Illinois Wildlife Preservation Fund Grant
Final Report
Project 08-L12W *Illinois Wild Mammals* and *Illinois Woodland Wildflowers* Posters

In July 2007, the Illinois Department of Natural Resources' (IDNR) Division of Education was awarded a $6,000.00 grant from the Illinois Wildlife Preservation Fund for the purpose of producing two new posters, *Illinois Wild Mammals* and *Illinois Woodland Wildflowers*. These posters were to become a part of the *Illinois Flora, Fauna, Habitats and Culture* series of posters, supplemental educational resources that can be used at all grade levels.

Text for the posters was written by Valerie Keener of the IDNR Division of Education with support and review from Bob Bluett, IDNR Wildlife Diversity Program Manager, Glen Kruse, Chief of the IDNR Division of Natural Heritage and John Wilker, IDNR Natural Areas Program Manager. For the *Illinois Wild Mammals* poster, the one-time right to use images was purchased from: Daybreak Imagery, Alma, Illinois (3 at $100 each); and Rob Curtis, The Early Birder, Chicago (5 at $75 each). Other images for the poster were obtained at no charge: Michael R. Jeffords, Illinois Natural History Survey, Champaign (1); Adele Hodde, IDNR Public Services, Springfield (6); Mike Redmer, U.S. Fish and Wildlife Service, Barrington (2); Timothy Carter, Ball State University, Muncie, Indiana (2); Hal S. Korber, Pennsylvania (1); Chris Young, State Journal-Register, Springfield (1); Erwin C. Nielsen, Painet, Incorporated (1); and Jim Rathert, Missouri Department of Conservation, Jefferson City, Missouri (1). For the *Illinois Woodland Wildflowers* poster, the one-time image rights were obtained from: Daybreak Imagery, Alma, Illinois (2 at $100 each); Rob Curtis, The Early Birder, Chicago, Illinois (4 at $75 each); Kenneth R. Robertson, Illinois Natural History Survey, Champaign (4); Ed Porter, Ed Porter Photography, Fort Smith, Arkansas (1); Rich Stevenson, Candler, North Carolina (1); and Adele Hodde, IDNR Public Services (16). Design and layout were provided by Brian McGrady (*Illinois Wild Mammals)* and Janice Thompson (*Illinois Woodland Wildflowers*) of the Illinois Information Services Graphics Division, Central Management Services (CMS), State of Illinois. Final cost to the agency was not available at the time of this report, but similar posters have accrued design charges of $1,500 - $2,000 each. Following a competitive bidding process by CMS, the printing bids for 10,000 copies of each of the posters were awarded as follows: Wayne-Wagoner Printing, Edwards, Illinois, $2,746.91 for the *Illinois Wild Mammals* poster; and Wayne-Wagoner Printing, Edwards, Illinois, $2,729.50 for the *Illinois Woodland Wildflowers* poster. Posters were received by the IDNR in mid-April (*Mammals*) and late June (*Wildflowers*) 2007.

Illinois Wild Mammals and *Illinois Woodland Wildflowers* help to supplement the Illinois State Board of Education's Illinois Learning Standards in Science (12A how living things function, adapt and change; 12B how living things interact with each other and with their environment). They may also be used to support Illinois Learning Standards in English Language Arts, Social Science and Fine Arts, depending upon how the instructor utilizes the posters. The front side of the *Illinois Wild Mammals* poster depicts 23 mammal species that are found in Illinois and provides their taxonomic classification. The back of the poster contains the following sections: What are Mammals?; Species Descriptions; Conservation; and Agency Resources. *Illinois*

Woodland Wildflowers has photographs of 28 species, with 20 on the front and eight on the back. Sections on the back of the poster include: Conservation; Species Descriptions; Key Terms; and Agency Resources. Posters are available through the IDNR online order form at http://www.idnrteachkids.com and are also distributed by the IDNR Division of Education at teacher conferences, ENTICE workshops and other events statewide. Ten thousand copies of each poster were printed.

Grant funds were used to pay for the printing of the posters. Total printing cost was $5,476.41, leaving $523.59 to be returned to the Illinois Wildlife Preservation Fund. Contractual general revenue funds ($1,175.00) were used to pay for the photographic rights and general IDNR funds paid the design and layout costs (invoice not yet received but approximate cost $3,000 - $4,000). Personnel costs were paid by the IDNR.

The IDNR Division of Education is very grateful for the support of the Illinois Wildlife Preservation Fund.

Illinois Wild Mammals

Virginia opossum *Didelphis virginiana*

Photo © Rob Curtis, The Early Birder

red bat *Lasiurus borealis*

Photo © Rob Curtis, The Early Birder

Rafinesque's big-eared bat *Corynorhinus rafinesquii*

Photo © Todd Fink, Daybreak Imagery

plains pocket gopher *Geomys bursarius*

Photo © Michael R. Jeffords

beaver *Castor canadensis*

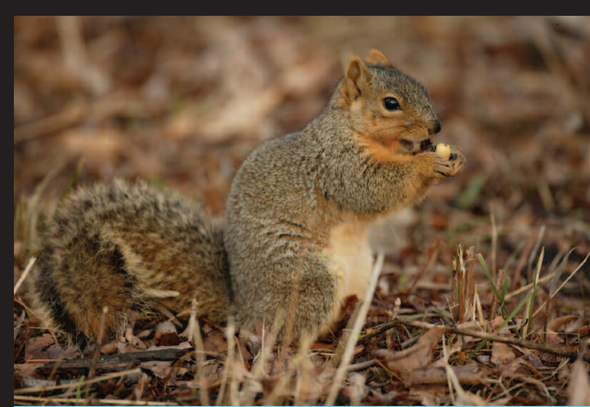
Photo © Rob Curtis, The Early Birder

red fox *Vulpes vulpes*

Photo © Rob Curtis, The Early Birder

red squirrel *Tamiasciurus hudsonicus*

Photo © Rob Curtis, The Early Birder



fox squirrel *Sciurus niger*

Photo © Adele Hodde, IDNR Public Services

marsh rice rat *Oryzomys palustris*

Photo © Timothy Carter

meadow vole *Microtus pennsylvanicus*

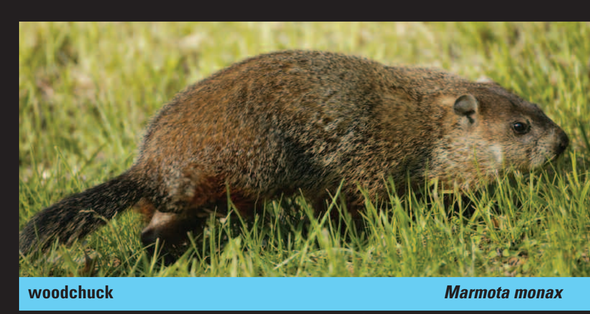
Photo © Michael Redmer

raccoon *Procyon lotor*

Photo © Adele Hodde, IDNR Public Services

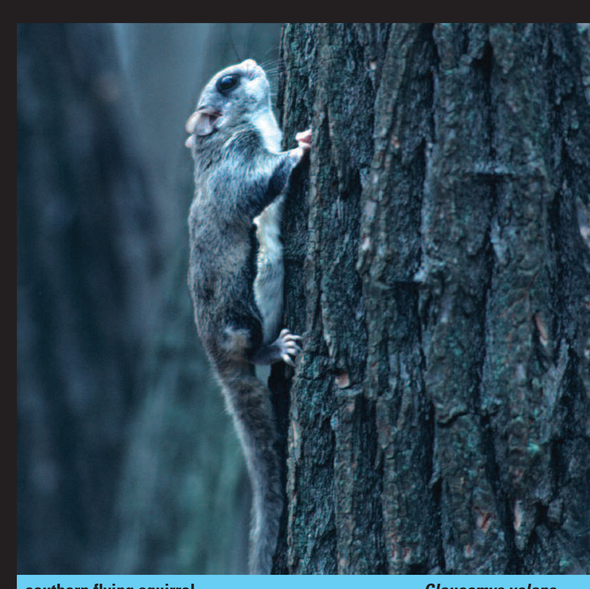
Franklin's ground squirrel *Spermophilus franklinii*

