

# MISSOURI'S Raptors

BY CAROL DAVIT

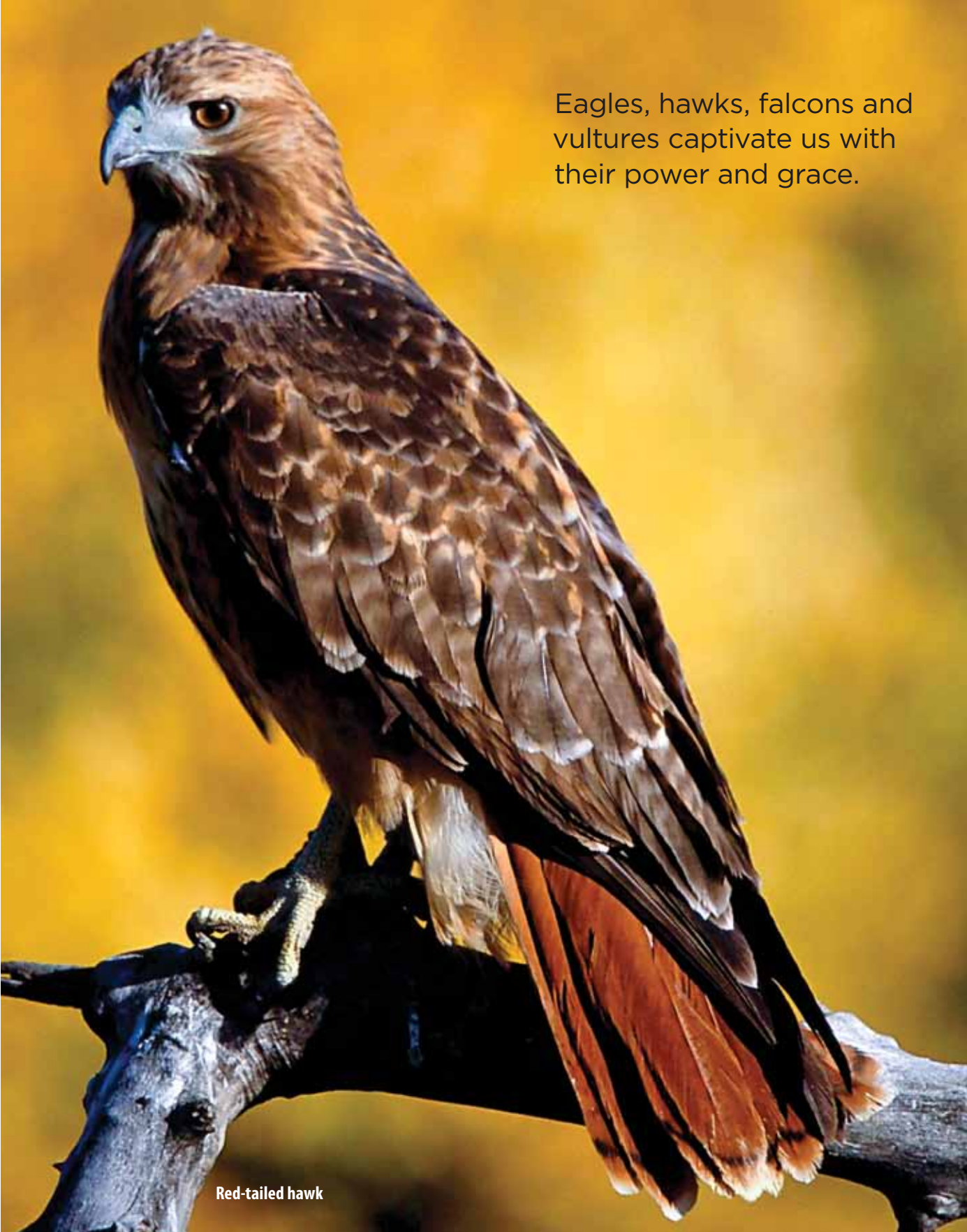




Cover photo by Noppadol Paothong, Red-shouldered hawk

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Eagles, hawks, falcons and vultures captivate us with their power and grace.

