

Photo by: Johnny McClung © 2009

INDIANA WILDLIFE FEDERATION Common Sense Conservation Since 1938

Birds, butterflies, toads and other wildlife thrive in healthy environments. But without wild expanses, nature suffers.

Fortunately, you can make a difference! Start your own wildlife habitat today in your yard, at your school, and around your community. Designing for wildlife is easy with the support of the Indiana Wildlife Federation (IWF), a leader since 1938 in the protection and restoration of wildlife. IWF, an affiliate of the National Wildlife Federation, offers wildlife habitat certification programs for both backyards and public locations.

For assistance in creating your vibrant wild space, contact:
Indiana Wildlife Federation at 1-800-347-3445 or online at
www.indianawildlife.org.

THE NEEDS OF INDIANA WILDLIFE



Photo by: NPS

FOOD

When you plan a landscape for wildlife, carefully consider sources of food so that berries, fruit, and nuts ripen throughout the season. As an added benefit, native plants attract insects, an essential food source for wildlife. In return, birds, small mammals and amphibians attracted to your habitat control pesky insects such as mosquitoes. Even when dead and dying, plants provide food. For example, declining trees, kept safe with limited trimming, conceal preferred meals for woodpeckers and other birds. Under trees and shrubs, leaf litter and woody debris attract foraging wildlife such as robins and thrushes. Left standing until spring, dead stalks and flowers of herbaceous plants contribute valuable food in harsh weather. Although Indiana's native plants are the best source of food for local wildlife, supplements create a center of attraction. Tube, hopper, platform or other specialized feeders packed with treats appeal to a variety of birds, mammals and insects. Try seeds, suet, fruit, nuts, nectar and even grit and insects. With clever garden design and complementary feeders your ecosystem invites wildlife right to your doorstep.

WATER

Provide as many sources of water as you can. A birdbath is a good start, but additional water sources will attract more wildlife. Consider adding a wildlife pond or other ground level water source such as an artificial wetland or a rain garden. Water sources will require some maintenance. Birdbaths must be kept full and clean, and you will need to add fresh water frequently in the summer. In the winter, a heater can keep the water from freezing. Consider adding a pump to your pond, birdbath or other water feature. Circulating the water discourages mosquito breeding, and many birds find moving water more attractive.

SHELTER

Shelter for wildlife may be trees (particularly evergreens), shrubs, rock piles, brush piles, hollow logs, grassy areas, or artificial structures such as bird houses. Shelter provides protection from weather and predators. A good wildlife habitat will contain a variety of types of shelter at a variety of levels, such as ground cover, meadow grasses, shrubs, small trees, evergreens, and tall trees. Weed-free, insect-free lawns provide little or no benefit to wildlife. Consider changing all or part of your lawn area to wildlife habitat. Replace lawn grass with ground cover or meadow grasses. If you must keep some parts of your yard as lawn, avoid using herbicides or pesticides and let some “weedy” wildflowers, such as plantain, violets, and clover grow.

PLACES TO RAISE YOUNG

Ensure future generations of wildlife by providing suitable habitat for courtship and nesting. You may provide both natural and artificial nest sites. Natural sites include snags, dense shrubs, evergreens, rock piles, brush piles, ponds, and trees. Supplement these sites by adding birdhouses and nesting shelves in areas inaccessible to predators. Thoughtfully consider before using pesticides, remembering that they will not only eliminate the insect populations that are the primary source of food for many, but can harm or kill other species as well.



WILDLIFE FRIENDLY NATIVE PLANTS

Is your garden full of easy-to-grow plants from your home state? If so, you are helping to prevent the spread of invasive exotics and encourage healthy wildlife in Indiana. Lovely native species thrive here and help sustain the environment. They use less fertilizer and water, are hardy, and keep down pesky uninvited plants. Conserve your resources and garden with natives. Consider using the following common plants in your habitat:

TREES:

Evergreen:

Eastern Red Cedar,
Juniperus virginiana
Hemlock, *Tsuga canadensis*
White Pine, *Pinus strobus*

Deciduous:

