

Plant it and they will come....

A GREEN MANTLE™ GUIDE

BENEFICIAL INSECTS



LADYBUG LARVAE

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	PREFERRED PLANT(S)
BRACONID WASP	Larvae parasitize aphids, hornworms, cutworms, imported cabbageworms, beetle larvae, gypsy moths, codling moths, tent caterpillar	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.)
ICHNEUMON WASP	Larvae parasitize many caterpillars, borers, wood-boring larvae, spiders	See Braconid wasp
LACEWING (PREDATORY LARVAE)	Aphids, thrips, whiteflies, leafhopper nymphs, corn earworms, mites, scales, mealybugs	Angelica, goldenrod, Queen Anne's lace, red cosmos, tansy
LADYBUG (PREDATORY LARVAE)	Aphids, rootworms, whiteflies, weevils, cinch bugs, Colorado potato beetle, mealy bugs, scales, spider mites	Cosmos, raspberries, other brambles
PRAYING MANTIS	Aphids, bees, beetles, true bugs, butterflies, caterpillars, leafhoppers, flies, wasps (anything smaller or slower than itself)	See Ladybug
SYRPHID FLY (OR HOVER FLY)	Prey on aphids, mealybugs, leaf hoppers, scales	Spearmint, cosmos, baby blue eyes, Gloriosa daisies, marigolds
TACHINID FLY	Internal parasites of the larvae/nymphs of sawflies, Japanese beetles, Mexican bean beetles, corn borers, gypsy moths, grasshoppers, cutworms	Wild buckwheat
TRICHOGRAMMA WASP	Parasitizes eggs/larvae of many caterpillar pests	See Braconid wasp

BIRDS



RUBY-THROATED HUMMINGBIRD

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 neighboring 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.

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Butterflies



EASTERN TIGER SWALLOWTAIL

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 SPANGLED FRITILLARY	Violets (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 ADMIRAL	Nettles (Urtica spp.), hops	Milkweed, aster, alfalfa, coneflower
BALTIMORE CHECKERSPOT	White turtlehead	Lobelia, coneflower, Indian blanket
GRAY HAIRSTREAK	Hibiscus, hollyhock, passion flower, mallow, white clover	Milkweeds goldenrod, dogbane, heath aster

BEES (NATIVE)



BUMBLE BEE

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 (COLONIAL)	Flowers with deep corollas and hidden nectar spurs, as in larkspur, delphinium, monkshood, jewelweed, bergamot, columbine, penstemon, snapdragon	Brush piles, abandoned rodent burrows, grass tussocks
BLUE ORCHARD BEE (MASON BEE) (SOLITARY)	Early pollinator- Redbud, apple, willow, brambles, maple, geranium, clover	Pre-existing holes (6 in. deep) in logs, stumps; hollow reeds
CARPENTER BEE (SOLITARY)	See below*	Dead branches, firewood
SWEAT BEE (SOLITARY)	See below*	Bare ground (sandy, loamy soils)

***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, Helenium (sneezeweed), Baptisia, (wild indigo), wild geranium, clover



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