Photo © Chris Young, State Journal-Register



woodchuck *Marmota monax*

Photo © Adele Hodde, IDNR Public Services



southern flying squirrel *Glaucomys volans*

Photo © Richard Day, Daybreak Imagery

deer mouse *Peromyscus maniculatus*

Photo © Timothy Carter

golden mouse *Ochrotomys nuttalli*

Photo © Todd Fink, Daybreak Imagery

meadow jumping mouse *Zapus hudsonius*

Photo © Hal S. Korber from *Guide to Mammals of Pennsylvania* by Joseph F. Merritt. University of Pittsburgh Press, Pittsburgh, Pennsylvania. 1987.

southern short-tailed shrew *Blarina carolinensis*

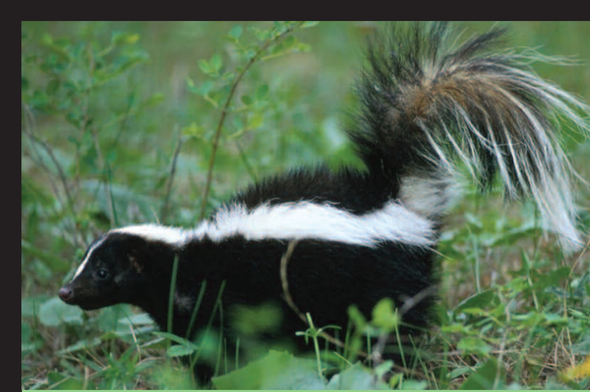
Photo © Michael Redmer

eastern mole *Scalopus aquaticus*

Photo © Missouri Department of Conservation, Jim Rathert

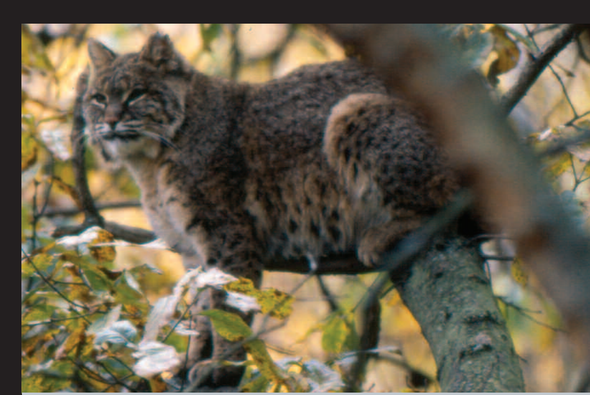
eastern cottontail *Sylvilagus floridanus*

Photo © Adele Hodde, IDNR Public Services



striped skunk *Mephitis mephitis*

Photo © Erwin C. Nielsen/Painet, Inc.



bobcat *Lynx rufus*

Photo © Adele Hodde, IDNR Public Services

white-tailed deer *Odocoileus virginianus*

Photo © Adele Hodde, IDNR Public Services

Large wild mammals are familiar by sight to most people. The majority of mammal species in Illinois, though, are small and usually hidden from view. They may be active at night or spend most of their life in obscured places, like under dead grasses or in the ground. Many times we know that they are present by the signs they leave behind. Tracks, scat and gnawed trees or nuts are all mammal signs. Wildlife populations are constantly changing. The area of land they inhabit expands and contracts over time. Some mammals, like the nine-banded armadillo (*Dasypus novemcinctus*), are expanding their range into southern Illinois. Others, like the white-tailed jack rabbit (*Lepus townsendii*), have disappeared from the state. These fluctuations explain why recent estimates of the number of wild mammal species in Illinois vary from 58 to 62. Bob Bluett of the Illinois Department of Natural Resources' Division of Wildlife selected the species depicted on this poster to represent the variety of mammal species found in our state.

Species List

Kingdom Animalia	Phylum Chordata	Class Mammalia	
Order Marsupialia	Family Didelphidae	Virginia opossum	*Didelphis virginiana*
Order Insectivora	Family Soricidae	southern short-tailed shrew	*Blarina carolinensis*
	Family Talpidae	eastern mole	*Scalopus aquaticus*
Order Chiroptera	Family Vespertilionidae	red bat	*Lasiurus borealis*
		Rafinesque's big-eared bat	*Corynorhinus rafinesquii*
Order Lagomorpha	Family Leporidae	eastern cottontail	*Sylvilagus floridanus*
Order Rodentia	Family Sciuridae	woodchuck	*Marmota monax*
		Franklin's ground squirrel	*Spermophilus franklinii*
		fox squirrel	*Sciurus niger*
		red squirrel	*Tamiasciurus hudsonicus*
		southern flying squirrel	*Glaucomys volans*
	Family Geomyidae	plains pocket gopher	*Geomys bursarius*
	Family Castoridae	beaver	*Castor canadensis*
	Family Muridae	marsh rice rat	*Oryzomys palustris*
		deer mouse	*Peromyscus maniculatus*
		golden mouse	*Ochrotomys nuttalli*
		meadow vole	*Microtus pennsylvanicus*
	Family Zapodidae	meadow jumping mouse	*Zapus hudsonius*
Order Carnivora	Family Canidae	red fox	*Vulpes vulpes*
	Family Procyonidae	raccoon	*Procyon lotor*
	Family Mustelidae	striped skunk	*Mephitis mephitis*
	Family Felidae	bobcat	*Lynx rufus*
Order Artiodactyla	Family Cervidae	white-tailed deer	*Odocoileus virginianus*

Mammals are not shown in equal proportion to actual size.

This poster was made possible by:

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

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

Illinois Wild Mammals

What are Mammals?

Mammals are animals that have four limbs and hair or fur. They are warm-blooded, meaning that their body temperature is kept at the same level regardless of the temperature of the environment. Most mammals have young born after developing in the female's uterus. A few primitive mammals lay eggs, but none of these species live in Illinois. After birth, mammal young are fed milk produced by the female's mammary glands. Mammals are also characterized by their large, complex brain.

Urban and rural areas are both homes for mammals. There are mammals adapted to live in woodland, water, prairie and soil habitats, and some species are generalists that can survive in most of these places. Human dwellings and other buildings provide homes for a variety of mammal species, too. Several bat species live in Illinois for part of the year and then migrate to more southern locations for the winter. Other mammals in Illinois spend about the same amount of time hibernating as they do being active during the year.

You may have noticed that this poster is titled *Illinois **Wild** Mammals*. There are also mammals in the state that are not considered to be wild. These are known as domesticated mammals. What's the difference? Wild mammal species are those that must find the food, water and shelter that they need without human assistance. Domesticated species have been brought under the care of humans, and their breeding has been controlled to emphasize certain characteristics such as production of meat, milk or fiber (wool) or compatibility with humans. All domesticated species have been derived from related wild species. Cows, horses, sheep, pigs and dogs are all domesticated mammals. A "tame" animal is any individual whose behavior has been changed to allow it to live with humans. For example, it is possible to tame a raccoon, but raccoons as a species are not domesticated. Some domesticated mammals escape from their owners or are released into the wild. If they manage to survive and reproduce in the wild, these once-domesticated mammals are known as "feral" animals. Feral hogs, dogs and cats are sometimes found in Illinois.

Conservation

While most Illinois wild mammals are commonly found, as of 2008, five mammal species are listed as endangered and four others are threatened in the state. The endangered mammals include Rafinesque's big-eared bat (*Corynorhinus rafinesquii*), the southeastern myotis (*Myotis austroriparius*), the gray bat (*Myotis grisescens*), the Indiana bat (*Myotis sodalis*) and the eastern wood rat (*Neotoma floridana*). The gray bat and Indiana bat are also on the federal endangered species list. Threatened mammals include the gray wolf (*Canis lupus*), the golden mouse (*Ochrotomys nuttalli*), the marsh rice rat (*Oryzomys palustris*) and Franklin's ground squirrel (*Spermophilus franklinii*). The gray wolf is a federally endangered species. A few of these species are at the edge of their historic range and have never been common in Illinois. Others were much more numerous residents and have seen drastic declines in their population. Habitat loss and human disturbances are factors affecting all of these species, however. Cave destruction or alteration, either natural or human-induced, has been detrimental to many bat species. Unwarranted killing by humans has also decimated some bat populations.