Hackberry, *Celtis occidentalis*
Tulip Poplar, *Liriodendron tulipifera*
Shagbark Hickory, *Carya ovata*
Red Maple, *Acer rubrum*
Oaks, *Quercus* (all spp.)
Ash, White/Green, *Fraxinus*
Redbud, *Cercis canadensis*
Black Gum, *Nyssa sylvatica*
Walnut or Butternut, *Juglans*

SHRUBS:

Serviceberry, *Amelanchier*
New Jersey Tea, *Ceanothus*
Spicebush, *Lindera benzoin*
Ninebark, *Physocarpus opulifolius*
Sumac, *Rhus* spp.
Elderberry, *Sambucus canadensis*
Gray Dogwood, *Cornus racemosa*
Silky Dogwood, *Cornus amomum*
Virginia Sweetspire, *Itea virginica*
Winterberry Holly, *Ilex verticillata* *But-tonbush*, *Cephalanthus*
Coralberries, *Symphoricarpos*
Viburnums, *Viburnum* (most spp.)

VINES:

Virginia Creeper, *Parthenocissus*
Trumpet Creeper, *Campsis radicans*
Wooly Dutchman's Pipe *Aristolochia*

INVASIVE EXOTICS TO AVOID:

Purple loosestrife, *Lithrum*
Burning Bush, *Euonymus*
Highbush Cranberry, *Viburnum opulus* (don't confuse with native American Cranberrybush, *V. trilobum*)
Reed Canary Grass, *Phalaris*

Honeysuckle species including:

Japanese, *Lonicera japonica*
Amur, *L. maackii*
Tartarian, *L. tatarica*
Morrow, *L. morrowii*

POLLINATORS AND BENEFICIALS

Insects are adaptable, abundant and a very important component in our environment. Although insects can damage crops, buildings, and stored products, and some are carriers of diseases, the world would not exist as we know it without insects. They are an essential part of our food chain.



Beneficial insects can be defined as predators, parasitoids, and pollinators. Predators are valuable because they attack other insects. Ladybugs and praying mantids are common examples, but even more effective are centipedes, spiders, dragonflies, and ground beetles! Parasitoids feed off other insects by laying eggs on them. The young larvae feed off the host insect, killing it. Some wasps, which lay eggs in the tomato hornworms, are a familiar example of parasitoids.

From the Purdue University Extension Office's
Managing Insects in the Home Vegetable Garden:

"Only a very small percentage of the insects that occur in Indiana are pests...It is important to conserve as many predators and parasites as possible. Often they will control the pest species well enough that additional control is not necessary."

There are many other beneficial insects with common names such as assassin bug, pirate bug, soldier bug, ant lion, mealybug destroyer, robber fly, and tiger beetle. These along with such insects as dragonflies, centipedes, spiders, many parasitic wasps, and bees, are of great benefit when found in the yard and garden, and they should not be destroyed.



Photo by: V. French

Without bees and other pollinators, we would have fewer flowers and less food. When any group of insects is reduced or eliminated, the entire ecosystem is impacted. Human impact through overpopulation, chemical-usage, forest clearing, and wetlands destruction, is devastating to wildlife, including insects.

