

U.S. Fish & Wildlife Service

# Attracting Pollinators to Your Garden



# Why are Pollinators Important?

- Pollinators are nearly as important as sunlight, soil and water to the reproductive success of over 75% of the world's flowering plants.
- They are crucial to the production of most fruits, nuts, and berries on which people and wildlife depend.
- Over 150 food crops in the United States depend on pollinators, including blueberries, apples, oranges, squash, tomatoes and almonds.



*Blue Berries*



*Sunflower Seeds*



*Wild Strawberries*



*Wild Cherries*



*Carolina Rose*



*Elderberry*



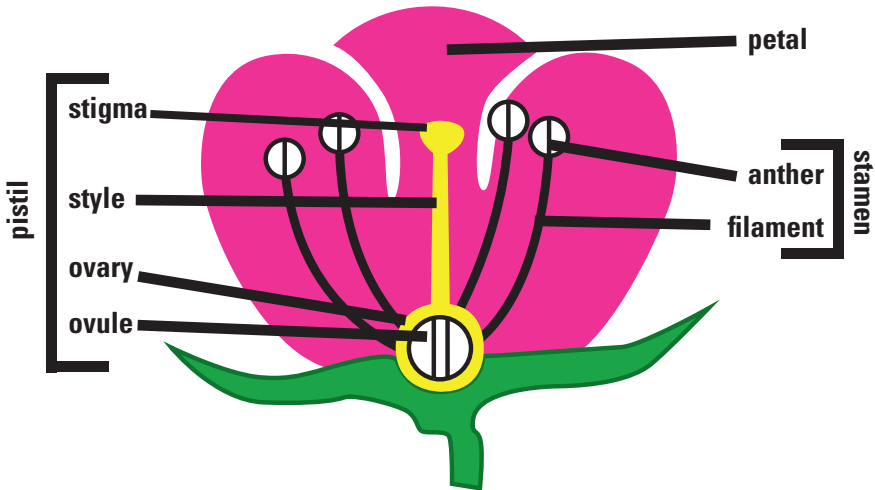
*Thistle Seeds*

# What is Pollination?

Pollination occurs when pollen grains from a flower's male parts (anthers) are moved to the female part (stigma) of the same species. Once on the stigma, the pollen grain grows a tube that runs down the style to the ovary, where fertilization occurs, producing seeds.

Most plants depend on pollinators to move the pollen from one flower to the next, while others rely on wind or water to move pollen.

Plants produce nectar to attract pollinators. As the pollinator moves from flower to flower collecting nectar, they are also moving pollen from flower to flower. Certain fruits and seeds will not be produced if their flowers are not pollinated.



*Worldwide there are more than 100,000 different animal species that pollinate plants. Insects are the most common pollinators, but as many as 1,500 species of vertebrates also help pollinate plants.*

## A Good Pollinator:

- *Is highly mobile and can travel from flower to flower. Moving pollen from flowers on one plant to another plant (rather than on the same plant) is called cross-pollination. Plants resulting from cross-pollination have greater genetic diversity and are more capable of withstanding environmental change.*
- *Has hairs, scales or feathers. Pollen grains from one flower get caught in the hairs, scales, and feathers then are brushed off on another flower as the pollinator moves from plant to plant collecting nectar.*
- *Has specialized mouth parts for collecting nectar from the plants it visits.*

# Meet the Pollinators

*Trumpet honeysuckle*



*Ruby throated hummingbird*

Hummingbirds are attracted to scarlet, orange, red or white tubular-shaped flowers with no distinct odors.



*Lesser long-nosed bat*

*Saguaro cactus*

Bats are attracted to dull white, green or purple flowers that emit strong, musty odors at night.



*Bumble bee*

*Raspberry*

Bees are attracted to bright white, yellow or blue flowers and flowers with contrasting ultraviolet patterns that have fresh, mild or pleasant odors.

*Hover fly  
(flower fly)*



*Daisy*

Flies are attracted to green, white or cream flowers with little odor or dark brown and purple flowers that have putrid odors.

*Monarch butterfly*



*Butterfly  
milkweed*

Butterflies are attracted to bright red and purple flowers with a faint but fresh odor.



*Hummingbird  
moth*

*Dense  
blazing  
star*

The hummingbird moth is active during the day however most moths are active at night and are attracted to pale red, purple, pink or white flowers that emit a strong, sweet odor at night.



*Soldier beetle*

*American  
black  
elderberry*

Beetles are attracted to white or green flowers with odors ranging from none to strongly fruity or foul.

## *Pollinators in Peril!*

*Pollinator populations are declining. The most probable causes include:*

- *Habitat loss, fragmentation and degradation (including the introduction and spread of invasive plant species)*
- *Misuse of pesticides*
- *Disease, including parasites carried to the U.S. on introduced species*

# What You Can Do for Pollinators

*Plant a garden using native flowering plants:*

- Choose a variety of colors and shapes that will attract a variety of pollinators
- Choose plants that flower at different times providing nectar and pollen sources throughout the growing season.
- Plant in clumps rather than single plants to better attract pollinators

**For more information:** <http://pollinator.org/guides.htm>



## *Provide habitat for nesting and egg-laying, such as:*

Shrubs, tall grasses, and low-growing plants

- Patches of fallen branches and k
- Small patches of bare ground
- Bee nesting block



**For more information:** <http://www.fws.gov/pollinators/PollinatorPages/YourHelp.html#bee>

## *Avoid or limit pesticide use:*

- For natural pest control provide a diverse garden habitat with a variety of plant sizes, heights, and types to encourage beneficial insects



- Expect and accept a little bit of pest activity
- Try removing pests by hand (wearing garden gloves)
- If you must use a pesticide, choose one that is the least toxic to non-pest species, does not persist on vegetation, and apply it in the evening when most pollinators are not as active

**For more information:** <http://www.fws.gov/pollinators/PollinatorPages/YourHelp.html#pesticide>



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