

Bee Friendly Blooms

Offer a mix of bee-friendly blooms from spring through fall.

Bees are strict vegetarians, consuming only pollen for protein and nectar for energy. And as we've seen in previous sections, a nesting female bee will visit anywhere from 1000 to 2000 flowers just to collect enough pollen and nectar to create the food store for a *single* offspring! Add to this the varied nesting schedules and foraging preferences of our thousands of species of native bees, and it's easy to appreciate the need for an endless salad bar of pollen- and nectar- rich blooms from spring through fall.



Mix of late spring/early summer blooms in a community bee garden. Photo by Celeste Ets-Hokin.

So the first and most important task of a budding bee-friendly gardener is to plant flowers! Well, it's almost that simple, but not quite. Here are some important things to keep in mind:

Encourage early and late bloomers – Spring blooming plants are particularly important for newly emerging bumble bee queens on their first foraging expeditions following hibernation. Remember, these royal visitors need to collect nectar from roughly 5000 flowers a day just to maintain their body temperature high enough to brood their first offspring. Other spring bees, such as miner, digger and mason bees, will also benefit from a mix of spring-blooming plants.

Mid and late summer blooms are important for the many species of bees that emerge during this portion of the nesting season. Social bees, such as sweat and bumble bees have multiple generations of offspring per year, and so are actively foraging from spring all the way through fall. And that bumble bee queen that awoke from hibernation in early spring will have produced new queens by late summer. These newly crowned queens will need to feed heavily before hibernating for the winter, so late summer and early fall blooms are critical for their survival.



[Ribes](#) (right), also known as currant, is an early flowering perennial that attracts bumble bees and other spring bees. [Phacelia](#) (left), also known as scorpionweed, is an important spring blooming plant that attracts a wide variety of native bees. Photos by Mace Vaughan, The Xerces Society.



[Solidago](#) (right), also known as goldenrod, is a late summer/early fall perennial that attracts many native bee visitors, including bumble bees. Photo by Celeste Ets-Hokin. [Agastache](#) (left), also known as giant hyssop, and [Monarda](#) (bee balm) are excellent perennial late summer bee plants. Photo by Eric Mader, The Xerces Society.

Celebrate diversity: Include flowers of different shapes, sizes and colors – In order to accommodate the foraging needs and preferences of a wide range of bees, include flowers with different sizes, shapes and colors in your garden. The length of a bee’s tongue governs the types of flowers it will visit for nectar. Long-tongued bees are able to take advantage of the typically rich nectar rewards offered at the base of deep tubular blossoms such as salvias, lupines and penstemons.



Deep tubular flowers like [penstemon](#) (left) typically have greater nectar rewards than open-access flowers. Long-tongued bees, like leafcutters, can access the nectar at the base of deep blossoms, like [lupine](#) (right). Photos by Celeste Ets-Hokin.

Short-tongued bees are restricted to obtaining nectar from flowers with an open, easy access design or from the tiny florets which make up the flower heads of composite flowers such as sunflowers, coneflowers and asters. Composite flowers like these are also attractive to many bees as a source of pollen. Leafcutter bees, which carry pollen on specialized hairs on the underside of their abdomens, will walk around the circumference of the composite flower head platforms, brushing their bellies like little ‘Swiffer’ dusters across the pollen-coated surface, as they go.

Bees are red-blind, so for them, “red is the new black”! As a result, they do not readily spot red flowers from the air. But on the other end of the color spectrum, bees can see ultra-violet, which humans cannot. In fact, the petals of certain flowers contain ultra-violet patterns called “nectar guides”, which direct the bee to the nectar reward at the base of the petals. A bee’s color palette also includes yellow, orange, blue, purple and white, so these are good color choices for the flowers in your bee garden.



[Polyester bee](#) female (right), a short-tongued bee, gathering nectar from the small florets of a composite flower. Photo by Rollin Coville. [Leafcutter](#) female (left) collecting pollen from an aster by brushing the flower platform with her “pollen brush” – a brush of specialized hairs located on the underside of her abdomen. Photo by Celeste Ets-Hokin.