INDIANA BIRDS IN BACKYARD WILDLIFE HABITATS

	Natural Food	Feeders	Nests	Comments
Mourning Dove	Some insects, seeds	Seed mix, corn, hulled sunflower, Nyger	Trees & shrubs 3"-30" high	Feeds on ground
Downy & Hairy Woodpecker	Ants, beetles, galls, wasps, caterpillars	Suet, hulled sunflower, peanuts, mealworms	Dead tree snags	Downy is smaller & more common
Blue Jay	Nuts, insects, bird eggs, acorns, fruit	Peanuts, sunflower seeds, mixed seeds	Bark & twigs in trees	May dominate feeders, mimics other calls
American Crow	Grasshoppers, insects, mice	Suet, corn	High in trees	Intelligent & playful, very adaptable
Tufted Titmouse	Insects, grubs, berries	Sunflower seed, suet, safflower, peanuts	Natural cavity	Inquisitive
White-breasted Nuthatch	Insects, acorns, nuts, seeds	Sunflower, suet, safflower, peanuts	Natural cavity or nest boxes	Hops head-first down tree trunks
Carolina Wren	Beetles, flies, moths, snails spiders, grasshoppers, caterpillars	Hulled sunflower, suet, safflower	Natural cavity, birdhouse, brush pile	Often nests near humans: porches, flower pots, garages
American Robin	Worms, other insects, berries	Mealworms, raisins, chpd. suet	Trees, shrubs, platforms	Most migrate, nest close to humans
Northern Cardinal	Insects, seeds, fruit	Sunflower, safflower	Small trees, dense shrubs	Male feeds female during courtship
Northern Mockingbird	Insects, berries, fruit	Mealworms, fruit, corn, millet	Small trees, dense shrubs	Territorial, mimic, nocturnal singer
Song Sparrow	Seeds, insects, fruit	Mixed bird-seed	Nests in dense shrubs	House sparrow is invasive pest

RUBY-THROATED HUMMINGBIRDS

Hummingbirds deserve a listing by themselves because they are so unique and remarkable. While some people may 'ho-hum' at other birds, it is very difficult to be nonchalant about hummingbirds. Although Indiana has only one species of "hummer," the Ruby-throated Hummingbird, it is indeed a gem.



Photo by: John Blenis

These tiny creatures are wonders in strength, agility, adaptation, and determination. Male hummingbirds are the tiniest warm-blooded animals on Earth. They are the only bird in this Hemisphere that can fly backwards. The fact that this bird, which weighs less than an ounce, can fly non-stop over 500 miles across the Gulf of Mexico is, indeed, a wonder of nature. It accomplishes this yearly on its migration from Indiana to Central America.

Hummingbirds arrive in Indiana about the time the native columbine (*Aquilegia canadensis*) comes into bloom. Not surprising, this delicate wildflower is a favorite of the early arrivals. The male impresses the female (and all human observers) with chirps and twitters as he performs a spectacular mating 'dance' where he dive bombs in figure-eight fashion.

The hummer's nest is only the size of a ping-pong ball, and the eggs are jelly-bean sized. The female relies on high-protein insects and spiders for feeding the hatchlings, which illustrates the negative impact of pesticides.

When the young birds can fly, you will begin to see them at the feeder. It's a good thing the hummer is so tiny, because it will aggressively defend its territory. Put up a nectar feeder, and you can watch this behavior as they compete for the food.

Hummingbird nectar is simple to make, but freshness and cleanliness are critical. Solutions are made of four parts boiled water to one part sugar. Do not use powdered sugar, brown sugar, or honey. Wash the feeder well, and replace nectar every three days, more often in high heat.

Your garden should contain trumpet-shaped flowers for the entire season starting with native columbine, scarlet bergamot (monarda), salvia, cardinal lobelias, scarlet runner bean, and trumpet vine. Hummers are very common in Indiana, with the exception of treeless areas.

BUTTERFLIES IN YOUR HABITAT!



Photo by: A. Clavette

Attracting butterflies to your Wildlife Habitat is not difficult, but keeping them there takes planning. Butterflies are attracted to large bright flowers or showy clusters of smaller blooms. Butterflies need the nutritious nectar offered by most annual and perennials flowers. The caterpillars, on the other hand, are not as easily satisfied. They have very specific needs during their larval stage. The best way to get butterflies to live in your yard is to supply not only nectar sources, but also the preferred larval food. Some species also sip at rotting fruit. A simple recipe consists of a mixture of bananas, brown sugar, and stale beer.

Besides nectar and larval food sources, butterflies have other needs. Some male butterflies will gather to "puddle" in moist, muddy, or gravelly areas. A plant saucer with wet sand works well. A wind-break of shrubs will provide shelter on cool, windy days. Finally, butterflies like to perch on a flat rock in a sunny spot where they can bask or watch for potential mates.

