Insects that eat other insects (beneficials) help us in the garden by keeping the numbers of pest insects down. If we use pesticides routinely we can not only kill damaging insects, but also the insects that could control them. Beneficial insects need to have certain plants for various stages of their life-cycle. We can work with nature and attract more beneficial insects by including some of the plants listed below in our gardens.

**BENEFICIAL CONTROLS**

- **BRACONID WASP**
  - Larvae parasitize aphids, hornworms, cutworms, imported cabbageworms, beetle larvae, gypsy moths, codling moths, tent caterpillar

- **ICHNEUMON WASP**
  - Larvae parasitize many caterpillars, borers, wood-boring larvae, spiders

- **LACEWING (PREDATORY LARVAE)**
  - Aphids, thrips, whiteflies, leafhopper nymphs, corn earworms, mites, scales, mealybugs

- **LADYBUG (PREDATORY LARVAE)**
  - Aphids, rootworms, whiteflies, weevils, cinch bugs, Colorado potato beetle, mealy bugs, scales, spider mites

- **PRAYING MANTIS**
  - Aphids, bees, beetles, true bugs, butterflies, caterpillars, leafhoppers, flies, wasps (anything smaller or slower than itself)

- **SYRPHID FLY (OR HOVER FLY)**
  - Prey on aphids, mealybugs, leaf hoppers, scales

- **TACHINID FLY**
  - Internal parasites of the larvae/nymphs of sawflies, Japanese beetles, Mexican bean beetles, corn borers, gypsy moths, grasshoppers, cutworms

- **TRICHOGAMMA WASP**
  - Parasitizes eggs/larvae of many caterpillar pests

**PREFERRED PLANT(S)**

- An early spring to fall wildflower assortment; Plants with small, shallow flowers such as those in the Asteraceae (chrysanthemum, daisy, etc.) and Umbelliferae (dill, fennel, yarrow, etc.)

- See **Braconid wasp**

- See **Ladybug**

- See **Braconid wasp**

**BIRDS**

Backyard feeding stations are especially appreciated in winter by feathered guests as well as those of us who watch them. For year round nourishment of avian residents in more natural settings we can provide plant-based feeding stations that supply seeds, berries, and nuts. Birds flocking to such areas reward our efforts with a natural insect control service. While some birds are insect-eaters as adults, virtually all birds feed insects to their young.

Healthy birds need to avoid chemical pesticides as do other wildlife and ourselves.

**BIRD PREFERRED PLANT(S)**

- **GOLDFINCH**
  - Coneflower, black-eyed Susan, thistle

- **RUBY-THROATED HUMMINGBIRD**
  - Trumpet vine, Indian paintbrush, blazing star (Liatris sp.), cardinal flower (Lobelia cardinalis), Penstemon sp.

- **CEDAR WAXWING**
  - Elderberry, hackberry, dogwood, holly, red cedar, wild cherry, Viburnum spp.

- **EASTERN BLUEBIRD**
  - Dogwood, eastern red cedar, holly, pokeweed

- **EASTERN PHOEBE**
  - Elderberry, hackberry, dogwood, holly, red cedar, wild cherry, Viburnum spp.

- **MOCKINGBIRD**
  - Wild cherry, mulberry, elderberry, hackberry, crab apple, American beautyberry, dogwood, grape, raspberry, blackberry, fig, winterberry

- **NORTHERN CARDINAL**
  - Wild grape, dogwood, blackberry, pokeweed, mulberry, eastern red cedar, sumac, hackberry, sunflower, poison ivy, Virginia creeper

- **RED-EYED VIREO**
  - Virginia creeper, spicebush, elderberry, blackberry, dogwood

**NOTE:** Toxic chemical pesticides in the habitats of bees, butterflies, other beneficial insects and birds are hazardous to their survival. These pesticides may come from applications on site, drift from near-lying areas or from treatments of plants and seeds while in nurseries prior to purchase. For a contaminant-free garden we need to install only plants and seeds that have NOT been treated with pesticides. It is especially important to avoid the systemic neonicotinoid insecticides such as imidacloprid. Why? These persistent chemicals travel throughout the plant, remain hazardous to desirable organisms for extended periods and can result in loss of valuable wildlife over time. Contact RCC for more information.
Butterflies

Butterflies are more than a delightful presence on warm summer days. As pollinators and part of the food chain, they also contribute to a garden’s health and biodiversity. Essential nectar is supplied to the winged adults by blossoms; however, food sources for their larval stages are critically important as well. Females lay eggs only on host plants able to provide suitable food for their young. Toxic chemical insecticides can kill these desirable insects and, herbicides the host plants essential for their survival.

**BUTTERFLY LARVAL HOST(S) PREFERRED NECTAR PLANTS**

**MONARCH**
Milkweed (Asclepias spp.)
Many different flowers, esp. goldenrod

**EASTERN TIGER SWALLOWTAIL**
Yellow poplar, black willow, black cherry, red maple,
American hornbeam, spicebush, American elm, sassafras
Milkweed, thistle, NY ironweed, red clover, mint

**EASTERN BLACK SWALLOWTAIL**
Umbelliferae including dill, fennel, Queen Anne’s lace, parsley
Red clover, milkweed, thistle, phlox, coneflower, joe-pye weed

**GREAT SPANGLING FRUITLARY**
Violas (Viola spp)
Milkweed, thistle, ironweed, dogbane, mountain laurel, verbena, vetch, bergamot, red clover, joe-pye weed, coneflower

**BUCKEYE**
Snapdragon (Antirrhinum), toadflax (Linaria), plantains, Acanthus family including ruellia
Aster, chicory, knapweed, tickseed sunflower, dogbane, peppermint, Indian blanket, lantana, cosmos, clover

**RED ADAMIRAL**
Nettles (Urtica spp.), hops
Milkweed, aster, alfalfa, coneflower

**BALTIMORE CHECKERSPOOT**
White turtlehead
Lobelia, coneflower, Indian blanket

**GRAY HAIRSTREAK**
Hibiscus, hollyhock, passion flower, Milkweeds goldenrod, dogbane, heath aster, mallow, white clover

Bees (Native)

Most flowering plants need pollinators in order to produce fruit or seeds. Native bees are some of the most efficient pollinators (and many are not aggressive to humans). They come to our gardens in search of pollen and nectar for their own nourishment and to feed their larvae. If we provide appropriate plants as well as nesting sites the bees’ pollinating services will result in higher garden yields. Many insecticides can harm bees and/or their larvae and thus should be avoided.

**BEE**

**PREFERRED PLANT(S)**

**SHELTER/NEST**

**BUMBLEBEE**

**BEE**

**PREFERRED PLANT(S)**
Flowers with deep corollas and hidden nectar spurs, as in larkspur, delphinium, monkshood, jewelweed, bergamot, columbine, penstemon, snapdragon

**BEE**

**PREFERRED PLANT(S)**
Early pollinator- Redbud, apple, willow, brambles, maple, geranium, clover

**BEE**

**PREFERRED PLANT(S)**
Pre-existing holes (6 in. deep) in logs, stumps; hollow reeds

**BEE**

**PREFERRED PLANT(S)**
See below*

**BEE**

**PREFERRED PLANT(S)**
See below*

**BEE**

**PREFERRED PLANT(S)**

*Plants attractive to bees, in general: Penstemon, Monarda (beebalm), Gaillardia, Liatris (blazingstar), Solidago (goldenrod), Agastache, Veronia (ironweed), Eupatorium (joe-pye weed), Lobelia, Asclepias (milkweed), mountain mint, coneflower, Helinium (sneezeweed), Baptisia, (wild indigo), wild geranium, clover

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