Several mammal species in Illinois, however, have recovered from low population levels. The white-tailed deer (*Odocoileus virginianus*), beaver (*Castor canadensis*) and river otter (*Lontra canadensis*) are examples of species that have been restored to abundance through translocation and careful regulation of harvest seasons. Regulated hunting and trapping help to maintain a balance between the needs of people and species that have flourished because of human-induced changes to the landscape.

Good-quality habitat is beneficial to all wild mammals and increases wildlife diversity in an area. Increasing the diversity of an area increases its ecological stability. A diverse natural habitat may help humans, too. 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.

Agency Resources

The Illinois Department of Natural Resources (IDNR) provides additional information and resources about wild mammals in our state. Researchers at the Illinois Natural History Survey study mammals, their distributions and population levels, and maintain collections of specimens. The IDNR Divisions of Natural Heritage and Wildlife monitor populations of wild mammals and make and implement management options. 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 Division of Education provides educational materials and teacher training on a variety of natural resources topics, including wild mammals, and offers grants for schoolyard wildlife habitat development and field trips for students. Many publications related to wild mammals and to wildlife habitat development are available through the publications order form at http://www.idnrteachkids.com.

Correlation to Illinois Learning Standards
The information on this poster may be utilized by teachers to help meet the following Illinois Learning Standards: 12.B.2a, 12.B.2b, 12.B.3b.

Illinois Department of Natural Resources

Division of Education
One Natural Resources Way
Springfield, IL 62702-1271
217-524-4126
http://dnr.state.il.us
dnr.teachkids@illinois.gov

Division of Natural Heritage
One Natural Resources Way
Springfield, IL 62702-1271
217-785-8774
http://dnr.state.il.us/offices/resource.htm

Division of Resource Review and Coordination
One Natural Resources Way
Springfield, IL 62702-1271
217-785-5500
http://dnr.state.il.us/orep/nrrc/nrrc.htm

Division of Wildlife
One Natural Resources Way
Springfield, IL 62702-1271
217-782-6384
http://dnr.state.il.us/orc/wildliferesources/

Illinois Natural History Survey
1816 South Oak Street
Champaign, IL 61820-6970
217-333-6880
http://www.inhs.uiuc.edu/

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.

Printed by the Authority of the State of Illinois. 10M 3/08 IISG 08-719

Species Descriptions

Mammals are part of the animal kingdom, in the Class Mammalia. The descriptions below will help you to learn more about them and their relationships to each other.

Order Marsupialia: The Virginia opossum is the only marsupial in Illinois. It bears young that are not fully developed.

Family Didelphidae

Virginia opossum ***Didelphis virginiana*** This mammal (head and body length 15.0 – 20.0 inches; tail 9.0 – 20.0 inches; 50 teeth) lives almost anywhere on land and feeds on a variety of items including plants, animals, carrion, garbage and pet food. When scared, the opossum may play dead, hiss, growl, bare its teeth or run. It is active at night and is found throughout the state. The young are very small when born. They crawl into a pouch on the mother's body where they develop for about two months.

Order Insectivora: The shrews and moles are insectivores. Shrews are active at night. Moles spend most of their life in tunnels under the ground's surface.

Family Soricidae

southern short-tailed shrew ***Blarina carolinensis*** This species (head-body length 3.0 – 4.0 inches; tail 0.7 – 1.0 inch; 32 teeth) has gray-black fur on most of the body and brown fur on the belly. It has a very short tail and no external ears. Found in the southern one-third of Illinois, the southern short-tailed shrew uses wooded areas, grassy fields and thickets for habitat. Active day and night year round, it eats invertebrates, including earthworms, snails, slugs and insect larvae.

Family Talpidae

eastern mole ***Scalopus aquaticus*** The eastern mole (head and body length 4.5 – 6.5 inches; tail 1.0 – 1.5 inches; 36 teeth) may be found statewide in Illinois living in wooded areas, pastures, gardens, cemeteries, farm fields and lawns. Its fur is gray-black. The distinctive paddlelike front feet with big claws are used for digging tunnels in the soil. Shallow tunnels are used for finding food, while deeper tunnels are used for resting and nesting. To change directions in a tunnel, the mole completes a slow somersault. This animal has a long, hairless nose. Its diet consists mainly of insects, but it will eat earthworms and other invertebrates, when available.

Order Chiroptera: Bats are the only true-flying mammals, with hands modified into wings. They use echolocation to find food.

Family Vespertilionidae

red bat ***Lasiurus borealis*** The nocturnal red bat (head and body length 3.5 – 4.5 inches; tail 1.8 – 2.0 inches; 32 teeth) roosts in trees and shrubs. This very common species is found statewide. The fur is rust-colored with white tips. Insects comprise the bulk of the diet. It migrates south out of the state for the winter.

Rafinesque's big-eared bat ***Corynorhinus rafinesquii*** The huge ears (more than 1.0 inch in length) distinguish this species. The ears can be curled when resting or hibernating, making identification difficult at first glance. This bat (head-body length 2.0 – 2.5 inches; tail 1.7 – 2.0 inches; 36 teeth) has brown-black fur on most of the body with belly fur white with black roots. It lives in the southern one-third of Illinois in trees, abandoned buildings, mines and caves. It flies late at night, eating insects. Hibernation occurs in mines and caves.

Order Lagomorpha: Rabbits and hares are mammals with a short, furry tail. They have four incisors (front teeth) on the upper jaw.

Family Leporidae

eastern cottontail ***Sylvilagus floridanus*** The eastern cottontail (head-body length 14.0 – 17.0 inches; tail 2.0 – 3.0 inches; 28 teeth) has large hind legs and long ears. Found statewide, this mammal is active at night, in the early evening and in the morning. It lives near brush piles, hedges, short grasses and shrubs, and feeds on plant materials such as grasses, clover, alfalfa, seeds, buds, fruits and bark. The female places the blind, helpless newborns in a shallow depression in the ground or a short burrow that is lined with hair and covered with grasses. The fur is gray-brown except at the back of the neck, where it is red-brown. The underside of the tail is white.

Order Rodentia: This order contains the most Illinois mammal species. Rodents have a large gap between the incisors and the rest of their teeth.

Family Sciuridae

woodchuck ***Marmota monax*** The woodchuck, also know as the groundhog, (head-body length 13.5 – 16.7 inches; tail 3.5 – 7.3 inches; 22 teeth) has red-brown fur on its back with scattered black hairs. Most of the hairs have a white tip. The front legs and hind feet are black. Found statewide, it lives in brushy or weedy areas, fencerows, forest edges, dams and railroad embankments. The diet includes plants and their parts, such as clovers, grasses, bulbs, leaves, fruits and bark. Active during the day, it usually spends no more than two hours out of its burrow. It digs tunnels but can also swim and climb trees. This species hibernates four to five months each year.