- Butterflies are active from early spring until late fall, so plant for continuous bloom.
- Although they have many predators, the biggest threat to butterflies is habitat destruction. Planting a butterfly garden can help!
- Butterflies are active on calm, sunny days. Nectar plants should be grown in sunny areas that are protected from strong winds.
- There are over 700 species of butterflies that occur in North America. About 150 are found in Indiana.
- In Indiana, butterflies range in size from the little Spring Azure with a wingspread of less than an inch to the Giant Swallowtail with a wingspread of up to 6 inches.
- Butterfly metamorphosis involves 4 stages: egg, larva (caterpillar), pupa or chrysalis, and adult butterfly.
- The adult life span averages 6 to 20 days, with a range of a few days to over six months. Some migrate and some hibernate.
- Butterflies and their caterpillars can be killed in large numbers by pesticides.

NECTAR PLANTS

Nearly every blooming tree, shrub, perennial, or annual will provide some nectar for butterflies. Plant nectar plants in clumps so that the color and scent of the flowers can more easily be detected by passing butterflies. Identify the butterflies that come to nectar plants in your yard. Then plant the larval food plants for those species close to nectar plants. Try some of these eye-catching favorites:



Photo by: Illinois DNR

Redbud, *Cercis canadensis*
Lilac, *Syringa vulgaris*
Dogwood, *Cornus spp.*
Catmint, *Nepeta mussinii*
Bee balm, *Monarda spp.*
Phlox, *Phlox spp.*
Butterfly Bush, *Buddleia spp.*
Purple Coneflower, *Echinacea*
Summer Sweet, *Clethra*
Liatris, *Liatris spp.*
Goldenrod, *Solidago spp.*
Bluebeard, *Caryopteris*
Aster, *Aster spp.*

Annuals: zinnia, marigold, lantana, petunia, salvia, verbena

LARVAL FOOD SOURCES

Adding an assortment of caterpillar food sources will attract an array of butterflies and moths by offering them a place to raise their young. Often too small to see, eggs hatch into larvae, or caterpillars, with only one task: to eat! Each species requires specific foods, called “host plants.” For example, since monarch butterfly larvae eat only milkweed, choose any of the sixteen Indiana native species to attract these beautiful and interesting butterflies to your habitat. Despite their recent dwindling numbers, monarchs tempted by milkweed will visit your Monarch Waystation. Check www.monarchwatch.org to follow their migration to and from Mexico.

INDIANA is blessed with a variety of reptiles and amphibians. Frogs will likely turn up if your backyard includes a shallow pond. And you may be lucky enough to have an encounter with a turtle or two and even a few salamanders. Snakes, too, may find their way into the yard, although they may be more difficult to detect. Since their natural habitat is dwindling rapidly, all should be readily welcomed into your habitat area.

REPTILES

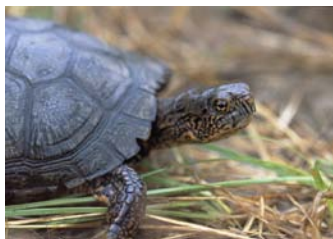


Photo by: USFWS

Turtles Older than the dinosaurs, several species of turtles could find their way into your backyard habitat. The most common land turtle found statewide is the Eastern Box Turtle.

Its numbers are dwindling due to habitat destruction, highway fatalities, collection and exportation to other countries. The small (5") Painted Turtle can also be readily found in small lakes and quiet streams, often basking on a log. Many Hoosiers remember keeping Red-ear Sliders before their sale was banned. Red-ears are frequently found along quiet waters. The foul-tempered Snapping Turtle is less likely to be encountered in most backyard habitats.

Snakes A snake's appetite for small mammals and rodents is beneficial to us all. Gardeners appreciate the fact that some eat insects, slugs, and snails. As carnivores with no legs, no eyelids, and no chewing teeth, they are a valuable component of most Indiana habitats. Cold-blooded, they are both oviparous (egg-laying) and ovoviviparous (live-bearing). Misinformation has taken its toll on these fascinating reptiles, and even numbers of common, non-venomous snakes have dwindled. Indiana has four species of venomous snakes, of which three are endangered and found in very limited areas. The Eastern Garter Snake, Brown Snake, Black Rat Snake, and Racer are beneficial snakes that are likely to be encountered in Indiana.

