## **Planting for Seasonal Diversity**

With arrival of spring, our thoughts turn to gardens and flowers. When choosing plants, it is important to: 1) select plants with flowers diverse in form, size, shape, and color to provide for many different pollinators and 2) choose plants for continuous bloom throughout the growing season, spring through fall.



**Pollinators' anatomy dictates their need for plant diversity.** Physically butterflies, bees and hummingbirds are quite unique and therefore, their plant choices will be different. Red-throated hummingbirds have long tongues for sipping nectar from deep-throated flowers like trumpet honeysuckle and cardinal flower. A flower's red color is a signal of high energy fuel, but richness of nectar is what keeps the hummers coming back.

Butterflies are attracted to masses of color and lots of nectar, preferring flowers offering a sturdy landing platform. However, butterflies could not exist if not for the plants that feed their caterpillars. All of our butterfly species require a specific 'host plant" or related plants for their caterpillars to grow and transform into adult butterflies. Planting both nectar plants for adults and food plants for caterpillars is most effective for attracting butterflies. Native sunflower, aster, and milkweed check both boxes.

Bees are the best pollinators. Unlike incidental pollinators and those seeking only nectar, (beetles, flies), bees are actively collecting pollen to provision their brood cells. Their pollen-covered bodies regularly brush against flower parts resulting in cross-pollination. Attracted to blue, white and yellow flowers, a bee's choice of flower also depends on her size and method of extracting nectar and gathering pollen, i.e. long vs short tongues and ability to buzz pollinate. Bees range in size from tiny sweat bee to large fuzzy bumble bee. Most are somewhere in between.

**Continuous bloom from spring through fall is necessary** because different bee species emerge at different times during the growing season. They need nectar-rich flowers for a ready source of energy and protein-rich pollen to provide for their young, the next generation of pollinators. Most bees are solitary in nature and only live on average about two weeks. Many are specialists, meaning they only collect pollen from a single plant or related plant. Young bees emerge in time for a plant's bloom so providing 3-season bloom ensures each species has the food they need for continued survival.



## Spring blooming plants are especially important to pollinators.

Early-emerging bees rely on spring ephemerals that flower before trees' leaf out to shade the understory. Bumble bee queens, having survived winter hibernation, are looking for energy in order to start their colony. **Dutchman's breeches**, spring beauty, trout lily and Virginia bluebells are a few of the many spring ephemerals that support pollinators. While blooms are fleeting and plants fade from view, their underground parts stay virile for return the following spring. Spring blooming shrubs and trees carry on to support pollinators. Spicebush, serviceberry, crabapple, flowering dogwood, eastern redbud and more are attractive landscape additions.

By mid-summer, there is variety of native perennials in bloom. A rule of thumb, **"right plant for the right spot."** A plant's requirement for sun exposure and moisture is important. Native plants are best because once established, they require little or no maintenance. Pollinators do prefer flowers of kind planted in clusters or drifts since foraging expends energy. Clustering also makes it easier for native bees who visit just one plant species per foraging trip.



**Fall plants are critical to pollinators.** By late summer many flowers have faded away. Fall-blooming **asters and goldenrod** are invaluable for supporting pollinators. These plants are critical for fueling migration for Monarch and American Lady butterflies and for ensuring that bumble bee queens survive winter hibernation. Allowing their stems to persist over winter preserves many overwintering bees and beneficial insects. But the time is now for increasing plant diversity throughout the growing season.

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