

GARDENS FOR HABITAT

A habitat garden is designed for beauty and to provide habitat for native wildlife, particularly for pollinators and other beneficial insects. Insects are essential to life on earth. They ensure the regeneration of flowering plants through pollination, support plants by keeping soil healthy, and they are a food source for both terrestrial and aquatic wildlife. Pollinators also support many of the crops we depend upon for food, such as nuts, fruits, and vegetables.

Unfortunately, insect populations are declining worldwide due to loss of habitat from development, excessive pesticide use, and the uncontrolled spread of invasive plants. Other factors, such as light pollution, forest fragmentation, and climate changes are also contributing to the loss.

Gardening and managing the land in ways that sustain insects, birds, and other forms of wildlife is an immediate and direct way to help support not only native insects and wildlife, but life on earth. At the same time, gardens and well-managed landscapes makes spaces more attractive and pleasant for humans to inhabit!

Design Basics for a Habitat Garden

Designing for habitat means thinking about more than just pretty flowers. It requires selecting and maintaining plants so that the garden supports the full lifecycle of insects, from the larvae stage (i.e., caterpillars) to maturity, and provides a variety of material for nesting (foliage, twigs, logs, access to soil) so insects can reproduce. All parts of plants through various stages of their lifecycle, including dead plant matter, have habitat value. A garden that is designed to be highly manicured and maintained with mulch, pesticides, and herbicides may be visually appealing in that it is neat and clean, but it offers little in the way of habitat. Strategies for creating habitat include:

- ♣ **Naturalized Aesthetic.** A more naturalized aesthetic works best when creating habitat. And it means less work! A naturalized look replicates what you might see in a meadow or woodland edge. A garden might start with a formal layout, but as seeds are dispersed by wind or moved by ants, the pattern of plants will change over time. Some plants may die or be eaten, but new seedlings will sprout to replace them. Allowing nature, with a bit of our help, to shape the design will be what works best for the plants.
- ♣ **Native Plants.** Plants that are native to the local area (state or region) are important for supporting native insects and wildlife. However, urban conditions may require the use of plants that are not native or plants that are cultivars of native plants and that are a better fit for the site conditions. They may be more compact or more resistant to foraging by rabbits or deer. Aiming for as many native species as possible is best but ultimately, having desirable plants that survive the challenges of urban conditions is more important.



Some insects are specialists and depend on specific plants to survive. Monarchs, for example, will only lay eggs on milkweed and monarch caterpillars will only feed on milkweed.



Goldenrods support a wide variety of pollinators and other insects. It is a common misperception that goldenrod causes allergies. The real culprits are ragweed and mugwort.

- ♣ **Diversity.** Using a wide variety of plant species is important. Diversity allows for a variety of food and types of nesting materials, thereby supporting a diverse array of wildlife species. A wide variety of plant types (i.e., evergreen, deciduous, trees, shrubs, grasses, flowers) and mixing sizes so that you have layers of plants will also better protect the soil throughout the seasons. A wide diversity also protects the garden from large scale losses due to insect pests, diseases, or weather conditions.
- ♣ **Dead Plants Matter.** Dead stems, twigs, and leaves provide shelter and nesting habitat and are as important as living plants. Without nesting opportunity, insects can't reproduce. Dead plant material also protects the soil, supplies a source of organic matter to be converted into nutrients, and retains moisture. Allow dead plant material to be part of your garden design.

Maintaining for Habitat

Maintaining the garden in a more naturalized way will provide more habitat, require less work, and cost less than a more traditional approach. Allowing plants to reseed and mix in unplanned ways creates a more complex and diverse ecosystem which provides more habitat. Allowing dead foliage, twigs, and logs to remain in the garden provides places for shelter and nesting. Generally, the following care can be expected:

- ♣ **Weeding.** The primary work will be weed management, particularly while plants are in the early stages of development and until they fill in the space. This usually takes about three years. Weeding will require that you become familiar with your plants and learn to distinguish between desirable plants and weeds. If plants die, leaving open spaces, it's best to fill those gaps with new plants or divisions from other plants in the garden to prevent weeds from moving into that space. Other than many hands, the best help with weeding is to have a variety of good tools.
- ♣ **Mulch.** Mulching immediately after planting reduces weeds while plants establish. However, reapplying bark mulch every year can discourage vegetative growth and prevent desirable plant seeds from germinating. Bark mulch will also discourage ground nesting bees. Straw mulch is often a better option for perennial beds. Straw allows desirable plants to re-seed and is easier to apply. For the long term, perennials, grasses, and other low groundcovers will spread quickly, both vegetatively and by seed, to fill in the gaps and, with some assistance, out-compete weeds. Groundcovers also provide habitat and better soil protection and are cheaper than annual mulching.
- ♣ **Watering.** Trees and shrubs will generally require watering 2-3 years after planting. Perennials grow quickly and, unless there are drought conditions, typically don't require watering after the first year. If they do, perhaps they are not the right plants for your location or your soil.
- ♣ **Fertilizers.** If you pick the right plants for your soil and site conditions and allow the organic matter (leaves, twigs, dead foliage) to remain on site (or some portion of it), you don't need to add fertilizer. Insects and fungi will slowly break that material down, and in the process, release nutrients for plants to absorb.



Carpenter bees, often viewed only as pests, are important pollinators of open-faced flowers. They are solitary bees that excavate nest tunnels in wood. Males, which can be distinguished by white facial markings, may display aggressive behavior when defending their territory, but they cannot sting. Like other bees, females are unlikely to sting unless provoked. Rather than resort to pesticides, use techniques to prevent the bees from tunneling into the wood in the first place.