Avoid show-offs and just-for-show varieties and cultivars – Many ornamental flower varieties available in nurseries have been bred to appeal to humans, often boasting lots of frilly petals. Unfortunately, these multiple petals come at the expense of pollen production, and the flowers generally offer minimal nectar rewards. Also be wary of the double- or multi-petal cultivars of otherwise perfectly good bee plants. Good examples of this are [Coreopsis](#) (tickseed) and [Rosa](#) (rose). Look for single petal varieties of these plants. Single petal roses, such as native species, or the introduced Rugosa rose, can provide a good source of pollen for many bees. In addition to not providing as much in the way of pollen, showy, ruffled cultivars restrict a bee’s access to whatever pollen may be available in the center of the flower.



Bees can see blue, purple, yellow, orange, white and ultraviolet, but not red - something to keep in mind when choosing the color palette for your bee garden. Photo by Jessa Guisse, The Xerces Society.



Single petal varieties of plants offer more pollen rewards than cultivars with multiple petals. Single petal [coreopsis](#) (left). Photo by Celeste Ets-Hokin. [Rosa](#) rugose (right). Photo by Dr. Les Mehrhoff.

When selecting sunflower seeds or plants, be sure that they are not the “pollen-less” varieties. These cultivars have been bred for use as cut-flowers that will not drop pollen on your tablecloth. These just-for-show sunflowers have no place in a bee garden buzzing with “desperately seeking pollen“, female bees!

Go native – A sure way to avoid show-offs, or plants that offer little in the way of pollen or nectar to local pollinators, is to integrate a good selection of native plants into your garden mix. A region’s native plants and native bees have evolved together over the millennia, so they are best suited to each other. In fact research conducted by Dr. Gordon Frankie at UC Berkeley has shown that, in general, native plants are more than four times more attractive than exotics to the native bees in a given region.



Encourage native plant gardening in your community. Photo by Michael May, courtesy of Bringing Back the Natives Garden Tour.

Plants native to your area are also adapted to your climatic conditions, and typically require much less in the way of water, fertilizer and maintenance than do exotic species. And native plants support other local wildlife by offering food and shelter. If you can gradually convert at least 50% of the plants in your garden to natives, you will attract more bees, birds and butterflies, while saving yourself both time and money!

Consider the bee's eye view: Create visible clumps of each plant variety – Where possible, create good sized groups or clusters of each plant variety – 3' X 3' is a good rule of thumb. This permits a bee to readily spot an attractive forage plant from the air. Because bees tend to visit the same species of flower on any given foraging trip – a trait called “flower constancy” – grouping plant varieties also reduces the energy a bee must expend in moving between the blooms of a particular plant type.

If a single plant of a particular species achieves a substantial size on its own, there's no need to plant multiples of this variety all in one spot. If your space allows, you can mimic a naturally occurring arrangement or other landscaping aesthetic, and intersperse them with other plants in your garden.



Planting each plant variety in a good-sized clump or cluster allows a bee to more readily spot a favorite flower from the air. Photo by Matthew Shepherd, The Xerces Society.

Include both annuals and perennials – While perennials may seem like less work once established, annual seeds are inexpensive and often easy to sow directly in the ground with rewarding results. Many varieties will self-sow for the following year, and they make excellent spring and summer bee plants. Consider sowing a packet of mixed native wildflower seeds into your yard in early spring.

Other excellent spring annuals include species of [Phacelia](#) (scorpionweed) and [California poppies](#). Bee-attracting summer annuals that actually grow most vigorously when sown from seed include cosmos and sunflowers.



Wildflower mix. Even a small garden can accommodate numerous plant species. Photo courtesy of Bringing Back the Natives Garden Tour.

A number's game – More types of flowers in your garden means more types of bees!

Small bees tend to favor small flowers, while large bees often prefer larger or more complex blossoms. While some bees are specialists (or “oligilectic” bees, such as squash bees or cactus bees), and only collect pollen from a closely related group of plants, they will typically visit a wider range of plants for nectar. Social bees, such as bumble bees and sweat bees, which have multiple generations of offspring per year, are generalists, collecting pollen from a broad range of plants. Since they are active from spring through fall, they can't afford to be finicky eaters, or specialize on a select group of plants that may only bloom at certain times of the year.



Including at least 10 different plant varieties, with different shapes, colors and sizes, will attract more types of bees. Photo by Celeste Ets-Hokin.

