Growing Pollinator Gardens

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- **What is pollination?**
- **Why do we care?**
- **Who are the pollinators?**
- **What are the challenges?**
- **What makes a good pollinator garden?**

Pollination (aka Plant Sex) is the transfer of pollen from the anther (male) to the stigma (female) of the same or different flower.

- The pollen grain has to travel from the anther to the stigma to fertilize the ovule, which grows the seed, be it for a madrone or a lupine or a carrot.
- Other than those plants that are wind pollinated, the reproduction of all plant species depends on insects or animals to transfer their pollen.

Ninety percent of all plant species need pollination from an animal or insect to reproduce, and at least one out of 3 bites of the food we eat every day is because a flower was pollinated.

- Without pollination, we would not have blueberries, zucchini, coffee, or milk.
- Without pollination, we would not enjoy madrones, lupines, zinnias, or sunflowers.
- Without pollination, there would be few birds, fish, and other wildlife

Eat Food? Thank a Pollinator!

Oregon's Pollinators

- **Honey Bees**
  One bee makes 1/12 tsp of honey in her lifetime!
  A "super-organism" (the hive is greater than the sum of individual bees)

- **Solitary Bees**
  500+ species in Oregon
  Most species cannot sting

- **Bumble Bees**
  ~ 30 species in NW
  One, if not two, extinct species in Oregon

- **Butterflies**
  ~125 species in Oregon; nectar only
  Monarchs need milkweed!

- **Moths**
  Active at dusk or dawn or at night
  Plant a night garden?

- **Flies**
  Some looks like a bee
  Many are predators or parasitoids in larval stage and will eat aphids and other pests!

- **Beetles**
  Many are predators of aphids, mealybugs and other pests

- **Hummingbirds**
  Rufous and Anna's (year round)

Challenges:
- Development / loss of habitat
- Pesticide usage has increased - crops, lawns, and mosquitos
- Pesticide range has increased - even on wildflowers
- In-breeding and imports
- Invasive species (plant and animal)
- Diseases and parasites
- Light pollution at night
- Climate change

Pollinators Need
- Food: Trees, shrubs, perennial plants with pollinator-friendly flowers, preferably native, and lowers blooming from early spring through late fall
- Shelter: Undisturbed areas, including plant stems and stalks, fallen leaves, dead wood, bare ground in and around rocks, for nesting and overwintering
- Water: Shallow water sources or mud for drinking or for nest-building material
- Pesticide-free Garden: Many pollinators live only weeks - pesticides, even some organic ones, can impact the health of the pollinator population in your landscape

Notes:
- Native plants require less maintenance, fertilizers, and water and support species-rich communities of native pollinators, birds, and insects
- Leave the Leaves! Butterfly chrysalis and other beneficial insects overwinter in leaf litter
- Attract a variety of pollinators with a variety of flower shapes, colors, and scents