Franklin's ground squirrel ***Spermophilus franklinii*** Franklin's ground squirrel (head-body length 9.2 – 10.2 inches; tail 4.5 – 6.2 inches; 22 teeth) lives in the northern two-thirds of Illinois. Its body fur is olive-gray with scattered black hairs, while the belly has cream-colored hair. It inhabits areas with grasses short enough for it to see over when standing upright on its hind legs. It is active during daylight hours and feeds on carrion, insects, small mammals, birds, bird eggs and plants. This mammal digs a burrow deep enough so that the temperature inside remains above freezing in winter. It hibernates for about seven months each year.

fox squirrel ***Sciurus niger*** Forest edges, fencerows, woodlots and urban areas are all home to the fox squirrel (head and body length 10.5 – 15.0 inches; tail 7.0 – 14.0 inches; 20 teeth). Its rust-yellow fur and light yellow belly make it easily recognized. Found throughout Illinois, this tree squirrel eats fruits, tree buds, nuts, acorns, corn, flowers, leaves, fungi and insects. It is active early in the morning and late in the evening. Although the fox squirrel does not hibernate, it may sleep several consecutive days in winter. It builds a leaf nest or uses a cavity in a tree or a human-made nesting box for resting, shelter and raising young.

red squirrel ***Tamiasciurus hudsonicus*** The red squirrel (head-body 7.0 – 8.0 inches; tail 4.0 – 6.0 inches; 20 teeth) with its cinnamon, brown and black fur is similar in appearance to the fox squirrel but is much smaller. Its belly and feet are white or gray. In Illinois, it may be found in the northeastern part of the state associated with the Kankakee and Iroquois rivers and other areas where there are dense pine forests or dense hardwood forests with a thick understory. Tree buds, leaves, flowers, fungi, acorns, nuts, bark, fruit and insects make up its diet. Active early in the morning and late in the evening, the red squirrel uses a leaf nest or tree cavity for shelter.

southern flying squirrel ***Glaucomys volans*** The small (head and body 5.5 – 5.8 inches; tail 3.5 – 5.2 inches; 22 teeth) southern flying squirrel has a flap of loose skin between the front and hind legs that makes a gliding surface when the legs are stretched out. It lives statewide in hardwood forests near water. Hickory nuts, acorns, fungi, fruits, bark, bird eggs, insects and young birds are some of the foods it eats. Although active year round, this nocturnal species may sleep for several consecutive days in winter. The fur is gray-brown everywhere except for the white under side.

Family Geomyidae

plains pocket gopher ***Geomys bursarius*** The pocket gopher (head and body 5.5 – 9.0 inches; tail 2.0 – 4.5 inches; 20 teeth) is adapted to an underground existence, and it spends much of its time in burrows. The large front feet have claws for digging. The mouth can be closed behind the incisors so they can be used for digging without dirt entering the animal's mouth. Active day and night, this species eats plants. In Illinois, it is only found along the Kankakee and Illinois rivers. The fur is predominantly black.

Family Castoridae

beaver ***Castor canadensis*** The beaver is the largest rodent in Illinois (head and body 25.0 – 30.0 inches; tail 9.0 – 10.0 inches; 20 teeth). This nocturnal species has a large flat tail and webbed hind feet. It spends most of its time in water, only coming to land to rest, rear young and feed. Found statewide, it eats plants. Its fur is brown.

Family Muridae

marsh rice rat ***Oryzomys palustris*** Active year round, mainly at night, the marsh rice rat (head and body length 5.0 – 8.0 inches; tail 4.0 – 7.5 inches; 16 teeth) has gray-brown fur with white feet. The belly is gray. Living in the southern one-fourth of the state in marshes and swamps, it eats seeds and leaves of grasses and aquatic plants as well as insects, bird eggs, small mammals and snails. This species makes and uses runways.

deer mouse ***Peromyscus maniculatus*** The deer mouse (head and body 3.0 – 4.0 inches; tail 3.0 – 5.0 inches; 16 teeth) lives statewide in prairies, grasslands, pastures and fields. It is a nocturnal omnivore, feeding on insects, seeds and grains. It may store food for later consumption. This rodent builds a shallow burrow system or may use the burrows of other small mammals. The fur on the upper side of the animal is gray-brown, while the belly side is white. The tail is white on the lower half.

golden mouse ***Ochrotomys nuttalli*** Found in the southern one-fourth of Illinois in honeysuckle and greenbrier thickets associated with cane, conifers or sumac, the golden mouse (head and body length 3.3 – 3.8 inches; tail 3.3 – 3.8 inches; 16 teeth) has red or golden fur on most of the body with white belly fur. Acorns, seeds and fruits are the main components of the diet. This species lives in colonies and is active at night. The nest is built above ground or under debris on the ground and is used for resting as well as to raise young.

meadow vole ***Microtus pennsylvanicus*** The meadow vole (head and body length 3.5 – 5.0 inches; tail 1.5 – 2.0 inches; 16 teeth) has black fur with scattered red hairs. Its belly has white-tipped black fur. Found in the northern one-half of the state, this species inhabits moist areas with grasses or sedges, marshes, stream banks, wet fields, lake shores and gardens. It eats grasses, other green plants, bulbs, seeds and grains. Active day and night, this vole moves in underground burrows and above ground runways.

Family Zapodidae

meadow jumping mouse ***Zapus hudsonius*** The meadow jumping mouse (head and body 3.0 – 4.0 inches; tail 4.0 – 6.0 inches; 18 teeth) has grooved upper incisors. Its back feet are enlarged for jumping. Active mainly at night, this species can be found statewide in Illinois. It lives in moist areas in fields, woods and along streams, ponds and marshes. It eats seeds. The back and the top half of the tail are brown, the sides are gold with an orange stripe and the belly, bottom half of the tail and feet are white.

Order Carnivora: Carnivores feed primarily on prey that they capture. They are large- to medium-sized mammals with claws on their feet.

Family Canidae

red fox ***Vulpes vulpes*** Grasslands, field edges, bottomland woods and brushy areas throughout Illinois are habitat for the red fox (head and body 22.0 – 25.0 inches; tail 14.0 – 16.0 inches; 42 teeth). The red-orange fur is distinctive. The tail is a mix of red and black with a white tip. Generally a meat-eater (birds, dead animals, frogs, insects, small mammals) it also consumes some plant materials (seeds, berries, fruits, grasses). It uses a den in which to raise its young.

Family Procyonidae

raccoon ***Procyon lotor*** The black-masked face and ringed tail make the raccoon (head and body 18.0 – 28.0 inches; tail 8.0 – 12.0 inches; 40 teeth) easy to identify. Most of the fur is gray-black. This species can live in a variety of habitats, but they must be close to water. Its varied diet includes nuts, grains, seeds, berries, crayfish, fishes, reptiles and small mammals. It is common in urban areas. Active at night, this animal is found statewide.

Family Mustelidae

striped skunk ***Mephitis mephitis*** The skunk (head and body 13.0 – 18.0 inches; tail 7.0 – 10.0 inches; 34 teeth) is black except for the two white stripes on its back and the stripe on its head. Found statewide in urban areas, pastures, open woods or in roadside habitats, this species is active at night. Frogs, birds, dead animals, garbage, grasses, insects, fruits, small mammals and reptiles are all included in its diet. Young are raised in an underground den. The skunk will spray its bad-smelling scent on any animal it considers to be a threat, but it only does so after giving a warning.

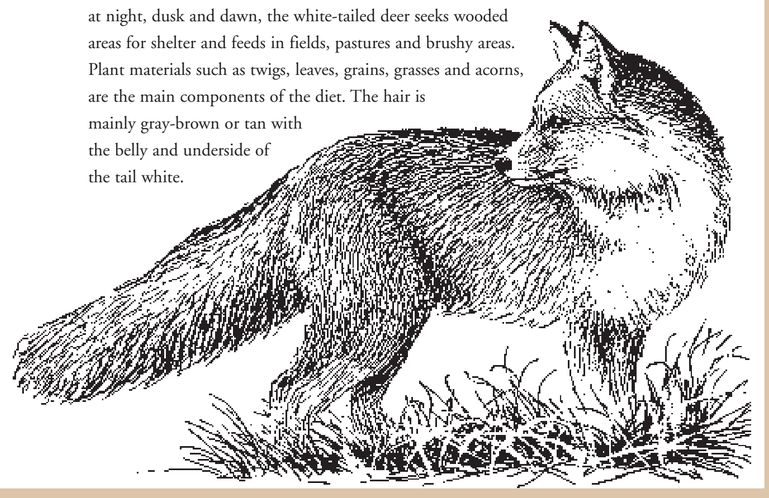
Family Felidae

bobcat ***Lynx rufus*** Active at night, the bobcat (head and body 25.0 – 35.0 inches; tail 5.0 inches; 28 teeth) lives in wooded bluffs or rolling hills mixed with open fields, brushy ravines or open lowlands along rivers. It preys upon mammals and birds. The fur is gray, brown and tan.

