

Illinois

Habitats are Homes



PRAIRIE



reptiles



reptiles



birds



fishes



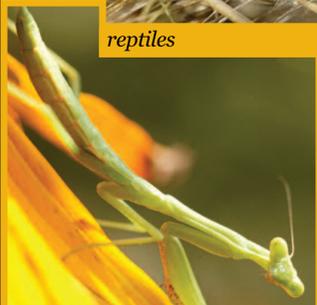
amphibians



reptiles



URBAN



invertebrates



birds



invertebrates



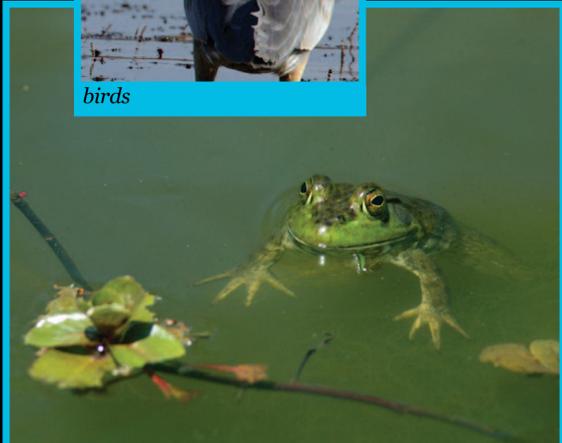
mammals



mammals



invertebrates



AQUATIC



birds



mammals



birds



mammals



WOODLAND



invertebrates



mammals



fishes

A habitat is the place in which a species is suited to live. There are four important components of a habitat: food; water; shelter or cover; and space. Habitat components must also be in the proper quantities and arrangement. The amount of suitable habitat available generally determines the diversity of species and the number of individuals that can live in an area. Habitat requirements may be similar, but they are unique for each species. Habitat destruction and alteration are the most serious problems facing wildlife species today. Human actions are often detrimental to wildlife habitat, but humans can also have a beneficial influence on habitats. There are many reasons to become involved in wildlife habitat development or restoration projects, including the direct benefits to native organisms. A diverse natural habitat may also help homeowners and businesses reduce heating and cooling costs. The beauty of a natural habitat can enhance property values. Undertaking a habitat improvement project can give you and your students a connection to the land and the knowledge that you are doing something to help our world. Today's students are the future stewards of the earth. It is important for them to make that connection.

Species List

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tiger swallowtail
 six-lined racenunner
 praying mantis
 regal fritillary
 northern bobwhite
 eastern cottontail
 cottonmouth
 greenside darter
 eastern pondhawk
 great blue heron
 bullfrog
 muskrat
 red shiner
 eastern box turtle
 Fowler's toad
 gray fox
 wild turkey
 white-tailed deer
 American robin
 raccoon
 hoary bat
 spider
Papilio glaucus
Onemidophorus sexlineatus
 Family Mantidae
Speyeria idalia
Colinus virginianus
Sylvilagus floridanus
Agkistrodon piscivorus
Etheostoma blennioides
Erythemis simplicicollis
Ardea herodias
Rana catesbeiana
Ondatra zibethicus
Cyprinella lutrensis
Terrapene carolina
Bufo fowleri
Urocyon cinereogargenteus
Meleagris gallopavo
Odocoileus virginianus
Turdus migratorius
Procyon lotor
Lasiurus cinereus
 Class Arachnida

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Illinois Wildlife Preservation Fund
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What Is A Habitat?

A habitat is the place in which a species is suited to live. There are four important components of a habitat: food; water; shelter or cover; and space. Habitat components must also be in the proper quantities and arrangement. The amount of suitable habitat available generally determines the diversity of species and the number of individuals that can live in an area.

Food: In order to survive, animals must have energy provided by an outside source. The energy comes from the food they eat. Food for animals may be other animals, plants and/or other organisms. Insufficient food in an area limits the number of wildlife species and individuals present. A variety of food sources can increase the types of species utilizing the area. Plants produce their own food (via photosynthesis), but conditions must be favorable for them to thrive.

Water: All organisms must have water, whether from a pond, stream, lake or other habitat, their food or dew. Some species require water at various times in their life cycle. For example, amphibians need water for their developing eggs and young.

Shelter: Protected spaces function to offer escape from predators and extreme weather. Vegetation, tree cavities, brush piles, rock piles and burrows all provide shelter.

Space: Space is the area needed to obtain food, water and shelter in the proper arrangement for an individual, family or social group. Some species require a large amount of space, while others can meet their needs in a smaller area. By enhancing the habitat, the amount of space needed may be reduced.

Habitat requirements may be similar, but they are unique for each species. For example, insects, birds, mammals, fungi, spiders and other species, including plants, may live on or in a tree. Each species performs a different function, though, and has different needs. Within a small area, this web of life acts to support the entire system. Habitats are continually changing in nature, and a healthy ecosystem with many species is more likely to adapt to and survive changes than a system with just a few types of organisms.

