Illinois

Threatened & Endangered Species

moccasin flower *Cypripedium acaule*
Photo © Elvin Warrick

Rafinesque's big-eared bat *Corynorhinus rafinesquii*
Photo © Merlin D. Tuttle, Bat Conservation International, Inc.

Swainson's hawk *Buteo swainsoni*
Photo © Richard Day, Daybreak Imagery

black rail *Laterallus jamaicensis*
Photo © Brian E. Small, VIREO

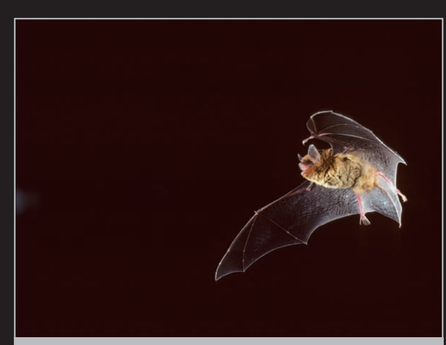
taillight shiner *Notropis maculatus*
Photo © Matthew R. Thomas

Illinois cave amphipod *Gammarus acherondytes*
Photo © Dr. Frank M. Wilhelm, Southern Illinois University, Carbondale

alligator snapping turtle *Macrochelys temminckii*
Photo © Mike Redmer

eastern massasauga *Sistrurus catenatus*
Photo © Mike Redmer

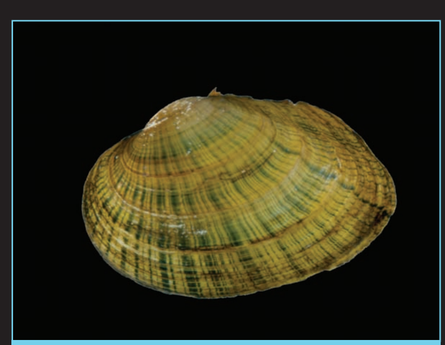
Indiana bat *Myotis sodalis*
Photo © Merlin D. Tuttle, Bat Conservation International, Inc.



southeastern myotis *Myotis austroriparius*
Photo © Merlin D. Tuttle, Bat Conservation International, Inc.

northern brook lamprey *Ichthyomyzon fossor*
Photo © David J. Eisenhour

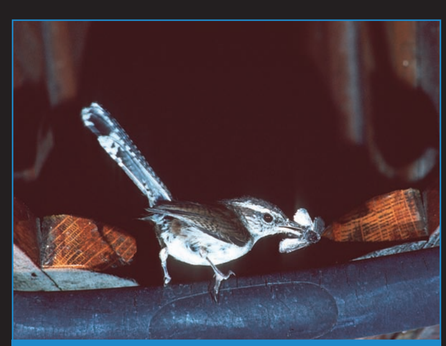
northern madtom *Noturus stigmosus*
Photo © Matthew R. Thomas



wavy-rayed lampmussel *Lampsilis fasciola*
Photo © Kevin S. Cummings

silvery salamander *Ambystoma platineum*
Photo © Mike Redmer

clubshell *Pleurobema clava*
Photo © Kevin S. Cummings

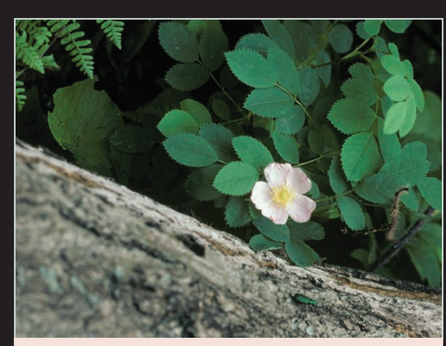


Bewick's wren *Thryomanes bewickii*
Photo © Todd Fink, Daybreak Imagery

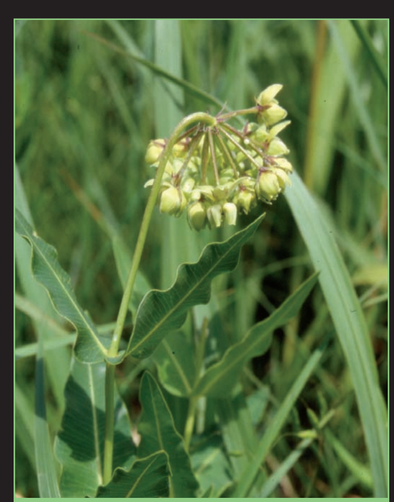
sturgeon chub *Macrhybopsis gelida*
Photo © David J. Eisenhour