Try to include at least 10 flower species in your bee garden, and more if possible. You'll be surprised at how easy this is to do, even in a small garden. It's even easier if you take advantage of annual species that will bloom in succession from spring through fall, allowing the early varieties to cede their space to the later ones.

A Few Words about Herbs – The flowers of most herb plants are attractive to bees. Perennial varieties, such as rosemary, lavender and mint produce seasonal flowers that offer nectar to a number of bee species, including bumble bees. In temperate climates both rosemary and lavender species will produce flushes of blooms from spring through fall.

Short-lived annual herbs, such as basil, dill and cilantro, can also be good bee plants, if they are allowed to “bolt” – that is to flower after the plant has finished producing edible leaves. Another advantage of these short-lived varieties is that they can easily be grown in containers, and don't require prime real estate in your garden. It's another way to make your small garden go a little further.

A short-lived perennial hybrid basil known as “African Blue Basil” (*Ocimum kilimandscharicum* × *basilicum* 'Dark Opal'), grows to 3 feet by 4 feet and produces both edible leaves and beautiful lavender flower spikes from spring through fall. The flowers are a magnet for honey bees, but also attract a variety of small native bee species as well.



Spanish [lavender](#) blooming in late spring – this herb will bloom in flushes throughout the summer and fall in temperate climates, and is attractive to many bee species. Photo by Celeste Ets-Hokin.

The More the Merrier: Inspire your neighbors and get them involved – Another strategy for maximizing the area you can dedicate to pollinator-friendly plants is to plant the areas between adjoining properties. Inspire your neighbors to make their gardens BEE-UTIFUL as well. Bring up the topic of bee-friendly plantings at neighborhood meetings; discuss the possibility of planting roundabouts, median or curbside strips with native plants for pollinators.



Consider planting the areas between adjoining properties or median strips with pollinator-friendly plants. Photo courtesy of Bringing Back the Natives Garden Tour.

We've all heard the old real estate maxim about the three most important factors for success being "location, location, location". For the survival of our native bees, success depends upon *habitat, habitat, habitat*. It isn't often that the average citizen can play an active role in the conservation of a critical species. But for North America's native bees, most every backyard gardener can pitch in by adding a patch of valuable bee-friendly habitat to the landscape.

Pollinator Posse: Act locally to inspire globally! – You can make an even greater impact by organizing a group of neighborhood representatives to petition your town or city governments to adopt pollinator conservation policies. Encourage the planting of pollinator-friendly flowers and shrubs in your local parks, community gardens and school grounds. And to ensure that any "bee-friendly" plants established on community property are indeed bee-friendly, urge a commitment from your local governments to use only plants and seeds that have not been treated with systemic pesticides. Make your town or city a model of pollinator conservation for others to follow!

Here are some additional resources to support the organization and outreach efforts of your own community "pollinator posse":

Encourage your local community and schools to help pollinators thrive by joining Center For Food Safety and Beyond Pesticide's "Bee Protective Campaign".

Help make your town and college campuses pollinator-friendly! Use Center For Food Safety's model resolution to guide your campus or community to adopt pollinator conservation policies, and raise awareness about this important issue!

Pollinator-friendly seeds and nursery directory: <http://beyondpesticides.org/pollinators/seed.php>

View the list of retailers committing to not use or sell neonicotinoid pesticides.
<http://www.foe.org/beeaction/retailers>



Residential garden with Xerces Society pollinator habitat sign inspires neighbors to plant their own bee-friendly gardens. Photo by Matthew Shepherd, The Xerces Society.

Consult a bee-friendly plant guide to inform your selections – To ensure that you choose the most appropriate plants for your area that provide a good source of pollen and nectar for local bee species, it's a good idea to consult a bee-friendly plant guide.

And of course, this is the whole point of the plant profile pages featured in this app! While not comprehensive of every bee-friendly plant, most of the plants we included have representative species that can be grown in many parts of North America. The plant profiles also contain information on each plant's characteristics, including bloom period, to assist you in selecting the best bee plants for the conditions in your garden.

Extensive regional plant lists are also available online at www.xerces.org. Helpabee.org offers an excellent plant list for California gardeners as well as ideas for the overall planning of bee gardens everywhere.