Red-tailed hawk



**W**e know more about the hunting behavior of raptors, aptly known as “birds of prey,” than we do about many of Missouri’s other native predators. That’s because most predators, including bobcats, otters, coyotes and our nocturnal raptors, the owls, primarily hunt at night. Eagles, hawks, falcons and most other raptors, however, hunt during the day, allowing us to observe their predator-prey relationships in forests, woodlands, prairies, wetlands, and even along roadsides.

### What Makes a Raptor a Raptor?

Despite differences in size, habitat, feeding habits and flight, most raptors share the following traits:

- Strong feet, toes and talons, for killing and holding prey. In fact, the word raptor derives from the Latin *raptus* (“one who seizes”).
- A large, curved beak for tearing flesh.
- Sharp vision, up to eight times better than humans. If you could see like a hawk, you could read a newspaper from a football field away.
- A bony shield above each eye, protecting the eyes from tree limbs, brush and struggling prey. These bony projections also shield raptors’ eyes from the sun as the birds soar to stalk prey.
- Simple calls—harsh, high-pitched screams, cries or whistles.
- Solitary hunting strategy, although vultures and, to some extent, bald eagles, are scavengers.
- Size difference between males and females in many species. The female is sometimes as much as twice as large as the male. Because of this, males and females sometimes seek different-sized prey, which is especially helpful for brood survival.
- Nests constructed from sticks in tall trees, along cliffs or even atop utility poles. Nests are often used year after year by the same birds and grow larger each season. Most raptors lay one to three or four to six eggs every year, depending



NOPPAPOL PAOTHONG

Black vultures



on the species, with both parents usually sharing in incubation and brood rearing.

- Fantastic flyers. Large hawks, eagles and vultures can glide for miles on rising air currents; kites can dart and swoop like acrobats; and falcons can dive with terrific speed.

Scientists have placed eagles, hawks, falcons, osprey, kites and vultures into the taxonomic orders: Falconiformes. Owls (Order Strigiformes) share many traits with these raptors but are nocturnal, hunt primarily by sound rather than vision and swallow prey whole rather than tearing it apart. There are 290 species of raptors worldwide, 33 in North America and 19 that have been observed in Missouri.

## Raptors and People

The bald eagle—found only in North America—is our national symbol. Eagles, hawks, vultures and falcons appear on national, tribal, family and sports team emblems, crests, coats of arms and flags around the world. Images of raptors appear in relics from the civilizations of the Aztecs and Romans, and in ancient Zimbabwe, Egypt and numerous regions of the Middle East, Europe and Asia. Many Native Americans continue traditions of using raptor images and artifacts in ceremonies to invoke the spirit and power of these exceptional hunters.

Why have raptors figured so prominently in human history? Being large and active during the day, raptors are noticeable. Because raptors spend considerable time quietly stalking prey, either by soaring or perching in trees, people have had time to study them. Their calls are loud and simple and immediately capture attention.

Beyond their regal stature and strength, something more primal attracts us to raptors. Like humans, raptors are top predators. We respect their keen purpose and focus, their hunting prowess, their speed and grace.

## Raptor Conservation

Being at the top of the food chain has its perils. If what you eat is poisoned, you may be poisoned, too. After World War II, long-lived pesticides, like DDT, entered food chains worldwide. Rodents and fish ate contaminated insects; small birds, mammals and reptiles ate rodents; and raptors ate these animals, with concentrations of pesticides accumulating in fatty tissues at higher levels up the food chain.

Pesticide contamination in bald eagles, osprey and other raptors caused thin-shelled or otherwise defective eggs, so populations plummeted. In 1972, Congress banned the use of DDT within U.S. borders, but DDT persisted in ecosystems for decades. In 1978, the U.S. Fish and Wildlife Service placed bald eagles on the federal endangered species list. No successful bald eagle nests were known in Missouri between 1965 and 1982, and eagles disappeared as summer residents. Illegal shooting of bald eagles and other raptors also decreased populations, as did the loss of habitat to development.