Illinois mud turtle *Kinosternon flavescens*
Photo © Mike Redmer

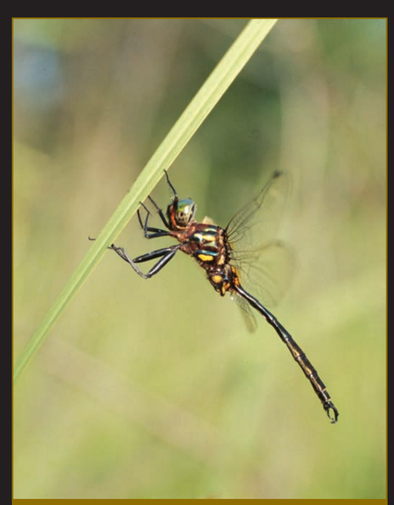
Iowa Pleistocene snail *Discus macclintocki*
Photo © Jochen Gerber, Field Museum



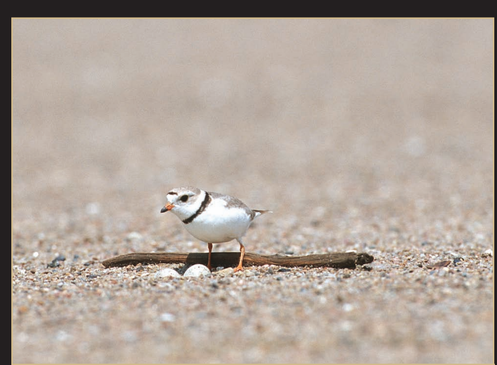
bristly rose *Rosa acicularis*
Photo © Randy Nÿboer



Mead's milkweed *Asclepias meadii*
Photo © Kenneth R. Robertson

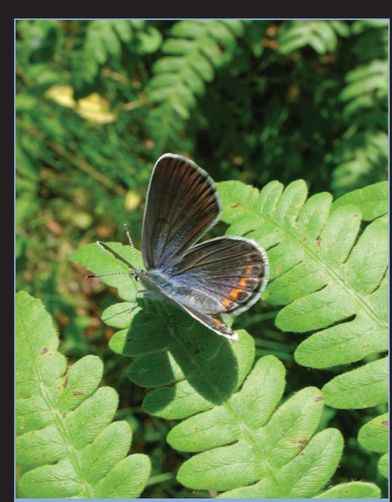


Hine's emerald dragonfly *Somatochlora hineana*
Photo © Everett D. Cashatt



piping plover *Charadrius melodus*
Photo © Richard Day, Daybreak Imagery

American mountain ash *Sorbus americana*
Photo © Kenneth R. Robertson



Karner blue butterfly *Lycaeides melissa samuelis*
Photo © Paul Labus, The Nature Conservancy

Species become threatened, endangered or extinct for a variety of reasons. In Illinois, the Endangered Species Protection Board (ESPB), in conjunction with the Illinois Department of Natural Resources' Office of Resource Conservation, is responsible for determining which species warrant inclusion on the state's threatened and endangered list. Through scientific research and population monitoring, the ESPB updates the list every five years. Species whose populations have decreased to dangerously low numbers and are extremely limited in distribution may be added to the list. Species that have shown population rebounds and are no longer threatened or endangered in Illinois may be removed from the list. Currently, more than 350 species are listed as endangered in Illinois and more than 125 are listed as threatened. It is possible that the status of the species depicted on this poster will change upon further review by the ESPB. Visit the Internet site at http://dnr.state.il.us/espb/index.htm for the most current listing of Illinois threatened and endangered species.

