WORCESTER GARDEN CLUB

A Guide to Pollination

FAST FACTS FOR GARDENERS

What is pollination?

- Pollination occurs when pollen grains are moved between two flowers of the same species, or within a single flower, by wind or animals that are pollinators. Successful pollination, which may require visits by multiple pollinators to a single flower, results in healthy fruit and fertile seeds, allowing plants to reproduce. Without pollinators, we simply wouldn't have many crops!
- About 75% of all flowering plants rely on animal pollinators and over 200,000 species of animals act as pollinators. Of those, about 1,000 are hummingbirds, bats, and small mammals. The rest are insects such as beetles, bees, ants, wasps, butterflies, and moths.

Why are pollinators important to us?

- Worldwide, approximately 1,000 plants grown for food, beverages, fibers, spices, and medicines need to be pollinated by animals in order to produce the goods on which we depend.
- Foods and beverages produced with the help of pollinators include blueberries, chocolate, coffee, melons, peaches, pumpkins, vanilla, and almonds. Plants that depend on a single pollinator species, and likewise, pollinators that depend on a single type of plant for food are interdependent. If one disappears, so will the other.

What about bees that sting? What about allergies?

- Most species of bees don't sting. Although all female bees are physically capable of stinging, most bee species native to the U.S. are "solitary bees," that is, not living in colonies and don't sting unless they are physically threatened or injured. Only honey bees are defensive and may chase someone who disturbs their hive.

- It is wise, though, to avoid disturbing any bee or insect nest. For instance, if you spot an underground nest of ground-nesting bees, you might want to mark it with a stick so that it can be easily avoided.
- Some people are allergic to pollen of various flowering trees, plants and grasses, but not to all pollen. A common misunderstanding is that hay fever is caused by goldenrod pollen. It isn't! Ragweed is the main offender and should be avoided.

BLOOM PERIODS FOR THE EASTERN BROADLEAF FOREST, OCEANIC PROVINCE

The following chart lists plants and the time they are in bloom throughout the growing seasons. Choose a variety of flower colors and make sure something is blooming at all times! Note for all charts: When more than one species of the same genus is useful, the genus name is followed by "spp."

Botanical Name	Common Name	March	April	May	June	July	August	Sept	October
Trees and Shrubs									
Acer spp.	maple	red, greenish yellow	red, greenish yellow						
Amelanchier spp.	serviceberry	white	white						
Salix spp.	willow	yellow green	yellow green	yellow green	yellow green				
Sassafras albidum	sassafras		yellow green	yellow green					
Cercis canadensis	eastern redbud		pink/lav	pink/lav					
Arctosraphylos uva-ursi	bearberry		white tinged w/ pink	white tingedw/ pink					
Celtis ocidentalis	common hackberry		yellow green	yellow green					
Vaccinium spp.	blueberry		white to pink	white to pink					
Sambucas spp	elderberry			creamy white	creamy white	creamy white			
Rosa spp.	rose (wild types)			pale pink	pale pink	pale pink	pale pink		
Ceanothus americanis	New Jersey tea			white	white	white	white	white	
Oxydendrum arboreum	sourwood				white	white			
Cephalanthus occidentalis	buttonbush					creamy white	creamy white		
Rhus copallinum	dwarf sumac					yellow green	yellow green	yellow green	
Perennial Flowers									
Slvis spp	sage		violet white,	violet white,	violet white,				
Viola spp.	violets		yellow, deep blue, purple	yellow, deep blue, purple	yellow, deep blue, purple				