Since the 1980s, bald eagles have made a nationwide comeback, thanks to the decline of DDT in food chains, legal protection and reintroductions to states where they had ceased to nest. In 2007, there were more than 10,000 pairs of bald eagles nesting in the United States, with about 150 known nests in Missouri. The Fish and Wildlife Service removed eagles from the endangered species list in 2007.

The bald eagle is the national symbol of the United States and is still protected under the Bald and Golden Eagle Protection Act. Bald eagles, and all other migratory birds, are also protected under the 1918 federal Migratory Bird Treaty Act, which prohibits the killing, capture, possession, sale or shipment of any migratory bird except as provided for by regulations.

Living conditions for many raptors have improved in Missouri, and conservation efforts will ensure their presence here. Here's what you can do to help:

- Support efforts to conserve and restore the natural communities that raptors require. Different raptors need prairies, bottomland forests, wetlands, rivers, lakes and upland forests, woodlands and savannas.
- Dispose of toxins and wastes properly: keep human waste, motor oil, pesticides and other contaminants out of water bodies and soil.
- Properly dispose of fishing line, which can entangle raptors.
- Build nest boxes for American kestrels (formerly called sparrow hawks).

Nest plans are available from [www.MissouriConservation.org/8437](http://www.MissouriConservation.org/8437).

- Support Missouri organizations like the World Bird Sanctuary in Valley Park, Missouri (636-861-3225, [www.worldbirdsanctuary.org](http://www.worldbirdsanctuary.org)) and the Raptor Rehabilitation Project of the University of Missouri-Columbia (573-882-5972 or 888-850-2357, [www.raptorrehab.missouri.edu](http://www.raptorrehab.missouri.edu)). These organizations engage in conservation efforts and rehabilitate injured raptors, which are used in educational programs.





## RAPTOR FAQs

**Will hawks eat my pets?** This happens occasionally, but is unlikely, especially if you keep your pets close to home and don't allow them free run of the outdoors. Occasionally a hawk—especially an immature one—will swoop toward a dog or cat then veer away, realizing that the pet is too large to take as prey.

**If we want to protect songbirds and game birds, shouldn't we get rid of some raptors?**

No. The greatest threat to songbirds and game birds is destruction or degradation of habitat, not natural predators. Free-ranging and feral cats, which are non-native predators, are a far greater threat than raptors. Killing raptors could actually hurt populations of birds since raptors help control rodents and other small mammals that prey on ground-nesting birds. Moreover, it is illegal to kill any raptor.

**Why is it illegal to keep a hawk feather or an eagle feather that I found in the woods?**

It would be impossible to prove that the feather—or any other raptor body part—you found did not come from an illegally taken bird. The 1918 Migratory Bird Treaty Act, which originated between Canada and the United States in 1916 to protect migratory birds from “indiscriminate slaughter” by market hunters and others, protects more than 800 species of birds, including raptors.

**What should I do if I find an injured hawk or eagle?**

You can leave it where you found it and let nature take its course. You can also call your local Missouri Department of Conservation office for information about local raptor rehabilitators. These are licensed rehabbers who are permitted to work with birds of prey.

Do not feed the bird, give it water or move it until talking with a rehabber. Remember that raptors have sharp talons and powerful beaks. Even young or injured birds can hurt you if you handle them. For more information, visit the University of Missouri's Raptor Rehabilitation Project's Web site at [www.raptorrehab.missouri.edu/injured.html](http://www.raptorrehab.missouri.edu/injured.html).

**What eats raptors?** Raccoons, bobcats and coyotes will sometimes eat raptors that are on the ground, especially injured raptors or young rap-

Bald eagle

JIM RATHER

tors that are learning to fly. Many animals, including raccoons, snakes and other birds, will eat raptor eggs. Larger raptors will eat smaller raptors. Some female raptors will kill and eat their mates or young if food is especially scarce.