Species List

All species depicted on this poster are endangered in Illinois.

Species Selection:

Joseph A. Kath
Illinois Department of Natural Resources

Species are not shown in proportion to actual size.

taillight shiner	*Notropis maculatus*	
northern madtom	*Noturus stigmosus*	
*pallid shiner	*Hybopsis amnis*	
northern brook lamprey	*Ichthyomyzon fossor*	
sturgeon chub	*Macrhybopsis gelida*	
*spotted dusky salamander	*Desmognathus conanti*	
alligator snapping turtle	*Macrochelys temminckii*	
eastern massasauga	*Sistrurus catenatus*	
Illinois mud turtle	*Kinosternon flavescens*	
silvery salamander	*Ambystoma platineum*	
piping plover	*Charadrius melodus*	Federally endangered
*Swainson's warbler	*Limnothlypis swainsonii*	
black rail	*Laterallus jamaicensis*	
Bewick's wren	*Thryomanes bewickii*	
Swainson's hawk	*Buteo swainsoni*	
Indiana bat	*Myotis sodalis*	Federally endangered
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	
southeastern myotis	*Myotis austroriparius*	
*eastern wood rat	*Neotoma floridana*	
Iowa Pleistocene snail	*Discus macclintocki*	Federally endangered
Illinois cave amphipod	*Gammarus acherondytes*	Federally endangered
Hine's emerald dragonfly	*Somatochlora hineana*	Federally endangered
Karner blue butterfly	*Lycaeides melissa samuelis*	Federally endangered
clubshell	*Pleurobema clava*	Federally endangered
wavy-rayed lampmussel	*Lampsilis fasciola*	
Mead's milkweed	*Asclepias meadii*	Federally threatened
bristly rose	*Rosa acicularis*	
American mountain ash	*Sorbus americana*	
*screwstem	*Bartonia paniculata*	
moccasin flower	*Cypripedium acaule*	

*Species illustrated on the back of the poster.

This poster was made possible by:

Illinois Department of Natural Resources
Division of Education
Division of Natural Heritage

Illinois Wildlife Preservation Fund

Funding for this project was made possible in part by contributions to the Illinois Wildlife Preservation Fund.

Threatened/Endangered

When a species is listed as threatened, it is likely to become listed as endangered. The threatened classification indicates that populations are low enough or declining such that extinction is possible in the future. An endangered species is an organism that is in danger of becoming extinct within all or a portion of its range. A species listed as endangered by the state of Illinois is in danger of disappearing as a breeding species in the wild within the state. If a species is classified as endangered by the federal government, the situation is even more grave — the species is in danger of becoming extinct within the United States and possibly the world.

A species is included on the official Illinois list of threatened and endangered species when one or more of the following criteria exist: 1) it occurs in Illinois and is included in the federal list of threatened or endangered species; 2) it occurs in Illinois and is proposed for federal threatened or endangered species status; 3) it was formerly widespread in Illinois but has been nearly eliminated from the state due to habitat destruction, collecting or other stressors resulting from the development of Illinois; 4) it exhibits a very restricted geographic range, of which Illinois is a part; 5) it exhibits restricted habitats or low populations in Illinois; or 6) it has significant disjuncts in Illinois (that is, the Illinois population is far removed from the rest of the species' range).

spotted dusky salamander *Desmognathus conanti*
Photo © Mike Redmer

The federal Endangered Species Protection Act was passed in 1973, leading to federal and state laws to protect threatened and endangered species. A species listed by the federal government or the state of Illinois is by law not to be harmed, pursued, harassed, hunted, transported or traded. The U.S. Fish and Wildlife Service is responsible for determining which species warrant being listed as federally threatened or endangered.