AMPHIBIANS

Frogs and Toads

Both frogs and toads may show up in your Wildlife Habitat. Two similar species are common throughout Indiana, American Toad and Fowler's Toad. Gardeners have long appreciated toads as bug-catchers. Handling toads will not cause warts. Although they spend most of their life on land, toads need water to breed and lay their eggs. A small pond with sloping sides and dirt bottom is ideal. Chorus Frogs and Leopard Frogs may also find their way into the area amusing you with their croaks, twills, and mating calls. The Green Frog has as distinctive "glunk" plucked banjo sound. There is always excitement in discovering eggs and tadpoles in the water, which is another reason not to run a filter or "clean" ponds with chemicals. Spring Peepers, Indiana's best-known tree frogs, may be more easily heard than seen. They prefer a moist wooded area, as do larger Gray Treefrogs. Bullfrogs need permanent deep water for survival, and should not be added artificially to the habitat. They are voracious predators of other frogs and birds.



Photo by: IDNR

Salamanders

The foot-long Eastern Tiger Salamander and the clownish Spotted Salamander, both called 'mole' salamanders, are common throughout much of the state; however, they are often hard to find because they are secretive burrowers. These are exciting to find when turning over a log or rock in a moist, deciduous woods. Draining of wetlands, and use of lawn-care products continue to take a toll on these fascinating and sbeneficial amphibians. Create a rock pile in a shady, moist area to welcome them to your yard.

What is Common Sense Conservation? The Indiana Wildlife Federation is committed to continuing Teddy Roosevelt's idea of wisely using our country's natural resources, to use, but not abuse. IWF promotes hunting, fishing, and other outdoor activities allowing Hoosiers to enjoy and benefit from nature while enhancing habitat and using wildlife management techniques which will maintain a healthy and sustainable environment.

The IWF Vision

is to create sustainable Indiana wildlife as a source of inspiration, education, and recreation.

Current Projects:

- Creating Schoolyard Habitats®
- Stopping High Fenced "Canned Hunting"
- Funding Land Protection through Heritage Trust
- Monitoring Legislation and Rules Affecting Fish and Wildlife
- Encouraging Coal Gasification for Electric Power
- Protecting Great Lakes Water
- Training Volunteer Habitat Stewards
- Developing Backyard, Neighborhood, and Corporate Habitat Certifications To learn about other Wildlife Habitat Programs contact:

Indiana Wildlife Federation
4715 West 106th Street Zionsville, IN 46077
317-875-9453 (WILD)
1-800-347-3445
info@indianawildlife.org
www.indianawildlife.org



Thank you to the Engledow Group for helping make this booklet a reality.

**ENGLEDOW
GROUP**

*Creating the environment
of successful businesses.*

Habitat Certification Application

Use this form to certify a wildlife-friendly space in your yard, school, or anywhere in your community. Do your best to answer the questions and we'll make suggestions if something is missing. If your habitat meets the requirements, you'll receive a personalized certificate suitable for framing and become a member of National Wildlife Federation, receiving our award-winning National Wildlife® magazine and a 10% discount on all NWF catalog merchandise. For questions call 1-800-822-9919 or certify online at



www.nwf.org/gardenforwildlife

Have you ever certified before? Yes No If yes, what is your habitat # _____?

If yes, have you moved or is this for a second property ?

Property owner or organization _____

If you are filling out this application for someone else, please write their name in the space provided above.

If organization, contact person _____

Name(s) to Appear on Certificate _____

Maximum 30 characters, spaces included.

Address of Habitat _____

City _____ State/Province _____ Zip Code _____

Telephone _____ Email Address _____

Mailing Address (if different from above) _____

In what type of area is your property?

Urban Suburban Rural

What is the size of your property?

< 1/8 acre 1/8 - 1/4 acre
 1/4 - 1 acre 1 - 5 acres
 5 - 10 acres > 10 acres

Check the option that best describes your habitat.

