

## Planting Perennials for Pollinators

March 25<sup>th</sup>, 2023

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The blue orchard mason bee *Osmia lignaria*, is prized for its efficiency in pollinating fruit trees and is one of the only native bee species managed in agriculture.

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Our Philosophy: Pollinators, we would not be here without them.

- Plant a diverse and accessible garden with our ecosystem in mind. Too many gardens have been built around the needs of humans; to ensure a fruitful future we must focus on growing plants that feed our bees, butterflies, and birds—as well as everyone else.
- Design spaces with working knowledge of our local climate and the species you're adding to it in mind. Right plant, right place; plant a mix of native and non-native plants to cultivate a space conducive for healthy growth and successful cross-pollination.
- Limit threats to the health of our pollinator populations and understand that the easy, pretty or simple solution may not be as good for them as it is for us.

## Know your Pollinators!

There are four key groups of pollinators in the Pacific Northwest: birds, bees, butterflies, and flies.



Bumblebee on Penstemon, North America's largest group of native wildflowers.

## BEES

- *Bombus*: Bumble bees are the only bees native to North America that are truly social. They live in colonies underground, have different divisions of labor, and have overlapping generations, usually with multiple broods throughout the spring, summer, and fall.  
As generalists, they will visit a variety of flowers and food crops, often remaining active with it's colder out due to their ability to thermoregulate (generate their own heat) so you may see them out earlier in the season than anything else. Plant flowers in shades of blue, purple, pink, and yellow to draw bumbles to the garden for food. Plant grasses and a variety of flowering plants to feed them and leave wild sites undisturbed to provide nesting sites. Do not use pesticides or herbicides, especially neonicotinoids. Native bunch grasses, such as Prairie Switchgrass (*Panicum*), Native Carex, Dropseed Grass (*Sporobolus*), Little Bluestem (*Schizachyrium*), Big Bluestem (*Andropogon*), and Grama Grass (*Bouteloua*) to provide nesting sites and protection for the queen to overwinter. Leave perennials and grasses standing until the spring growing season to provide winter shelter.
- *Osmia*: Blue orchard mason bees are a major native pollinator of blooming plants in the Western half of the country. All black and looking suspiciously like a fly, you'll see the males emerge mid-March just before the females to scout out pollen sources and gain enough energy to mate. Two weeks later at the beginning of April, females emerge to mate and begin collecting pollen for future broods. Plant *Pieris japonica*, heaths and heathers (*Ericaceae*), blueberries and huckleberries, *Prunus* (cherries and plums) to feed our early season native pollinators. By the heat of summer, they have "holed up" inside of their nesting cavities in order to build populations for the next year.
- *Apis*: Honeybees are a foreign species, colonial organisms that have followed our human cities and farms to keep us fed and alive. We supplement their population through ag-practice. If you encounter a swarm, enjoy the experience!
- *Megachile*: Leafcutter bees are our summer native bees. They thrive off plant life and decaying plant matter, undisturbed sites and piles of wood. Watering the summer garden is such a benefit for them. Opportunistic feeders, they will benefit from summer blooming perennial plantings and bee hotels.

## BIRDS

Our major bird pollinators are hummingbirds, and yet we must continue to feed all birds as one of the major channels of seed dispersal are other wild bird populations. Songbirds are as important as predator birds, even crows have a role.

- Hummingbirds: Native to the New World, hummingbirds have a longstanding relationship with flowering plants. Tubular-flowered plants (*Salvia*, *Fuchsia*, *Cordylone*, *Agastache*) are great, reliable sources of nectar... or so we thought. In fact, hummingbirds are opportunistic nectar-hunters and drink from a variety of flower shapes and eat insects too.

## BUTTERFLIES

*Lepidoptera* are Butterfly species with a wonderful paradox... their larval stage tends to be a pest while their adult stage is a pollinator.

Plant native flowering plants - Butterflies and flowering plants have co-evolved over time and depend on each other for survival and reproduction, it is particularly important to install native flowering plants for both the larval and adult stages. You may not be able to enjoy the butterflies without feeding the caterpillars! Keeping in mind shelters for the cocoon stage. Plant Eupatorium (Joe Pye), Brassicas, Scabiosa, Aster, Rudbeckia (Black Eye Susan), Hollyhock, Salvia, Shasta Daisy and of course Asclepias (Butterfly Milkweeds).