In Illinois, the Endangered Species Protection Board (ESPB), in conjunction with the Illinois Department of Natural Resources' (IDNR) Office of Resource Conservation, is responsible for determining which organisms are threatened or endangered in the state. This panel also advises the IDNR on means of conserving those species. The ESPB consists of nine members who are appointed by the Governor. By law, the board must include two zoologists, two ecologists and one botanist. It convenes quarterly in open public meetings.

The ESPB funds research projects to gather information that will contribute to listing decisions or conservation strategies for various species. Board and IDNR staff conduct and participate in many field surveys annually to monitor the status of threatened and endangered species. The ESPB may remove from the list any non-federally listed species for which it finds satisfactory scientific evidence that its wild or natural populations are no longer threatened or endangered in the state.

It is possible that the status of the species depicted on this poster will change upon further review by the ESPB; the list is updated every five years. Visit the ESPB Web site at http://dnr.state.il.us/espb/index.htm for the most current listing of Illinois threatened and endangered species.

Causes of Species Decline

The two most common causes of species decline today are habitat loss and degradation of habitat. In Illinois, the loss of natural habitat has been tremendous. More than 90 percent of the natural wetlands, 80 percent of the forests and 99 percent of the natural prairies have been lost.

Habitats may be destroyed through a variety of methods, including damming rivers and streams, removing vegetation and introducing exotic species that out-compete native species. Much land has been converted to agricultural, industrial and urbanization uses. The effects of habitat change are not always seen immediately. More often, habitat loss and the resulting decline of species are indirectly caused and the result of cumulative impacts over a period of time.

Degradation of existing habitats has compounded the effects of habitat loss. Pollution and environmental contamination are forms of degradation that can have a devastating effect on native species. For example, the use of the insecticide DDT in the 1950s and 1960s led to serious reproductive problems for many species of birds, including the bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*) and peregrine falcon (*Falco peregrinus*). The problem was discovered in time to save the birds from extinction, and the use of DDT in the United States was banned in 1972. Its use continued in other countries, however, affecting migratory species.

Other threats exist. Natural threats (predation, drought, lack of food, disease) are minimal when compared to threats caused by humans (chemicals, introduced species, illegal collection/killing, habitat destruction, domestic pets, obstructions such as tall buildings and dams). Much effort is expended by biologists in Illinois to remove threats posed by invasive introduced species. Human presence and use of the land have caused the extinction of some species, while other species have benefitted from human presence, actually increasing in numbers and range. Some species have thrived by human efforts to restore and manage them in their native habitats. Other species have such little native habitat remaining that management options are severely limited.

Extirpated and Extinct Species

Porcupines (*Erethizon dorsatum*), bison (*Bison bison*) and elk (*Cervus canadensis*) are among the many species that once lived in Illinois but no longer are found here in the wild. They do exist in other parts of the United States, however. These species which no longer have Illinois as part of their natural range are extirpated from the state. Extinct species are those that no longer exist anywhere on earth. Species that once lived in Illinois and that are now extinct include the Carolina parakeet (*Conuropsis carolinensis*) and passenger pigeon (*Ectopistes migratorius*).

What Can You Do to Help Threatened & Endangered Species?

- Because the greatest threat to wildlife is habitat loss, you can help by encouraging the creation and protection of wildlife habitat in the community. Plant a native wildflower garden and leave the flower heads and dead stems/leaves in place through the winter. Create a community garden or prairie. Encourage the use of retaining edges for wildlife on farm land. Build and install bird nest boxes. Where feasible, leave dead trees standing for wildlife to roost on, feed on and live in.
- Find out which endangered species live in your area and examine the causes of threats to them and their habitat.
- Write a letter to your elected representatives telling each that you care about threatened and endangered species and their protection. Conservation of natural resources may entail passage of laws. Your representatives should know how you feel.
- Contribute to organizations that help to preserve habitat or protect endangered species, such as the Illinois Wildlife Preservation Fund. You can contribute to this fund through the Illinois Department of Natural Resources or by using the check-off box when submitting your state income tax. The purchase of hunting and fishing licenses and habitat stamps also contributes to species protection.

