

(revision date:10/12/2018)

## ***Pollinators: Pollinators***

*Use Integrated Pest Management (IPM) for successful plant problem management.*

### ***Biology***

Many of the predators and parasitoids described in the other factsheets also play a secondary beneficial role in the garden—they help in flower pollination. As adults, hover flies, predatory bugs, lady beetles, lacewings, predatory wasps, predatory flies and many others all feed on nectar or pollen to a greater or lesser extent. Similarly, adult parasitoids like tachinid flies and parasitic wasps fuel themselves by feeding on sugary nectar. In the process of nectar and pollen feeding, all of these pest-regulating insects also provide pollination services.

Non-carnivorous insects also play a role in flower pollination. The most important group of pollinators is of course the bees, both the introduced honey bee and the hundreds of species of native bees that occur in the Pacific Northwest. Native bees are receiving renewed interest as introduced honey bee populations battle adversity. Gardens stocked with bee-attractive flowering plants can play an important role in encouraging and conserving native bee species.

Butterflies are a group of pollinators with immense appeal, so much so that some gardeners design their gardens as ‘butterfly gardens’, planting flowers and caterpillar host plants aimed at attracting and retaining some of the Pacific Northwest’s 160 or so butterfly species. The only butterfly caterpillar that can cause plant damage is that of the cabbage white butterfly (*Pieris rapae*), which, as its name suggests feeds on cabbages and related crucifers. The species of butterfly that can be attracted to a garden or landscape depends on geographic location with inland gardens east of the Cascades generally having a wider variety to choose from. In many eastern Washington towns growing the native chokecherry or ornamental green ash along with butterfly-attractive flowering plants like coneflower, columbine, asters and blazing star, virtually assures garden residence of the largest butterfly in western North America, the two-tailed tiger swallowtail (*Papilio multicaudata*). Coastal gardeners have a good chance of seeing the closely related western tiger swallowtail (*Papilio rutulus*) if they provide maples, willows or cottonwoods for the caterpillars and lilac, columbine, phlox etc for the adults to feed on.

### **Prey or Pest Targeted**

~ Refer to the predator and parasitoid factsheets to learn more about specific pollinators that have a primary role as a natural enemy.

### **Attracting and Keeping Beneficial Insects in Your Yard**

- ~ Avoid regular use of synthetic, broad-spectrum pesticides. Infrequent use of certain narrow-spectrum pesticides is more compatible with some beneficials but generally the less chemical inputs there are, the greater and more diverse the beneficial insect community will be. Extensive lawns are also not conducive to attracting and retaining a diversity of beneficial insects, mites and spiders. Minimize lawn areas and maximize shrub and bush plantings. Many beneficials reside naturally in riparian and other ‘natural’ areas near to many back yards. Natural dispersion from these refuges ensures that some beneficials will visit back yards but they will not stay unless food, host and shelter resources are available. Native plants have closer affinities with native insects and therefore provide most of these resources. A garden with a good diversity of local native flora in and around back yards, will improve the abundance and diversity of local, beneficial arthropods. Native flora also provides natural overwintering sites for many beneficial insects and it is useful to leave at least a small area of native vegetation undisturbed during fall and winter.
- ~ Some kinds of beneficial insects (e.g. lady beetles, lacewings, predatory mites) are available for purchase from commercial suppliers. However, benefits from introducing these beneficials are usually limited and short-lived. Upon release, commercially obtained lady beetles and lacewings often disperse and may rapidly leave your backyard despite the presence of prey and suitable nectar resources. Generally, it is more effective and sustainable to create a garden habitat that will be colonized by beneficials naturally.

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*Images*



~ Caption: A two-tailed tiger swallowtail  
Butterfly (*Papilio multicaudata*) visiting  
columbine in eastern WA  
~ Photo by: D.G. James