Order Artiodactyla: The even-toed ungulates have a stomach with four chambers.

Family Cervidae

white-tailed deer ***Odocoileus virginianus*** The white-tailed deer (head and body 4.5 – 6.5 feet; tail 6.0 – 12.0 inches; 32 teeth) is the largest Illinois wild mammal. It has hooves, and antlers that grow and are shed annually. Antlers are usually only found on males. Active mainly at night, dusk and dawn, the white-tailed deer seeks wooded areas for shelter and feeds in fields, pastures and brushy areas. Plant materials such as twigs, leaves, grains, grasses and acorns, are the main components of the diet. The hair is mainly gray-brown or tan with the belly and underside of the tail white.



Illinois WOODLAND Wildflowers

Photo © Kenneth R. Robertson
Jacob's-ladder *Polemonium reptans*

Photo © Adele Hodde, IDNR Public Services
columbine *Aquilegia canadensis*

Photo © Adele Hodde, IDNR Public Services
celandine poppy *Stylophorum diphyllum*

Photo © Richard Day, Daybreak Imagery
common phlox *Phlox divaricata*

Photo © Adele Hodde, IDNR Public Services
wild ginger *Asarum canadense*

Photo © Adele Hodde, IDNR Public Services
bluebells *Mertensia virginica*

Photo © Ed Porter Photography
rue anemone *Anemonella thalictroides*

Photo © Rich Stevenson, newaterfalls.com
yellow bellwort *Uvularia grandiflora*

Photo © Adele Hodde, IDNR Public Services
showy orchis *Galearis spectabilis*

Photo © Adele Hodde, IDNR Public Services
great waterleaf *Hydrophyllum appendiculatum*

Photo © Adele Hodde, IDNR Public Services
toothwort *Dentaria laciniata*

Photo © Adele Hodde, IDNR Public Services
bloodroot *Sanguinaria canadensis*

Photo © Rob Curtis, The Early Birder
woolly blue violet *Viola sororia*

Photo © Kenneth R. Robertson
squirrel corn *Dicentra canadensis*

Photo © Adele Hodde, IDNR Public Services
spring beauty *Claytonia virginica*

Photo © Adele Hodde, IDNR Public Services
mayapple *Podophyllum peltatum*

Photo © Adele Hodde, IDNR Public Services
purple trillium *Trillium recurvatum*

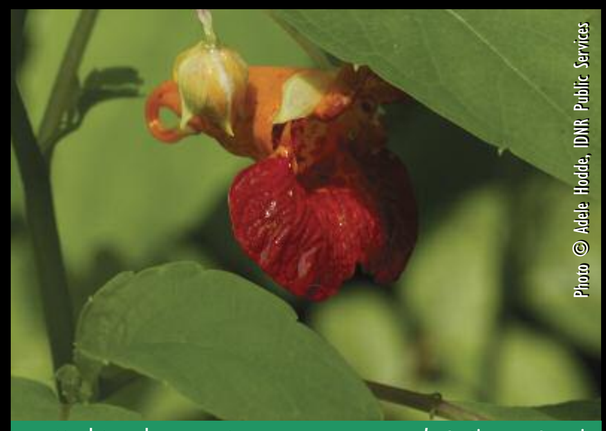


Photo © Adele Hodde, IDNR Public Services
spotted touch-me-not *Impatiens capensis*

Photo © Adele Hodde, IDNR Public Services
dwarf larkspur *Delphinium tricorne*

Photo © Adele Hodde, IDNR Public Services
Dutchman's-breeches *Dicentra cucullaria*

Colorful wildflowers blooming in Illinois' woodlands are a delight to behold. Nearly every week throughout the spring and summer an observer will be rewarded with glimpses of different species in flower. The 28 species illustrated on this poster were selected by John Wilker of the Illinois Department of Natural Resources' Division of Natural Heritage to illustrate the variety of species that grow in Illinois' woodlands and to encourage you to use some of these native species in your garden.

Species List

FAMILY ARACEAE – ARUM FAMILY
green dragon *Arisaema dracontium**
Jack-in-the-pulpit *Arisaema triphyllum**

FAMILY ARISTOLOCHIACEAE – BIRTHWORT FAMILY
wild ginger *Asarum canadense*

FAMILY BALSAMINACEAE – JEWELWEED FAMILY
spotted touch-me-not *Impatiens capensis*

FAMILY BERBERIDACEAE – BARBERRY FAMILY
mayapple *Podophyllum peltatum*

FAMILY BIGNONIACEAE – BIGNONIA FAMILY
trumpet creeper *Campsis radicans**

FAMILY BORAGINACEAE – BORAGE FAMILY
bluebells *Mertensia virginica*

FAMILY BRASSICACEAE – MUSTARD FAMILY
toothwort *Dentaria laciniata*

FAMILY FUMARIACEAE – FUMITORY FAMILY
squirrel corn *Dicentra canadensis*
Dutchman's-breeches *Dicentra cucullaria*

FAMILY GERANIACEAE – GERANIUM FAMILY
wild geranium *Geranium maculatum**

FAMILY HYDROPHYLLACEAE – WATERLEAF FAMILY
great waterleaf *Hydrophyllum appendiculatum*

FAMILY LILIACEAE – LILY FAMILY
white trout lily *Erythronium albidum**
Solomon's-seal *Polygonatum commutatum**
purple trillium *Trillium recurvatum*
yellow bellwort *Uvularia grandiflora*

FAMILY ORCHIDACEAE – ORCHID FAMILY
showy orchis *Galearis spectabilis*

FAMILY PAPAVERACEAE – POPPY FAMILY
bloodroot *Sanguinaria canadensis*
celandine poppy *Stylophorum diphyllum*

FAMILY POLEMONIACEAE – PHLOX FAMILY
common phlox *Phlox divaricata*
Jacob's-ladder *Polemonium reptans*

FAMILY PORTULACACEAE – PURSLANE FAMILY
spring beauty *Claytonia virginica*

FAMILY RANUNCULACEAE – BUTTERCUP FAMILY
doll's-eyes *Actaea pachypoda**
rue anemone *Anemonella thalictroides*
columbine *Aquilegia canadensis*
dwarf larkspur *Delphinium tricorne*
sharp-lobed hepatica *Hepatica acutiloba**

FAMILY VIOLACEAE – VIOLET FAMILY
woolly blue violet *Viola sororia*

* Photo found on reverse side.

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 poster was made possible in part by contributions to the Illinois Wildlife Preservation Fund.

Illinois WOODLAND Wildflowers

Flowers growing in forested areas must be able to survive changing conditions. They adapt to these changes in several ways. Many woodland wildflowers complete their life cycle early in the spring. In this manner, they are able take advantage of sunlight that will soon be blocked when leaves on canopy trees unfurl. They must quickly grow, flower and produce seeds. Their seeds can survive until conditions for growth are favorable. Several species grow from underground structures that store food produced during the short growing season. Other wildflowers of woodland habitats are adapted to conditions of low light, blooming later in the year and for a longer period of time. Those wildflowers growing near the edge of woodlands have access to more light than interior woodland species.

Conservation

As of 2008, 263 species of plants are listed as endangered in Illinois and 76 are threatened for the state. While not all of these species are woodland wildflowers, the threats to all plant species are important.