Illinois Wildlife Preservation Fund

eastern wood rat *Neotoma floridana*
Photo © Todd Fink, Daybreak Imagery

- If you see natural resources violations occur or know about someone who has violated a law regarding threatened or endangered species, report them to law enforcement officials.
- Boycott the purchase of wild-captured species.
- Even actions as simple as not disturbing what appears to be orphaned wildlife, practicing organic farming and using environmentally friendly pesticides are important.
- Volunteer to help with conservation projects in your area.

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Illinois' Threatened & Endangered Species

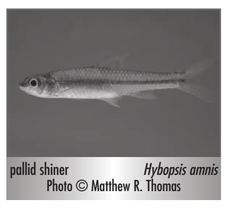
Thirty of the more than 480 species currently listed as endangered and threatened in Illinois are depicted on this poster. Many groups of organisms are not even considered for endangered and threatened listing because not enough information is available about them.

FISHES

northern brook lamprey *Ichthyomyzon fossor* – A fish of the Great Lakes and Ohio and Missouri river basins, the northern brook lamprey is known in Illinois from the Kankakee River. It requires clear, clean flowing water. Siltation and other pollutants leading to water quality degradation have hurt this species' ability to survive.

northern madtom *Noturus stigmosus* – Known only from two Illinois counties (east central and southeast), this species is declining throughout its United States range. It prefers sand and rock riffles in large rivers. Improved soil conservation practices to reduce siltation, turbidity and pollution would benefit this species' survival.

pallid shiner *Hybopsis amnis* – Formerly occurring in many of the large river systems in Illinois as well as in much of the Mississippi River's drainage system, its Illinois range has been reduced to the Mississippi and Kankakee rivers. It is intolerant of siltation and turbidity and has declined rapidly as land use practices have changed.


pallid shiner *Hybopsis amnis*
Photo © Matthew R. Thomas

sturgeon chub *Macrhybopsis gelida* – Found in the central United States, the sturgeon chub is fairly uncommon in most of its range. It prefers areas of swift, shallow water over sand and gravel substrate. Degraded water quality and siltation are factors affecting this species.

taillight shiner *Notropis maculatus* – Found throughout the southeastern United States, the taillight shiner is at the northern edge of its range in Illinois, occurring only in the southern tip of the state. It prefers to live near vegetation in swamps, ponds and rivers. It has never been widespread in Illinois, and loss and degradation of habitat have hurt its ability to survive.

REPTILES & AMPHIBIANS

alligator snapping turtle *Macrochelys temminckii* – The largest freshwater turtle in North America, this species has been the victim of habitat degradation and excessive killing by humans. A plan to restore the alligator snapping turtle to its native rivers, oxbow lakes and cypress swamps in the state is being implemented by the IDNR.

eastern massasauga *Sistrurus catenatus* – Once common in the northern two-thirds of Illinois, this venomous species relies on old fields, floodplain forests, prairie marshes and bogs. Destruction of prairie marshes and agricultural practices have destroyed its habitat. It is now known from only approximately eight locations in Illinois.

Illinois mud turtle *Kinosternon flavescens* – A species of more western habitats, the Illinois mud turtle lives in sand prairies with ponds and sloughs. In recent years, its Illinois populations have declined greatly. Habitat loss due to dredging, construction, lowered water tables and farming is the main problem for this species.

silvery salamander *Ambystoma platineum* – Found in scattered locations from Illinois to Massachusetts, this unusual species consists only of females. In Illinois, it is known from one natural population. A woodland pool is required for breeding, and smallmouth salamander sperm are used to initiate egg development. As many as 80 percent of the developing young die, and in some years the breeding pond dries out before any of the larvae have been able to complete development.

spotted dusky salamander *Desmognathus conanti* – Occurring in only three isolated populations in southern Illinois, this species requires cool spring-fed streams in forests. Found throughout the eastern United States, the spotted dusky salamander is extremely sensitive to deforestation and changes in water quality.