**What is a chicken hawk?** When people use the term chicken hawk, they are probably referring to a red-tailed hawk because these are the hawks most readily seen. Red-tails eat a wide variety of prey, although not many birds. Cooper's hawks and sharp-shinned hawks prey almost exclusively upon small birds, and all three hawks may hunt chickens if given the opportunity.

**What are the hawks that I see near my bird feeder?** Cooper's, merlins and sharp-shinned hawks have adapted to wooded suburbs and are attracted to concentrations of small birds, including those around bird feeders. These hawks are swift and agile, able to catch birds in flight.

**What are the large hawks I see perched along the highway?** Those are most likely red-tailed hawks, the most abundant large hawks in Missouri. Grassy highway medians are ideal habitat for small rodents and snakes, which red-tails hunt from their perches in large trees or power line poles. When perched, red-tails appear to have a puffy white chest and a brown band of feathers at the belly. The characteristic red tail of the adults is often visible.

**What are the small hawks I see hovering over the median along the highway?** They are probably American kestrels. These small, colorful raptors perch on telephone wires or hover over grassy highway medians, quickly beating their wings before they dive to the ground to seize a grasshopper or mouse.

**Do raptors mate for life?** Many raptors form pair bonds, meaning they have one mate during their lifetime. This may be due to attachment of the birds to nest sites, rather than loyalty to each other. Both the male and female may bond to a successful nest site, and both return there and mate with each other. If one of the pair dies, the other often will take a new mate. Male harriers will mate with several females if prey is especial-

ly abundant, taking advantage of plentiful food to increase harrier populations.

**How long do raptors live?** In captivity, raptors—especially larger species—have lived 30 to 50 years in captivity, depending on the species. In the wild their typical life span is much shorter, ranging from about 5 to 20 years. This is due to periodic shortages of prey, severe weather, predators, competition and disease. Up to 70 percent of raptors die within their first year of life.

Some raptors in Missouri have died from West Nile virus, but not at levels that threaten their statewide populations. Raptors also become injured or die due to habitat loss, illegal shooting, baited traps intended for other animals, carelessly discarded fishing line, collisions with power lines and cars, and ingestion of toxic chemicals, including household pesticides, at dump sites.



### *A Fine Kettle of Hawks*

While many raptors migrate solo, some, like broad-winged hawks, fly as a group called a "kettle." Kettles of hundreds of broad-wings have been seen in Missouri in late April and the third week of September, and kettles of tens of thousands of these birds migrate in spring and fall in the southern United States, Mexico and Central America. Many raptors time their migrations with the migrations of prey, like migrating dragonflies, so they will have a readily available food source along the way. Because of raptor migration, more of them are usually seen in Missouri in spring and fall.

Why do they migrate? The short answer is "because they can." While some raptors stay in Missouri year-round, many fly to where food and nesting sites are more plentiful. For example, bald eagles summering in the northern states winter in Missouri where rivers and lakes are not frozen solid, so they can hunt and scavenge fish in open water. Broad-winged hawks winter in the tropics, but nest in Missouri and elsewhere in North America. This helps them avoid nesting competition further south. Harsh winters in Missouri can drive some raptors to Arkansas and further south.



# VULTURES

Vultures differ from other raptors in that they rarely hunt prey, living primarily on carrion (dead animals). They feed their young regurgitated carrion instead of fresh meat. Vultures are well adapted to scavenge. Unlike most other birds, they have a keen sense of smell, assisted by the large hole in their beaks, which they use, along with sight and sound, to locate carrion. Their heads have no feathers, which helps keep the birds clean when feeding. They also are relatively immune to microbes found in rotten meat that can cause botulism and other diseases.

Vultures are voiceless except for hissing and grunting. They nest in sheltered areas, like caves along cliff faces. Black vultures sometimes follow turkey vultures, taking advantage of their keener sense of smell to locate carrion. Up to several hundred black and turkey vultures may roost together during migration.