Home Apartment/Balcony
 Workplace Park/Community Garden
 Farm Place of Worship
 School/Educational Setting

FOOD SOURCES: Plants provide the basic foods for wildlife. Feeders can be used as a supplemental source of food. Remember that some creatures will become food for others in a balanced habitat. Encourage a natural diversity of wildlife in your yard to ensure a healthy ecosystem. How do you provide food for wildlife? **(Minimum requirement: 3)**

Plant Foods: Seeds Nuts Pollen
 Berries Fruits Foliage/
Twigs
 Nectar Sap

Supplemental Feeders: Seed Suet
 Squirrel Butterfly
 Hummingbird

WATER SOURCES: Wildlife need a clean water source for drinking and bathing. How do you provide water for wildlife? **(Minimum requirement: 1)**

- | | |
|--|--|
| <input type="checkbox"/> Birdbath | <input type="checkbox"/> Water Garden/Pond |
| <input type="checkbox"/> Shallow Dish | <input type="checkbox"/> Butterfly Puddling Area |
| <input type="checkbox"/> Lake | <input type="checkbox"/> Rain Garden |
| <input type="checkbox"/> Stream/River | <input type="checkbox"/> Spring |
| <input type="checkbox"/> Seasonal Pool | <input type="checkbox"/> Ocean |

PLACES FOR COVER: Wildlife need shelter from bad weather and hiding places—for both predators and prey. How do you provide cover for wildlife? **(Minimum requirement: 2)**

- | | |
|---|---|
| <input type="checkbox"/> Wooded Area | <input type="checkbox"/> Dense Shrubs/Thicket |
| <input type="checkbox"/> Bramble Patch | <input type="checkbox"/> Evergreens |
| <input type="checkbox"/> Ground Cover | <input type="checkbox"/> Brush/Log Pile |
| <input type="checkbox"/> Rock Pile/Wall | <input type="checkbox"/> Burrow |
| <input type="checkbox"/> Cave | <input type="checkbox"/> Meadow/Prairie |
| <input type="checkbox"/> Roosting Box | <input type="checkbox"/> Water Garden/Pond |

PLACES TO RAISE YOUNG: In order to provide complete habitat, you must provide places for wildlife to engage in courtship behavior and to mate, and then to bear and raise their young. How do you provide places to raise young for wildlife? **(Minimum requirement: 2)**

- | | |
|---|---|
| <input type="checkbox"/> Mature Trees | <input type="checkbox"/> Dead Trees/Snags |
| <input type="checkbox"/> Meadow/Prairie | <input type="checkbox"/> Dense Shrubs/Thicket |
| <input type="checkbox"/> Nesting Box | <input type="checkbox"/> Water Garden/Pond |
| <input type="checkbox"/> Wetland | <input type="checkbox"/> Burrow |
| <input type="checkbox"/> Host Plants for Caterpillars | <input type="checkbox"/> Cave |

SUSTAINABLE GARDENING PRACTICES: How you manage your garden or landscape can have an effect on the health of the soil, air, water and habitat for native wildlife as well as the human community. What sustainable gardening techniques do you employ to help conserve resources? **(Minimum requirement: 2)**

Soil and Water Conservation:

- Riparian Buffer
- Capture Rain Water from Roof
- Xeriscape (water-wise landscaping)
- Drip or Soaker Hose for Irrigation
- Limit Water Use
- Reduce Erosion (i.e. ground cover, terraces)
- Use Mulch
- Rain Garden

Controlling Exotic Species:

- Practice Integrated Pest Management
- Remove Invasive Plants & Animals
- Use Native Plants
- Reduce Lawn Areas

Organic Practices:

- Eliminate Chemical Pesticides
- Eliminate Chemical Fertilizers
- Compost

To apply, please send: Completed application - REQUIRED
 \$20 non-refundable application fee - REQUIRED

TO: NATIONAL WILDLIFE FEDERATION ♦ P.O. Box 1583 ♦ Merrifield, VA 22116-1583
Allow 4-6 weeks for processing. Please keep a copy of this application for your records.

 Printed on paper that contains 30% post-consumer waste fiber

Rev0909