Habitats Are Homes

The land where we live, raise crops and livestock, work and travel is also land that originally supported only wildlife. Human activities directly and indirectly affect the wildlife species that an area can support. Often these activities reduce the number of types of species that can live in a place, decreasing its native biodiversity. Habitat destruction and alteration are the most serious problems facing wildlife species.

Biodiversity is the variety of life. It includes species, genetic and ecosystem diversity. The more diversity an area can support, the healthier that environment is considered to be. For example, if a forest includes 50 species of trees, 20 species of birds, 10 species of mammals and five species of amphibians, it would be considered to be more stable and better able to support itself than if a forest of the same size included five species of trees, three species of birds, two species of mammals and two species of amphibians. Besides providing more food options, a healthy environment is better able to withstand change. If something happens to one species, another one may be able to take over some of its functions in the environment. If only a few species are present, the effects of the loss of one of them can be greatly magnified. In some situations where just a few species are present, these species may be invasive exotics that have displaced native species and add little to the health of an ecosystem.

There is a limit to how many individuals and species a habitat can support at any one time. Known as carrying capacity, the limit is determined by the quality and quantity of habitat available. By changing any of the available food, water, shelter and space, or their arrangement, the carrying capacity is affected. If the carrying capacity is decreased, some individuals must leave or die. If the carrying capacity is enhanced, new individuals can move into the area. Carrying capacity changes naturally. It also changes by human influences.

The habitat requirement that is in least supply for a species is the limiting factor. This factor controls population size. For example, if you want to attract eastern bluebirds to a yard or school grounds, you can develop a habitat to attract insects for them to eat and provide the birds with a constant water supply, but if there are no dead trees or other cavities for them to nest in, they will not stay. The availability of nesting habitat is the limiting factor.

Limiting factors are very important in wildlife management. When developing or enhancing habitat, you should consider all factors that are important to the species you want to attract. Also consider that the composition of habitats changes over time. With these changes come natural shifts in the species supported. To retain the species currently occupying a habitat, the vegetation may need to be managed to remain the same in composition and quality.

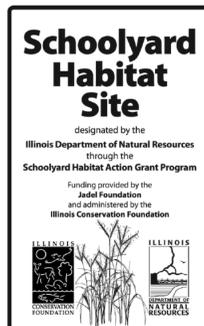
In Illinois, soils, topography, drainage and climate determine the types of natural communities present in an area. There are four main types of habitats: aquatic; woodland; grassland/prairie; and urban. Each of these habitats has its own characteristics and supports species adapted to them.

Schoolyard Habitat Action Grant

The Illinois Department of Natural Resources' Division of Education offers the *Schoolyard Habitat Action Grant* program for schools and youth organizations that want to develop or enhance existing wildlife habitat areas. Up to \$600 per applicant may be obtained through this competitive grant program. The application deadline each year is November 30. Successful applicants will receive funds no later than February 1 and have until the next November 30 to complete the project and submit their report.

Examples of projects developed through the *Schoolyard Habitat Action Grant* program include butterfly gardens, prairie plots, wetlands, outdoor classrooms, feeding stations and nest boxes. Each winning applicant receives a metal sign to post in the habitat area and supplemental literature to assist with the planning and development of the site. *Schoolyard Habitat Development* workshops are also regularly offered through the Division of Education's ENTICE (Environment and Nature Training Institute for Conservation Education) teacher-training program.

The *Schoolyard Habitat Action Grant* program is funded by donations from the Jadel Family Foundation and other private donors. An application form is available online at <http://dnr.state.il.us/lands/education/CLASSRM/grants.htm>.



How Do Habitats Change?

Habitats can change very rapidly, particularly if they are being affected by humans or severe natural events, like volcanic eruptions or fire. However, habitat changes are often subtle, occurring over a period of time. In these situations, species declines are indirectly caused.

The series of illustrations below depict the evolution of a wetland into dry land. See how many changes you can find between each successive drawing.

An undisturbed wetland may be teeming with organisms and have clear water in both shallow and deep areas.



Land use changes, such as new roads or conversion of uplands to agricultural fields, may increase runoff into the wetland, gradually altering both the water chemistry and the amount of silt entering the wetland.

Additional conversion of nearby land to new uses increases change in the habitat by reducing the buffer for the wetland. Homes and commercial areas may be placed closer to the wetland. Those animals that are unable to adapt to human disturbance may be unsuccessful in raising their young. The plant composition of the wetland gradually changes as species intolerant to the new conditions die out and are replaced by other species, including some not native to Illinois.



Increased demand for land brings developed areas ever closer to the wetland. The diversity of species decreases. As runoff increases, the wetland gradually fills in with dirt, and there are no longer deep water areas.

The wetland is now so surrounded by an altered landscape that it cannot survive. Even though it has not been drained, plowed or paved, it has been destroyed. It can no longer support the variety of life that it once did.