In the past, habitat destruction has been the main problem facing Illinois' native plants. Illinois retains only 11 percent of its land in the original vegetation type (49th in the nation). While habitat destruction remains a significant problem, habitat degradation is eroding the landscape's ability to maintain natural biodiversity. Habitat degradation by nonnative ("exotic") invasive plant species is the prime problem for native plant conservation. Exotic species lead to local extinctions by robbing native plants of critical resources (sunlight, water and nutrients) through increased competition and crowding. Another problem involves stress from grazing/browsing animals, such as white-tailed deer (*Odocoileus virginianus*). The deer population is often two to five times higher in an area than recommended by scientists for plant conservation and can decimate native plant populations. Habitat destruction leads to landscape fragmentation, with small isolated patches of habitat instead of larger habitat areas that are connected. Fragmentation reduces the amount of land suitable for dispersal and germination of seeds and increases the potential for local extinctions. Natural cycles serve as checks and balances on ecological processes, and land-use changes have disrupted these cycles with harmful effects. For example, periodic fires once were common in the state, and those plants adapted to the effects of fires were able to flourish. Now, unless set intentionally as a management tool, fires rarely occur in the Illinois landscape. Without regular fires, many forests experience a rapid change in the species growing in them. The result may be denser, shadier habitats that can contribute to local extinctions of wildflowers and tree seedlings that do not grow well in shaded conditions. Both habitat destruction and degradation lead to local extinctions. Once a plant species is gone from a particular habitat patch, it may be gone forever, affecting not only plant diversity but also animals and other organisms that were dependent on it.

green dragon *Arisaema dracontium* Photo © Kenneth R. Robertson

Species Descriptions

bloodroot *Sanguinaria canadensis*
Bloodroot flowers from early March through May. It grows in rich, moist woods throughout the state. This perennial plant develops from a thick underground stem. The distinctive red sap of the stem is the reason for the "bloodroot" name. The red sap was commonly used as a dye by Native Americans. The leaf arises from the base of the plant. The leaf is lobed, smooth, up to three inches wide and three inches long. It is rolled inward around the flower stalk when the plant is blooming. The white flower is borne on a stalk, and each flower may be one and one-half inches wide. The eight to 15 flower petals fall from the stalk after one day. Seeds are enclosed in a green capsule.

bluebells *Mertensia virginica*
Bluebells grow from shallow roots. The upright stems are sometimes branched and may reach two feet in height. The simple leaves are arranged alternately on the stem. Oblong to oval in shape, leaves may be up to six inches long. Flowers are arranged in clusters at the stem tip. Five blue petals per flower are united into a tube for most of their length. A flower may be one and one-fourth inches long. The fruit is a cluster of four wrinkled nutlets. Spectacular flowering displays of this species can be seen statewide in rich woods from late March to late May.

celandine poppy *Stylophorum diphyllum*
Celandine poppy, or wood-poppy, is a perennial with hairy stems that grow to about one foot in height. The stems have yellow sap that was commonly used as a dye by Native Americans. Leaves grow from the base of the plant and along the stem. The hairy leaves are pinnately lobed, with each leaf up to about 10 inches long. Flowers arise in clusters of up to four at the stem tip. There are four yellow petals per flower, and each flower may be two inches wide. The fruit is a hairy capsule, up to one inch long. Celandine poppy grows in rich wet woods of the southern one-fourth of Illinois as well as in Vermilion and Cook counties. Flowers are produced from March through May.

columbine *Aquilegia canadensis*
Growing from thick roots, the upright, branched stems of columbine may reach two feet in height. This perennial plant has basal leaves that are doubly compound, while the leaves on the upper stems are divided and do not have stalks. Flowers are produced in clusters at the stem tip, and a single flower may be two and one-half inches long on a slender stalk. The five petals are projected backwards into five hollow spurs that are red outside and yellow inside. In Latin, "*aquila*" means "eagle," so the genus name of *Aquilegia* refers to the five spurs that resemble an eagle's claws. The fruit is a cluster of five follicles with slender beaks. Columbine grows in rocky woods statewide and flowers from mid-April to July.

common phlox *Phlox divaricata*
Common phlox is also known as sweet William. A perennial plant, it grows upright or creeping with stems to one and one-half feet long. The leaves are oblong or oval and arranged opposite each other on the stem. Each finely hairy leaf may be up to four inches long. The light purple to blue flowers develop in clusters at the stem tip. Each flower has five petals. A single flower may be one and one-fourth inches wide. The seeds are contained in a capsule. Common phlox can be found statewide growing in rich open woods. It flowers from mid-April through early June.

doll's-eyes *Actaea pachypoda*

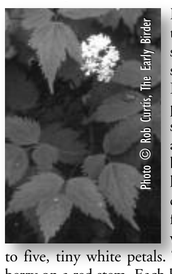



Photo © Rob Curtis, The Early Birder
Doll's-eyes is a perennial plant that grows from an underground stem. Above ground, the upright stems may reach two feet tall. Leaves develop at the base of the plant and along the stem, with the stem leaves in an alternate arrangement. The leaves are doubly compound with oval, toothed leaflets. Flowers arise in an oblong cluster at the stem tip. Each flower is about one-fourth inch wide on a short stalk and has three to five, tiny white petals. The fruit is an oval, shiny white berry on a red stem. Each berry has a purple dot on one end giving the appearance of a toy doll's eye, and thus, one of its common names. Growing statewide in rich thick woods and ravines, doll's-eyes blooms from May through June.

Dutchman's-breeches *Dicentra cucullaria*
This perennial plant grows from a bulb. It has no leaf-bearing stems. All leaves arise from the base of the plant. Each leaf is finely divided. Flowers develop in a cluster at the tip of a leafless stalk that may be 10 inches tall. Each flower may be two-thirds inch long and up to three-fourths inch wide. The four petals are arranged in two inflated pairs that are white except for a yellow tip. Petals spread out and have pointed spurs at the base. The fruits are oblong to linear, smooth and up to one inch long. Each fruit contains several seeds. Dutchman's-breeches may be found statewide growing in rich woods. Flowers are produced from mid-March through early May. Its common name was given to the plant because the flowers resemble the wide-legged pants worn by early European settlers.

dwarf larkspur *Delphinium tricorne*
Dwarf larkspur, wild larkspur and spring larkspur are all common names for this perennial plant. It grows from roots and may attain a height of two and one-half feet. The leaves are arranged alternately on the stem, with each leaf having five to seven lobes. The blue flowers are clustered at the tip of a stalk. Each flower has four petals, and a single flower may be one and one-half inches long. Five sepals are also present, of which one is developed into a spur. Dwarf larkspur grows in the southern two-thirds of Illinois in rich woods and produces flowers from April through June.

great waterleaf *Hydrophyllum appendiculatum*
This upright perennial may reach a height of up to one foot or more. Its leaves have five to seven shallow lobes. Each leaf is toothed, hairy and mottled with green and gray. The general appearance of the leaf is similar to that of a maple tree leaf. Flowers are produced in a cluster at the stem tip. Each five-petaled, purple flower is up to one-half inch wide. The fruit is a small spherical capsule. Found statewide, great waterleaf grows in rich bottomland woods and blooms from April through July.

green dragon *Arisaema dracontium*

Photo © Kenneth R. Robertson
The unique flower structures of green dragon can be observed when the plant blooms in woodlands statewide from mid-April through late May. This perennial grows from an underground corm and has no leaf-bearing stems. The one leaf present arises from the base of the plant and has as many as 17 leaflets. The flowers are clustered at the base of a cylindrical column called a spadix that extends into a long (up to seven inches) yellow appendage, or "dragon's tongue." The spadix is enveloped in a protective green sheath. Male and female flowers are sometimes on the same plant, and sometimes on different plants. The flowers do not have petals. The fruit is a red-orange berry, and berries can be seen clustered in thick heads.

Jack-in-the-pulpit *Arisaema triphyllum*

Photo © Richard Day, Daybreak Imagery
Jack-in-the-pulpit, or Indian turnip, is a perennial that develops from an underground corm. There are no leaf-bearing stems. The one or two leaves present grow from the plant's base and may reach a height of more than one foot. Each leaf is divided into three smooth leaflets. The flowers lack petals and are clustered at the base of a cylindrical column called a spadix, that is covered by a leaflike structure (spathe) that encircles it and arches over the top. The spathe can be green, purple or purple striped. The common name for this plant is derived from this arrangement (the Jack, or preacher, in his covered pulpit). The fruit is a red berry, and berries are arranged in a cluster. Jack-in-the-pulpit flowers in April and May in woods throughout the state.

