September</td>
<td>native</td>
<td></td>
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<tr>
<td>White Snakeroot (Asteraceae)</td>
<td>Long-tongued bees, Short-tongued bees</td>
<td>white</td>
<td>September to frost</td>
<td>native</td>
<td></td>
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<tr>
<td>Yellow Giant Hyssop (Lamiaceae)</td>
<td>Bumble bees, Colletidae, Halictidae</td>
<td>yellow</td>
<td>July to September</td>
<td>native</td>
<td></td>
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<tr>
<td>Lesser Calamint (Lamiaceae)</td>
<td>Bumble bees</td>
<td>white</td>
<td>June-October</td>
<td>exotic</td>
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**Flower type key**

<table>
<thead>
<tr>
<th>Clustered flowers</th>
<th>Single flower</th>
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<tbody>
<tr>
<td>rounded</td>
<td>radial symmetry</td>
</tr>
<tr>
<td>elongated</td>
<td></td>
</tr>
</tbody>
</table>

**Long-tongued bees**

- Honey bees, Bumble bees, Carpenter bees (Apidae)
- Digger bees (Anthophoridae)
- Leaf-cutting bees and Mason Bees (Megachilidae)

**Short-tongued bees**

- Andrenid bees, Small Miner bees (Andrenidae)
- Plasterer bees, Masked or Yellow-faced bees (Colletidae)
- Sweat bees (Halictidae)

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**Annuals can be planted to help our pollinators**

- Buckwheat
- California Poppy
- Coreopsis
- Cosmos
- Golden Bee Plant
- Rocky Mountain Bee Plant
- Sunflower (cultivars that produce pollen)
- Zinnia

**Trees and Shrubs for our pollinators**

- **Trees**
  - Chokecherry
  - Crab Apple
  - Lilac
- **Shrubs**
  - Bluebeard
  - Ninebark
  - Oceanspray
  - Russian Sage
  - Saskatoon Serviceberry
  - Woods Rose

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Local nurseries to source native plants for our pollinators:

- Cedar Mountain Perennials [http://cedarmountainperennials.com](http://cedarmountainperennials.com) 7875 E. Hwy 54 Athol, ID. 83801. Also at area Farmer’s Markets
- Snake River Seeds [http://snakeriversseeds.com](http://snakeriversseeds.com) Boise, ID. Access their online catalog to order locally bred seeds.
- Check with the local nurseries in Coeur d’Alene, Post Falls, Rathdrum and Sandpoint to see if they carry plants listed here and other native plants, or if they can order them for you:
  - All Seasons Garden and Floral
  - Aspen Nursery
  - The Flower Farm
  - New Leaf Nursery
  - Northland Nursery
  - Ponderay Garden Center
  - Vanhoff’s Garden Center
  - Westwood Garden Center

Further Reading and Resources:

- Bee Habitat by Montessa Young, University of Idaho, Extension Educator, Washington County.
- Xerces Society for the Conservation of Invertebrates offers free fact sheets and publications for sale about conserving pollinators.
- Missouri Botanical Garden through the Kemper Center for Home Gardening explains gardening plants from A-Z.