Botanical Name	Common Name	March	April	May	June	July	August	Sept	October
Perennial Flowers									
Lupinus perennis	lupine sundail lupine		blue-purple	blue-purple					
Geranum spp	cranesbills		lav/pink	lav/pink					
Phlox spp.	phlox, wild sweet WIilliam		rose, pink, purple, blue, violet, white	rose, pink, purple, blue, violet, white	rose, pink, purple, blue, violet, white	rose, pink, purple, blue, violet, white	rose, pink, purple, blue, violet, white	rose, pink, purple, blue, violet , white	rose, pink, purple, blue, violet, white
Aquilegia canadensis	wild columbine		red & yellow	red & yellow					
Baptisia australis	flase blue indigo			blue, purple	blue, purple				
Asclepias syriaca	common milkweed			pale purple	pale purple	pale purple	pale purple		
Asclepias tuberosa	milkweed, butterfly weed			yellow to orange	yellow to orange				
Rubus spp.	blackberry			white or rose purple	white or rose purple	white or rosepurple			
Echinacea purpurea	purple coneflower				rose pink	rose pink	rose pink		
Asclepias incarnata	swamp milkweed				pink to reddish	pink to reddish	pink to reddish	pink to reddish	
Actaea racemosa var. racemosa	black cohosh, fairy candles				white	white	white		
Aster spp.	sunflower. black-eyed susan, goldenrod, sneezeweed				yellow	yellow	yellow	yellow	yellow
Symphyotrichum spp.	aster					white, blue, violet	white, blue, violet	white, blue, violet	white, blue violet
Chelone glabra	white turtlehead					white	white	white	white
Monarda spp.	bee-balm. wild bergamot, horsemint				red, pink, purple	red, pink, purple	red, pink, purple	red, pink, purple	red, pink, purple
Eupatorium spp	Joe-Pye weed, boneset, Thoroughwort					pink, purple, white	pink, purple, white	pink, purple, white	pink, purple, white
Liatris spp.	blazing star					lav to rose purple	lav to rose purple	lav to rose purple	lav to rose purple
Lobelia spp.	cardinal Flower					red or blue violet	red or blue violet	red or blue violet	red or blue violet
Vines									
Campsis radicans	trumpet vine or creeper				orange-red	orange-red	orange-red	orange-red	

Ways You Can Help!

June 20-26, 2016
pollinator WEEK
www.pollinator.org

What everyone can do for pollinators:

- Watch for pollinators. Get connected with nature. Take a walk, experience the landscape and look for pollinators midday in sunny, planted areas.
- Reduce your impact. Reduce or eliminate your pesticide use, increase green spaces, and minimize urbanization. Pollution and climate change affect pollinators, too!
- Plant for pollinators. Create pollinator-friendly habitat with native flowering plants that supply pollinators with nectar, pollen, and homes.

What you can do for pollinators:

- Create a pollinator-friendly garden habitat in just a few simple steps.
- Design your garden so that there is a continuous succession of plants flowering from spring through fall. Check for the species or cultivars best suited to your area and gradually replace lawn grass with flower beds.
- Plant native to your region using plants that provide nectar for adults plus food for insect larvae, such as milkweed for monarchs. If you do use non-native plants, choose ones that don't spread easily, since these could become invasive.
- Select old-fashioned varieties of flowers whenever possible because breeding has caused some modern blooms to lose their fragrance and/or the nectar/pollen needed to attract and feed pollinators.
- Install 'houses' for bats and native bees. For example, use wood blocks with holes or small open patches of mud. As little as 12” across is sufficient for some bees.
- Avoid pesticides, even so-called "natural" ones such as Bacillus thuringiensis (Bt). If you must use them, use the most selective and least toxic ones and apply them at night when most pollinators aren't active.
- Supply water for all wildlife. A dripping faucet or a suspended milk carton with a pinhole in the bottom is sufficient for some insects. Other wildlife need a small container of water.
- Provide water for butterflies without letting it become a mosquito breeding area. Refill containers daily or bury a shallow plant saucer to its rim in a sunny area, fill it with coarse pine bark or stones and fill to overflowing with water.
- Share fun facts, such as: a tiny fly (a “midge”) no bigger than a pinhead is responsible for the world's supply of chocolate; or one out of every three mouthfuls of food we eat is delivered to us by pollinators.