Jacob's-ladder *Polemonium reptans*
A perennial that grows from a short, thick root, Jacob's-ladder may have upright or spreading stems and can reach one foot in height. The pinnately compound leaves are arranged alternately on the stem. Each leaf has three to 13 oblong, smooth leaflets. Five pale blue petals develop per flower, with flowers clustered at the tip of the stem. Each flower may be two-thirds inch wide. The fruit is an ovoid capsule that usually contains three seeds. Jacob's-ladder grows statewide in rich woods and flowers from April through June.

mayapple *Podophyllum peltatum*
The mayapple, or mandrake, is a common perennial inhabitant of woods throughout Illinois. It develops from an underground stem. The smooth, upright stem grows to about two feet in height and has two umbrellalike leaves, each with five to nine lobes. A single leaf may be 14 inches wide. The leaves attach to the stalk from their bottom center. Flowering occurs from late March to June. One white flower develops where the leaf stalks join the main stem. The flower has six to nine petals and only lasts for a day or two. The fruit is an ovoid, yellow berry that may be two inches long. The fruit ripens in August.

purple trillium *Trillium recurvatum*
The purple trillium is also known as the purple wake robin. Found statewide in rich woods, this perennial arises from thick roots. Its upright, unbranched stem may be one and one-half feet tall. Three leaves are present in a whorl under the flower. Leaves are mottled and up to four inches long. A single flower blooms at the stem tip. The flower has three maroon petals, each up to one and one-half inches long. The fruit is an ovoid, six-angled dry berry, about three-fourths inch long. This species blooms in Illinois from late March to late May.

rue anemone *Anemonella thalictroides*
Rue anemone is a perennial plant that grows from thick roots. Its upright, unbranched stems may attain a height of eight inches. The plant's compound leaves have three divisions that are further divided into three oval leaflets. Flowers develop in a small cluster at the stem tip. Each flower may be one inch wide and has its own stalk. There are no petals. What appear to be petals are actually sepals, with five to nine per flower. Sepals may be white, pink, lavender or shades of these colors. Fruits are a cluster of achenes, dry, hard fruits with one seed. Each achene may be up to one-half inch long. Rue anemone grows statewide in dry open woods, and blooms from late March through June.

sharp-lobed hepatica *Hepatica acutiloba*

Photo © Rob Curtis, The Early Birder
Also known as liverleaf, sharp-lobed hepatica grows statewide in rich upland woods. This perennial plant has no leaf-bearing stems. Leaves arise from the base of the plant on long stalks. Each leaf has three, pointed lobes. Flowers develop singly on stalks that may be eight inches tall. There are no petals. Each flower is composed of five to nine sepals that are white to lavender in color. Fruits are dry, hard, one-seeded structures (achenes). Sharp-lobed hepatica flowers from early March to early May.

showy orchis *Galearis spectabilis*
Showy orchis grows throughout Illinois in rich low woods and blooms from mid-April through June. It is a perennial whose two leaves grow from the base of the plant. Each smooth leaf may be up to six inches long and three inches wide. Flowers develop in a short spike. Each flower, purple and white, is about one inch long. There are three petals per flower, covered by a hood of the united three sepals. The fruit is a capsule, about one inch in length.

Solomon's-seal *Polygonatum commutatum*

Photo © Kenneth R. Robertson
This perennial wildflower grows from a thick underground stem. Its upright, unbranched leaf stems attain a height of one to three feet. The lance-shaped to oval leaves are arranged alternately on the stem. Leaves are smooth and may be six inches long and four inches wide. Flowers hang from leaf axils in clusters of two. The green-white flowers are shaped like a tube. The fruit is a spherical, dark-blue berry. Solomon's-seal grows statewide in rich woods, on riverbanks and in thickets. It flowers from May through mid-June

spotted touch-me-not *Impatiens capensis*
An annual herb, spotted touch-me-not has upright stems that may grow to eight feet tall. The smooth, toothed leaves alternate on the stem. Each leaf may be up to three inches long. Orange flowers, up to one and one-half inches in length, arise from the tip of the leaf petiole. The fruits are capsules, up to one inch long. Spotted touch-me-not grows in moist woods, on stream banks, in marshes and in swamps. Flowers develop from June through September. When mature capsules are touched, they split open, throwing the seeds several feet away.

spring beauty *Claytonia virginica*
A woodland carpet of spring beauty flowers is a common sight from March through May. Two leaves develop opposite each other, with each leaf up to six inches long and one-half inch wide. Flowers form in a cluster at the stem tip. A single flower may be one inch wide. The five petals are white or pink. The fruit is a nearly spherical capsule, about one-fourth inch in diameter, with three to six flat seeds. This perennial grows statewide in moist or dry open woods and occasionally prairies, as well as parks, cemeteries and lawns under tree canopies.

squirrel corn *Dicentra canadensis*
Squirrel corn has an appearance very similar to that of Dutchman's-breeches. Its common name is derived from its yellow tuber that looks like a grain of corn a squirrel may have buried. This perennial has no leaf-bearing stems. The leaves grow from the base of the plant and are finely divided. Flowers are clustered at the tip of a stalk that may be 12 inches tall. Four white or yellow-white petals are arranged in two pairs with rounded spurs at their base. A flower may be two-thirds inch long and three-fourths inch wide. The fruit is a capsule, about one inch long, that splits down the sides to release seeds. Squirrel corn grows statewide in rich woods and flowers from late March through mid-May.

toothwort *Dentaria laciniata*
Also known as pepper-root, toothwort is a perennial plant with unbranched stems that may be up to one foot in height. Leaves develop at the base of the plant as well as in a whorl of three below the flowers. Leaves are palmately lobed, and the lobes are usually coarsely toothed. Flowers are up to three-fourths inch long and wide and develop in clusters at the stem tip. Flower petals may be white, pale lavender or pink. The fruit is long (up to one and one-half inches) and slender, with a single row of seeds. Flowering occurs from early March to April in rich woods throughout the state. It is one of the first wildflowers to bloom in spring.

trumpet creeper *Campsis radicans*

Photo © Rob Curtis, The Early Birder
A perennial woody vine, trumpet creeper climbs using aerial rootlets. Its leaves are arranged oppositely on the stem and are pinnately compound, with seven to 11 toothed leaflets. The orange-red flowers have five petals in a trumpetlike arrangement. Each flower is about three inches long. The fruit is a capsule. Trumpet creeper is native to the southern half of Illinois but has spread statewide. It grows in roadsides, fields, thickets and the edges of woods. Flowers are produced from June through August.

white trout lily *Erythronium albidum*

Photo © Adele Hodde, IDNR Public Services
White trout lily, adder's tongue and white dog-tooth violet are all common names for this perennial species. There are no leaf-bearing stems, but the plant does produce two basal leaves, some with dark blotches, that may be six to nine inches tall. Its single flower has six white petals that may show purple on the back. The fruit is a capsule with several seeds. White trout lily may be found statewide growing in woods and fields. It flowers from March through May.

wild geranium *Geranium maculatum*

Photo © Adele Hodde, IDNR Public Services
A perennial plant that grows from thick roots, wild geranium has upright stems that may grow to one and one-half feet tall. The leaves at the base of the plant have three to five lobes, are hairy and may be up to five inches wide. The stem leaves are opposite, hairy and smaller than the basal leaves. Flowers are produced in a cluster at the stem tip. Each flower has five, rose-purple petals that may be one and one-half inches long. The fruit is a capsule, about one and one-half inches long. Wild geranium grows statewide in rich woods and produces flowers mid-April through June.

wild ginger *Asarum canadense*
Wild ginger flowers from April through May in rich Illinois woodlands. A perennial plant, it grows from underground stems and fleshy roots. There are no stems above ground. Two oppositely arranged leaves are produced, each leaf being heart-shaped, hairy, about six inches long and on a hairy stalk. The single flower arises from the leaf axil. There are no petals. Three maroon sepals have the appearance of petals. Sepals are united at the base and usually the tips point downward. The fruit is a spherical capsule about one-third inch in diameter. When disturbed, the underground stem gives off the aroma of ginger.

woolly blue violet *Viola sororia*
The woolly blue violet is the State Flower of Illinois. A perennial plant, it grows to three to eight inches in height. The heart-shaped leaves are produced in a cluster close to the ground. Blue or purple flowers arise on separate stalks than the leaves, with one flower per stalk. Flowers are variable in size, color and shape. Leaves are often taller than the flowers. Each flower has five petals, and the lower petals show much veining. The fruit is a capsule with several seeds. Found statewide in woods, this violet flowers from March through May.