*Note: All bird lengths are from beak tip to tail tip.*

## Turkey Vulture

*Cathartes aura*

LENGTH—27 INCHES

WINGSPAN—70 INCHES

Turkey vultures often soar along bluffs or circle in a group above a night roost. They forage by flying across many rural acres in search of tasty smells wafting from below. They have a large black body and a small, red, naked head. From below, they are two-toned: Wing-linings are dark and the trailing portion of the wings appears lighter. Turkey vultures often tilt from side to side while soaring, with the wings held in a V-position. Turkey vultures are common statewide in summer, and they winter in southern Missouri, the southern United States and Central America.

Raptor migration makes for great bird watching. The Conservation Department offers programs every year to encourage Missourians to see bald eagles and vultures. Vulture Venture is held every year in February at Shepherd of the Hills Conservation Center at Table Rock Lake dam near Branson. Naturalists are on hand to answer questions. You may see up to several hundred black and turkey vultures soaring above nearby bluffs or sitting in their roost, which covers nearly an acre. For more information, call 417-334-4865. Eagle Days events are held at several locations around the state near eagle feeding areas in winter. For information about both events, go to [www.MissouriConservation.org](http://www.MissouriConservation.org) or call 573-751-4115.

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## Black Vulture

*Coragyps atratus*

LENGTH—25 INCHES

WINGSPAN—58 INCHES

Black vultures are common in subtropical and tropical America, and some breed as far north as southern Missouri, where they reside from April through September. Occasionally they are seen as far north as central Missouri. Black vultures have a black head, and from below, the wings are mostly black with white patches at the tips. Black vultures often fly higher than turkey vultures and alternate between a series of three to four flaps and soaring.



## Osprey

*Pandion haliaetus*

LENGTH—24 INCHES

WINGSPAN—66 INCHES

Sometimes called “fish hawks” or “fish eagles,” ospreys are usually seen in spring and fall flying over lakes and rivers where they hunt for fish. Immature ospreys sometimes splash clumsily into water as they hone their fishing skills. Most ospreys are seen in Missouri while migrating to or from Canada or the southern United States or Mexican coasts.

Today, a handful of breeding ospreys reside here year-round, thanks to reintroduction efforts of captive-reared and -released (or hacked) birds in the 1990s. Reintroduced birds were released into the wild from hacking towers, and in 2000, the first nest and young were observed at Truman Lake. Since then, these birds have been building their huge stick nests in trees and on special nesting platforms, utility poles and even cell phone towers near large bodies of water around the state. Before these reintroduction efforts, the last time osprey nested in Missouri was in 1884.

In flight, osprey hold their wings with a distinct crook at the “elbow,” so the birds resemble the letter M. From above, wings are dark brown; from below, wing linings are white and trailing wings are contrastingly dark. Ospreys have no bony projection above the eye.







## Bald Eagle

*Haliaeetus leucocephalus*

LENGTH—36 INCHES

WINGSPAN—84 INCHES

There is no mistaking a mature bald eagle: Both males and females have a distinct white head and tail, brown body and wings, and a large yellow beak. For the first three years, though, immature eagles are dark brown with varying amounts of white on the underside of the wings. These young birds can be confused with immature golden eagles, which have darker wing linings than immature bald eagles.

In flight, bald eagles hold their wings straight and flat. While the number of year-round resident birds in Missouri continues to increase, most wintering bald eagles here return to their breeding grounds in the northern United States and Canada in spring.

Bald eagle nests, up to 7 feet across and 10 feet deep, are the largest in the bird world. Made of sticks and constructed in sycamores, cottonwoods and bald cypress trees, the nests are used year after year by the same birds. Bald eagles eat mostly fish, but also consume mussels, crayfish, waterfowl, rabbits, muskrats and turtles. In addition, they feed on carrion and may even forage in dumps.



## Golden Eagle

*Aquila chrysaetos*

LENGTH—37 INCHES

WINGSPAN—86 INCHES

Golden eagles do not live in Missouri year-round but winter here in small numbers. Adults are recognizable by their large size, immense wingspan, brown body and the golden sheen of the feathers on the crown and back of the head. Immature birds have brown and white underwings, with darker wing linings than immature bald eagles, and the base of their tail is bright white with a dark brown tip. Golden eagles have feathered legs.