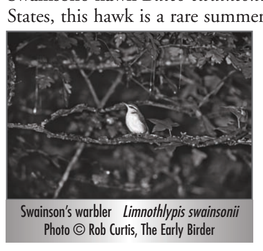
BIRDS

Bewick's wren *Thryomanes bewickii* – Found over a large area of the central, southern and western United States, populations of Bewick's wren are declining throughout the range. Once commonly nesting in central and southern Illinois, today it has only been documented as nesting in less than 10 counties. Competition with house wrens, house sparrows and European starlings as well as habitat loss may be contributing to its decreased numbers.

black rail *Laterallus jamaicensis* – Found along both coasts of the United States, this bird also frequents an area of the Midwest. It is seen occasionally as a rare migrant and summer resident in Illinois. It prefers wet areas with short vegetation including sedges, rushes and grasses. Destruction of marsh habitat in Illinois has been detrimental to this species.

piping plover *Charadrius melodus* – Federally endangered. In the United States, the piping plover nests along the Atlantic coast and Great Lakes and inland to the northern Great Plains. In Illinois, it is a rare migrant and rare nesting species along Lake Michigan. In the late 1800s, it nested abundantly along the Illinois shore of Lake Michigan. Recreational and vehicular use of the Lake Michigan shoreline, construction and shoreline erosion have all led to its inability to nest in the state.

Swainson's hawk *Buteo swainsoni* – A bird of the western United States, this hawk is a rare summer resident and rare migrant in the northern part of the state. It lives in open grasslands and nests in an isolated tree. Loss of the prairies and human disturbance are causes of this species' decline.


Swainson's warbler *Limnothlypis swainsonii*
Photo © Rob Curtis, The Early Birder

Swainson's warbler *Limnothlypis swainsonii* – Found throughout the southeastern United States, this warbler is restricted to the southern part of Illinois. It relies on large areas of dense forest with an understory of giant cane. If these habitats are not preserved this species will soon be extirpated from the state.

MAMMALS

eastern wood rat *Neotoma floridana* – The eastern wood rat has a few, very small and isolated populations remaining in the state, in southwestern Illinois. Widespread through the eastern and southern United States, Illinois is on the northern border of its range. At one time, the species was abundant in the Shawnee hills in southern Illinois. Extremely severe winter weather has been detrimental to the species.

Indiana bat *Myotis sodalis* – Federally endangered. The Indiana bat occurs from Oklahoma to Michigan and New Hampshire and south to northern Florida. Ninety-seven percent of its total population hibernates in caves in Illinois, Indiana, Kentucky and Missouri. The species has suffered serious declines due to cave vandals, cave commercialism, cave flooding, cave collapse, insecticides and loss of streamside habitat for foraging and rearing young.

Rafinesque's big-eared bat *Corynorhinus rafinesquii* – This species occurs throughout the southeastern one-fourth of the United States, with its range extending into southern Illinois. It is one of the rarest bat species in the state. Little is known of its habits in Illinois, although it has been found roosting in trees, caves and old buildings.

southeastern myotis *Myotis austroriparius* – Illinois is on the northern edge of this species' United States range. Found only in extreme southern Illinois, it has declined in the state due to destruction and alteration of wetland, cave and mine habitats.

INVERTEBRATES

clubshell *Pleurobema clava* – Federally endangered. An inhabitant of medium to large rivers, the clubshell has declined in all of its range. Only found along the eastern border of Illinois, siltation, pollution and channelization have all impacted this species. A plan to restore the clubshell to its native rivers and streams in Illinois is being implemented by the IDNR.

Hine's emerald dragonfly *Somatochlora hineana* – Federally endangered. Hine's emerald dragonfly was believed to be extinct until it was rediscovered in Illinois and Wisconsin in the late 1980s. Known from only a few locations in northeastern Illinois, the insect lives in calcareous spring-fed marshes along the Des Plaines River. Its limited Illinois range is threatened by industrial and highway development.