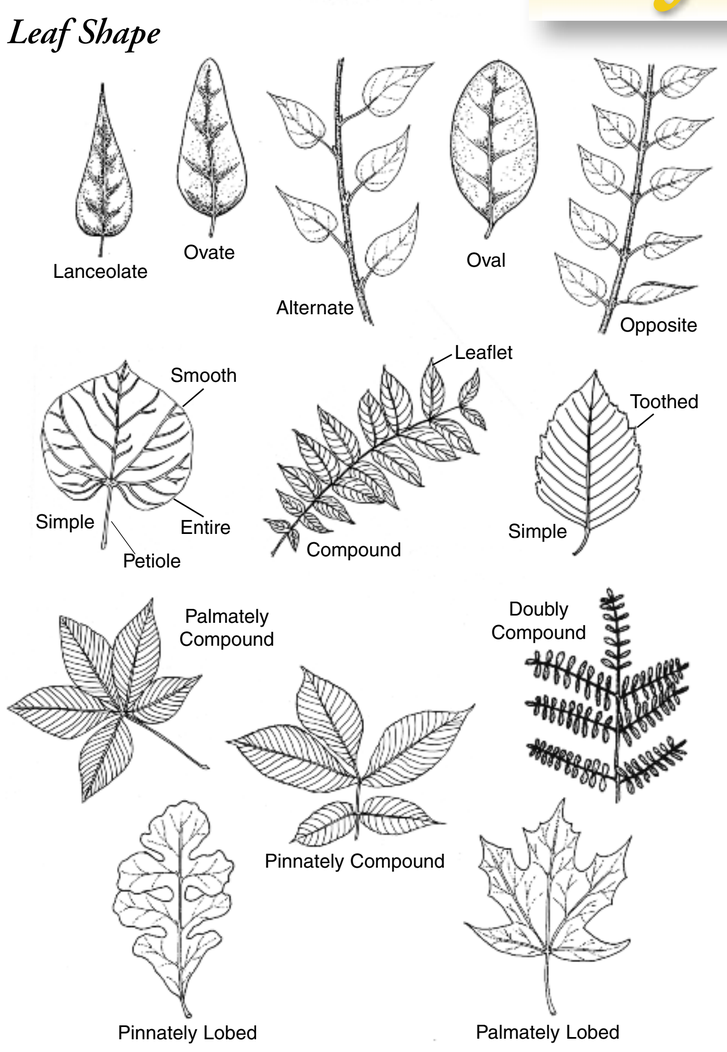
yellow bellwort *Uvularia grandiflora*
Flowers are produced in this perennial species from mid-April through mid-May. Found statewide in rich woods, this wildflower grows from thick roots. Its upright, smooth stems are often branched and may be one and one-half feet tall. The simple leaves are arranged alternately on the stem. Each leaf is oblong to oval, smooth and about four inches long. The leaf appears to surround the stem. Each yellow flower may be one and one-half inches long and is found singly at the stem tip, where it droops from a curved stalk. The fruit is a three-angled capsule, up to one-half inch in length with a few seeds.

Glossary

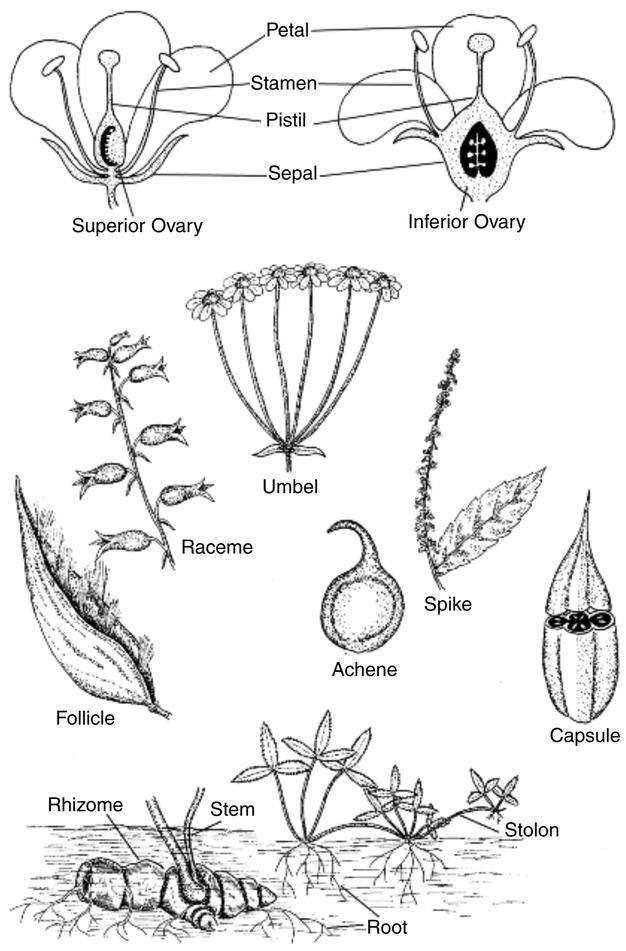
annual	plant that completes a cycle from seed germination to seed production in one year
berry	multi-seeded fleshy fruit
bulb	underground bud with fleshy leaves and a flat stem
corm	underground vertical stem with scaly leaves
nutlet	a small nut
perennial	plants that live three or more years
tuber	underground stem used as a storage organ

Key Terms

Leaf Shape



Flower and Fruit Structures



Illustrations used with permission from *Spring Woodland Wildflowers of Illinois*, Illinois Department of Natural Resources (IDNR), 1980. *Forest Trees of Illinois*, IDNR, 2006, and *Illinois' Forest Facts*, IDNR, 2006.

Agency Resources

The Illinois Department of Natural Resources (IDNR) provides additional information and resources about woodland wildflowers in our state. Researchers at the Illinois Natural History Survey study woodland wildflowers, their distributions and population levels, and maintain collections of specimens. The Division of Natural Heritage monitors populations of woodland wildflowers and makes and implements management options. 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 Division of Education provides educational materials and teacher training on a variety of natural resources topics, including woodland wildflowers, and offers grants for schoolyard wildlife habitat development and field trips for students. Many publications related to woodland wildflowers and to wildlife habitat development are available through the publications order form at http://www.idnrteachkids.com.

Illinois Department of Natural Resources

Division of Education
One Natural Resources Way
Springfield, IL 62702-1271
217-524-4126
http://dnr.state.il.us
dnr.teachkids@illinois.gov

Division of Natural Heritage
One Natural Resources Way
Springfield, IL 62702-1271
217-785-8774
http://dnr.state.il.us/offices/resource.htm

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

Division of Resource Review and Coordination
One Natural Resources Way
Springfield, IL 62702-1271
217-785-5500
http://dnr.state.il.us/orep/nrrc/nrrc.htm

Common and scientific names used on this poster are referenced from *Vascular Flora of Illinois* by Robert H. Mohlenbrock, 2002, Southern Illinois University Press, Carbondale, 490 pp.

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10M–5/08 • IISG08-137