Helping Habitats

Human actions are often detrimental to wildlife habitat, but humans can also have a beneficial influence on habitats. There are many reasons to become involved in wildlife habitat development or restoration projects, including the direct benefits to native organisms. Increasing the diversity of an area increases its ecological stability. A diverse natural habitat may help homeowners and businesses reduce heating and cooling costs. The beauty of a natural habitat can enhance property values. Undertaking a habitat improvement project can give you and your students a connection to the land and the knowledge that you are doing something to help our world. Today's students are the future stewards of the earth. It is important for them to make that connection.

What Can You Do?

- Use native plants in your yard, school grounds or park. Native plants are naturally adapted to provide food and shelter to native Illinois wildlife. They are also better able to withstand cold, drought, disease and insects than non-native species and cost less to maintain.
- Plant a variety of tree and shrub species in clumps around open spaces to attract many types of wildlife. Select species that flower or fruit at different times of the year to provide food for several months. Leave fruits and vegetation in the habitat over the winter as important food and cover sources.
- Provide nest and den boxes for animal species. Leave dead trees (snags) standing, when possible, to provide food, shelter and roosting locations.
- Use curved or irregular borders and layers of vegetation (instead of plants all the same height) to attract more wildlife species.
- Before clearing an area of vegetation, consider the affect of your actions on the wildlife living there. Is it necessary to remove all of the vegetation? Can you replace some of it in a nearby location?
- Even simple acts like making fresh, clean water available daily can dramatically assist wildlife species.
- Provide brush and rock piles for shelter.
- Research the food and shelter requirements of species you are trying to assist and provide those requirements.
- Encourage the use of retaining edges for wildlife on farm land.
- Write a letter to your elected representatives with your concerns about conservation of our natural resources. Protecting them may entail passage of laws. Your representatives should know how you feel.
- Contribute to organizations that help to preserve habitat, such as the Illinois Wildlife Preservation Fund. Donations to this fund are accepted through the Illinois Department of Natural Resources or by using the check-off box when submitting your state income tax. Purchasing hunting and fishing licenses and habitat stamps also contributes to species protection.
- Volunteer to help with conservation projects in your area.



Agency Resources

A good variety of information regarding habitat development and/or enhancement projects can be found on the Illinois Department of Natural Resources' (IDNR) Web site at <http://dnr.state.il.us>. By utilizing the online order form (<http://www.idnrteachkids.com>) you can select from hundreds of IDNR publications. Many of these items are also available for download. Several grants dedicated to wildlife habitat improvement are offered through the IDNR. See the "For More Information" section of this poster. The IDNR Divisions of Wildlife Resources and Natural Heritage study distribution and population levels of species and develop and implement management plans. The IDNR Division of Resource Review and Coordination reviews development plans proposed by local and state governments and recommends measures to reduce or avoid adverse impacts to species and their habitats. The IDNR Division of Education provides Illinois-specific educational materials for teachers, including the *Biodiversity of Illinois* CD-ROM series.

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Equal opportunity to participate in programs of the Illinois Department of Natural Resources (IDNR) and those funded by the U.S. Fish and Wildlife Service and other agencies is available to all individuals regardless of race, sex, national origin, disability, age, religion or other non-merit factors. If you believe you have been discriminated against, contact the funding source's civil rights office and/or the Equal Employment Opportunity Officer, IDNR, One Natural Resources Way, Springfield, IL 62702-1271; 217-785-0067; TTY 217-782-9175. This information may be provided in an alternative format if required. Contact the DNR Clearinghouse at 217-782-7498 for assistance.

For More Information

Grants

Visit <http://dnr.state.il.us/grants/> for the latest grant information from the Illinois Department of Natural Resources.

Conservation 2000

Illinois Conservation Foundation

Illinois Wildlife Preservation Fund

Schoolyard Habitat Action Grant

Special Wildlife Funds Grant Program

Publications

Butterfly Gardens: This brochure provides basic guidance on developing a butterfly garden, including the plant species preferred by many native butterflies.

Landscaping for Wildlife: An informational booklet about developing wildlife habitat in the home landscape, it is particularly useful for those people interested in attracting birds.

Prairie Establishment and Landscaping: More than just a primer on developing a prairie, this publication offers a history of the prairies in Illinois, too. Sources for native prairie plants are also listed.

Wood Projects for Illinois Wildlife: Plans for feeders and nest boxes are included in this booklet.

Order these publications online at <http://www.idnrteachkids.com>.

Workshops

ENTICE (Environment and Nature Training Institute for Conservation Education): Sponsored by the IDNR Division of Education, *Schoolyard Habitat Development* workshops through the ENTICE teacher-training program offer information, experience and resources for designing and implementing schoolyard habitat sites. Continuing Professional Development Units are available for teachers. Visit <http://www.ilcf.org/Workshop/Courses.asp> for the latest ENTICE workshop schedule.

