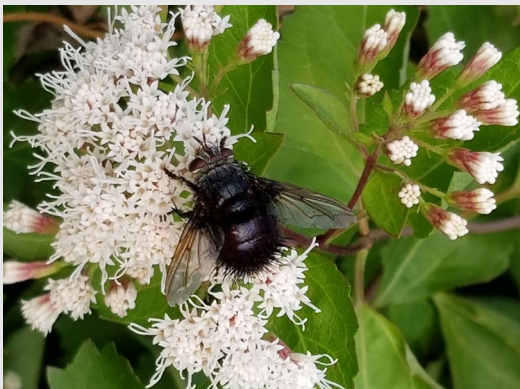


CREATING AN INSECT & POLLINATOR FRIENDLY GARDEN

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Plants (food)

- ▶ Provide pollen, nectar, and host plants, including trees and grasses, from spring through fall. Plan for a succession of bloom times using native plants.
- ▶ Plant “clumps” of same-flowering plants. Design the area with multiple types of plants to provide a variety of colors and flower shapes for maximum attraction.
- ▶ Avoid modern hybrids, especially those with “doubled” flowers. These plants may not have pollen, nectar, or fragrance for pollinators.
- ▶ Include larval host plants in the landscape for caterpillars, which turn into butterflies and moths. However, be aware that insects will eat them.
- ▶ Ensure that plants are insecticide-free.



Insect mouthparts determine what types of flowers the insect feeds from:

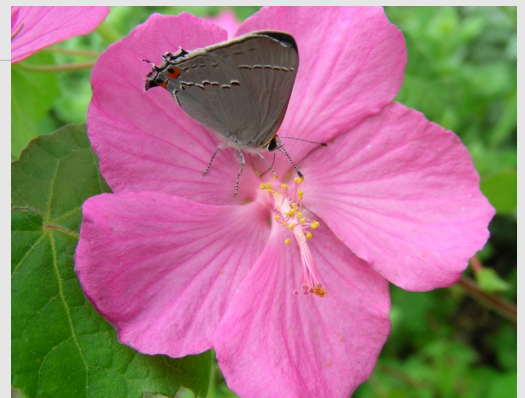
- ▶ **Tubular** – Butterflies and moths, some bees, and hummingbirds.
- ▶ **Ray/flat** – Beetles, bees, and flies. These can also serve as resting places for butterflies and moths.
- ▶ **Umbels** (flat-topped clusters of tiny funnel-shaped flowers) – Bees, flies, wasps, small butterflies and moths, and beetles.
- ▶ **Others** (funnel, whorled, bilabiate, and shallow bell shapes) – Bees, flies, wasps, and some beetles.

Host plants

- ▶ Essential for survival of certain butterfly and moth species
- ▶ Specific to individual species

Helpful resources are found at:

- ▶ <https://agrilifeextension.tamu.edu/solutions/butterfly-gardening/>
- ▶ www.wildflower.org/collections/
- ▶ <http://xerces.org/milkweed-seed-finder/>
- ▶ https://www.fs.fed.us/wildflowers/pollinators/documents/AttractingPollinatorsEasternUS_V1.pdf



Water

Provide easy access to water for insects without the chance of drowning.

- ▶ Water dishes
- ▶ Puddling dishes
- ▶ Drippers
- ▶ Mud baths



- ▶ Create a damp salt lick for bees and butterflies. Use a drip hose or irrigation line, or place a birdbath or dish on the ground. Add soil, a bit of sea salt or wood ashes, and water to make the area damp.
- ▶ Add a nectar source with a hummingbird feeder, filling it with 4 parts water to 1 part sugar. Clean the feeder regularly to avoid mold.
- ▶ Insects need resources other than nectar—some like foodstuffs such as moist animal droppings, urine, and rotting fruits. Add overripe bananas, citrus, or other fruits to a suet feeder and hang it in a tree.
- ▶ Place a sponge in a dish of water that is lightly salted with sea salt to see which insects come to investigate.



Shelter

- ▶ Plant in layers by mature height. (i.e., canopy such as trees, lower canopy, shrubs, grasses, and herbaceous plants such as herbs, vegetables, and flowers)
- ▶ Leave a little “mess”—logs, snags, twig bundles, and leaves can create nesting areas for native bees.
- ▶ Place rocks or logs for basking areas.
- ▶ Leave bare (unmulched) soil for ground-nesting native bees.
- ▶ Add handmade or “artificial” habitats. (NOTE: These should be sheltered and east- to southeast-facing.)

