



Bumblebee photo courtesy Flickr/Smudge 9000

Native Pollinator Gardening Guide

- Plant native flowers. Consider host plants for rare butterflies like milkweed. Contact a regional native plant nursery about what native flowers are the best sources of pollen and nectar for bees, which require them as a food source. Always avoid potentially invasive, nonnative species, which will compete with wild, native plants when they escape from your garden.
- Buy your seeds and native plants from reliable, local sources. Flowering plants purchased at major gardening retailers have been shown to contain systemic pesticides that kill visiting honeybees. Systemic insecticides, such as neonicotinoids, are commonly used, broad-spectrum, indiscriminate toxics, and can be found throughout all of the plants tissues, including their pollen and nectar.
- Plant a diversity of native flowering plants that will bloom in succession throughout your region's growing season. Be sure to include early-blooming species, mid-summer-blooming species, and late-blooming plant species to ensure a continual diversity of floral resources for native pollinators.
- Plant flowers with a diversity of shapes, sizes and colors. Different pollinators can see different wavelengths of light and are therefore attracted to different colors. Various kinds of pollinators, with their own varying sizes, shapes and capacities to manipulate flowers, require a diversity of floral forms to all be fed.
- Plant the same species of flowers in groupings to model the distribution of plants in nature. This makes it easier for pollinators to locate their preferred food source and reduces the energy required for them to efficiently gather as much pollen and nectar as needed.
- Keep a natural-looking garden: Native bees nest in loose soil, piles of dead plants and holes of various depths and diameters bored into fallen trees or dead standing snags by beetles (or which you can drill yourself to help create habitat).
- Continuous, connected habitat is extremely beneficial for all wildlife, even pollinators. By planting habitat corridors in places like drainage ditch banks, hedgerows, windbreaks, stream corridors and roadsides, you can effectively provide quality habitat while potentially connecting fractured landscapes for foraging native insects and wildlife.
- Most pollinators are generalists, in that they forage upon a broad array of flower species, but some flower visitors are varying degrees of specialists, or insect species that use limited sources of nectar or pollen, often from just one plant family, genus, or species. So, do some exciting botanical investigative work and find out what rare pollinator species in your region may need you to plant their food source.
- Chemical-free is the way to bee! Don't use pesticides, herbicides, or fungicides. If you do need to use pesticides try organic alternatives that are less toxic to native pollinators. Also, see our list of chemicals to avoid below.



NATIVE POLLINATORS



CHEMICALS TO AVOID

Insecticide bottles often say “safe for bees,” but the wise consumer will question this. There are many chemical-free options, some used for countless ages, to maintain any garden in a way that is safe for humans and beneficial native insects, like pollinators. Advertising can be deceiving, and dangerous chemicals can be given eco-friendly name brands, so be careful to read ingredients and do a little research if you ever really must use insecticides.

The following is a short list of active ingredients in common insecticides that should be avoided at all costs:

- Acetamiprid, clothianidin, imidacloprid, nitenpyram, nithiazine, thiacloprid and thiamethoxam (these comprise a class of pesticides called “neonicotinoids,” shown to persist in stream water, decimate native bee populations, and indiscriminately poison beneficial insects and birds).
- Parathion, malathion, methyl parathion, chlorpyrifos, diazinon, dichlorvos, phosmet, fenitrothion, tetrachlorvinphos, azamethiphos, and azinphos methyl (these are some representatives of a class of very dangerous pesticides called “organophosphates”).



Native bee (*Andrena helianthiformis*) Courtesy of Flickr/USGS Bee Inventory and Monitoring Laboratory



Soft Winged Flower Beetle Courtesy of Flickr/USGS Bee Inventory and Monitoring Laboratory