Illinois cave amphipod *Gammarus acherondytes* – Federally endangered. This small crustacean lives in the underground streams of several cave systems in southwestern Illinois. As these streams are near the surface, they are greatly affected by surface pollutants. Protection of water quality in this species' habitat is critical to its survival.

Iowa Pleistocene snail *Discus macclintocki* – Federally endangered. Found only in Iowa and Illinois, the Iowa Pleistocene snail was first discovered as a living species in 1955. It is restricted to cool algific slopes in northwestern Illinois. Its restricted habitat and human disturbances limit the snail's population growth.

Karner blue butterfly *Lycaeides melissa samuelis* – Federally endangered. The Karner blue butterfly is a native of the Great Lakes and Northeast regions of the United States. Nationwide, populations of the Karner blue have declined by 99 percent. The insect had not been seen for a century in Illinois until 1992, when five were spotted in Lake County. The caterpillar feeds on wild lupine and loss of this plant and its associated habitat have caused the decimation of this butterfly, too.

wavy-rayed lampmussel *Lampsilis fasciola* – Found in northern tributaries of the Ohio River, the wavy-rayed lampmussel is limited in Illinois to the Vermilion River system. It prefers clear, shallow running water with a sand and gravel bottom. Efforts to reduce siltation and other pollutants from agriculture, industry and construction should continue to be implemented.

PLANTS

American mountain ash *Sorbus americana* – Found more commonly in Canada, the northeastern United States and the Appalachian Mountains, American mountain ash grows only in a limited number of locations in northern Illinois. It prefers rocky woods and bogs and has little suitable habitat available.

bristly rose *Rosa acicularis* – Bristly rose grows in northern climates. It is known in Illinois only from two locations in Jo Daviess County on cool algific slopes. One of the sites is protected, and the other is on private land.

Mead's milkweed *Asclepias meadii* – Federally threatened. A plant of mesic prairies, Mead's milkweed was never common in Illinois and became much less abundant with the destruction of the prairies. Very few plants remain in a few scattered locations throughout the state.

moccasin flower *Cypripedium acaule* – Moccasin flower's range extends into Canada and the eastern United States. It is at its southern limit in northern Illinois. Never common in the state, it once grew abundantly in moist forests, forested fens and bogs. It only exists currently at one or two locations in northern Illinois.

screwstem *Bartonia paniculata*
Photo © B.E. Wofford, University of Tennessee

screwstem *Bartonia paniculata* – Screwstem grows in wet peat and sand in the southeastern United States and along the Atlantic coast. It reaches the northern limit of its range in extreme southern Illinois. Three populations are known from the state.

Agency Resources

More information about threatened and endangered species is available from the IDNR. The Illinois Natural History Survey, Illinois State Museum, Division of Wildlife Resources and Division of Natural Heritage study distribution and population levels of these species, maintain research collections, and develop and implement management plans. The 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 threatened or endangered species and their habitats. The IDNR Division of Education provides Illinois-specific educational materials for teachers, including the *Biodiversity of Illinois* CD-ROM series. A complete list of items available can be accessed at http://dnr.state.il.us/lands/education/CLASSRM/edmats02.htm.

Illinois Department of Natural Resources

Division of Education
One Natural Resources Way
Springfield, IL 62702
217-524-4126
dnr.teachkids@illinois.gov
http://dnr.state.il.us/lands/education

Division of Resource Review and Coordination
One Natural Resources Way
Springfield, IL 62702
217-785-5500
http://dnr.state.il.us/orep/nrrc/nrrc.htm

Illinois Natural History Survey
1816 South Oak Street
Champaign, IL 61820
217-333-6880
http://www.inhs.uiuc.edu/

Division of Natural Heritage
One Natural Resources Way
Springfield, IL 62702
217-785-8774
http://dnr.state.il.us/offices/resource.htm

Division of Wildlife Resources
One Natural Resources Way
Springfield, IL 62702
217-782-6384
http://dnr.state.il.us/orc/wildliferesources/

Illinois State Museum
502 South Spring Street
Springfield, IL 62706
217-782-0061
http://www.museum.state.il.us

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