## FLIES and WASPS

Pollinating flies and wasps are grotesquely underrepresented, probably because we mostly mistake them for honeybees. The giveaway is short antennae... a fly may look like a bee until you really watch its face and flight pattern. A wasp may be lighter colored and more faster-flying than a bee, they also tend to be thirstier. It's up to you to allow wasps and flies in your spaces, just remember that they make excellent pollinators.

## Cultivating nesting opportunities

- Most native bees build nests underground and require access to bare soil, mud, and undisturbed sites without mat forming vegetation like lawn grasses. Leaving spaces for them to nest is key in cultivating a healthy local population. Limit tilling.
- About 30 percent of native bees nest in cavities in wood or hollow stems. Leave native blackberry canes, elderberry or spirea standing in winter.
- You can buy or make bee houses, make sure the length of rods are over 8" so female mason bees have enough space to generate more female offspring.
- Bumblebees opportunistically nest in cavities above and below ground including abandoned human spaces. A messy garden may be the best place for them!
- Butterflies require species-specific host plants to rear caterpillars. Learn about what butterflies are present in your area and consider planting host plants for these species to support butterfly populations. Understand that plant damage will occur and that it's not necessarily a bad thing. Don't use Bt as although it is a useful pesticide, it will kill native caterpillars.

Plants toxic to bees... Yes, there are plants in this area that are toxic to bees, namely Kalmia and Rhododendrons. There is no need to run outside and remove your Rhododendron and Azaleas from the landscape. Your bees will ignore the blooms. They will choose instead to forage on better nectar sources.

## Chelsea's Favorites (Highlights included)

AGASTASHE (long blooming, smells amazing)

ASTER (bee candy, cute)

ALLIUM (Bees love onions)

ASCLEPIAS (Butterfly larvae food)

BERGINIA (Sturdy, versatile)

CAMELLIA (single flowers, long bloomers)

CISTUS (Spring bee candy)

EUPHORBIA (Off season bloom, shelter from herbivores)

Hardy FUCHSIA (Hummingbird candy, long season bloom)

GEUM (Butterfly friendly)

Hardy GERANIUM (prolific and hardy)

HELLEBORUS (early season)

SHASTA DAISY (long blooming, bee friendly)

MONARDA (pollinator palace)

NEPETA (bee conversion plant)

OSTEOPERMUM (tender perennial bee fave)

PENSTEMON (Wildflower cultivars, pollinator havens)

PAPAVER (Iceland, Oriental, California... all good)

ROSE (single blooms best for pollinators)

RUDBECKIA (Late season gold mine)

SOLDAGIO (native pollen spiller)

TERUCHRIUM (shade loving pollinator paradise)

VIOLA (plant everywhere, part shade is best)

## Plant these Plants (By Season)

### *Spring Blooming*

*Crocus, Galanthus (Snow Drops), Hyacinth, Forsythia, Prunus spp. (Plums and Cherries), Clematis, Amelanchier (Service Berries), Bletilla, Magnolias, Arctostaphylos, Camassia, Alyssum*

### *Summer*

*Daylily, Shasta Daisy, Monarda (Bee Balm), Salvia, Yarrow, Thyme, Helenium, Joe Pye Weed, Baptisia, Liatris, Hardy Hibiscus, Phlox, Lavender, Euphorbia, Coreopsis, Allium*

### *Fall*

*Rudbeckia, Russian Sage, Salvia, Agastache (Licorice Mint), Asters, Echinacea, Goldenrod, Japanese Anemone, Platycodon, Chrysanthemum*

### *Winter Blooming or Important Habitat Plants*

*Helleborus, Japanese Mahonia, Asclepias (Butterfly Milkweed), native sedges like Carex obtusata, Andropogon, Pieris, Heaths or Heathers, Rosemary, Camellia, Elderberry*

And don't forget to supplement with annuals! Grow from seed to save \$\$\$

## Resources:

King County easy guide for designing native gardens based on landscape type >

<https://green2.kingcounty.gov/gonative/Plan.aspx?Act=list>

Xerces Society monarch butterfly conservation guide > <https://xerces.org/publications/plant-lists/monarch-butterfly-nectar-plant-lists-for-conservation-plantings>