Unlike bald eagles, which are usually found near water, golden eagles hunt in open grasslands for a wide variety of prey, including rabbits and other small mammals and birds. In flight, golden eagles resemble turkey vultures, soaring with their wings slightly raised.



## Mississippi Kite

*Ictinia mississippiensis*

LENGTH—15 INCHES

WINGSPAN—36 INCHES

The kites' swallow-like gliding and diving flight enables these insect-eating raptors to hunt for prey on the wing, often in foraging flocks of more than 25 birds. Kites sometimes hunt for small birds and other small animals from exposed perches.

Mississippi kites are summer residents in Missouri. They feed and nest in bottomland forests, mainly along the Mississippi River and in scattered forested areas in western Missouri. Formerly seen only in southeastern Missouri, Mississippi kites have expanded their range and numbers and are now seen in the St. Louis and Kansas City areas. The reduction of DDT and other chemicals in the natural environment may be a factor in the kites' population growth.

Adults have a light gray body, whitish head and black tail. As seen from above, wings of adults are three shades of gray. Immature birds are heavily streaked underneath.



## Northern Harrier

*Circus cyaneus*

LENGTH—18-22 INCHES

WINGSPAN—40-47 INCHES

If you see a raptor soaring low over a prairie, marsh or hay field in winter, you are likely seeing a northern harrier, formerly known as a marsh hawk. Harriers rarely nest here, and with so little native prairie or open wetlands remaining in Missouri, they are rather uncommon in winter. Harriers almost skim the ground as they hunt, and descend feet first to capture rodents, birds, insects, snakes and other prey.

Males and females differ dramatically in appearance: Mature males are gray above and white below while females are brown and streaked below. Harriers have a disc-shaped face, which helps them locate prey by sound, much like owls. Harriers also are one of few raptors to nest on the ground, laying a clutch of four to seven eggs.



# BUTEOS

The buteo group of hawks are stocky birds with broad wings, making them well adapted for soaring in open country. Buteos seen in Missouri have relatively short, broad tails, which are fan-shaped in flight.



## Swainson's Hawk

*Buteo swainsoni*

LENGTH—21 INCHES

WINGSPAN—52 INCHES

The Swainson's hawk winters in South America and summers in the western United States, occasionally residing in western Missouri during the warm months. They nest in and around Springfield, Mo., and into the Osage Plains, and a few are in northwest Missouri. A Swainson's hawk can be distinguished from a red-tailed hawk by its relatively slim body, its dark chestnut breast and all-brown back feathers. From underneath, it has white wing linings that contrast with its darker, barred wings. It hunts for rodents, birds, snakes, insects and other prey over prairies or crop field stubble by circling like a vulture.

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## Red-tailed Hawk

*Buteo jamaicensis*

LENGTH—22 INCHES

WINGSPAN—50 INCHES

Due to its aggressive hunting abilities, great variety of prey and ability to adapt to many different habitats, the red-tailed hawk is the most abundant hawk in North America. Its high-pitched scream is familiar, too, as it is the typical raptor call played in movies. Adult birds usually are easy to identify. They are brown from above, nearly uniformly white/light streaked below, with a brown band of feathers at the belly, and they have a reddish tail. Immatures can be harder to identify. They are similar to adults, but the tail is brown with narrow dark bars.

Darker and lighter color variations exist in red-tailed hawks (color morphs), but they do have reddish tails. During the winter, red-tailed hawk subspecies (dark Harlan's hawk and the pale Krider's red-tailed hawk) can be present, too, so carefully study bird field guides for correct identification. There are also several individuals of partial or completely albino red-tailed hawks in Missouri.



## Red-shouldered Hawk

*Buteo lineatus*

LENGTH—19 INCHES

WINGSPAN—40 INCHES

If you hear a high-pitched *KEyar-KEyar-KEyar* call, look up. You are likely hearing a red-shouldered hawk, or a blue jay, which imitates hawk calls. Red-shouldered hawks nest and feed along forested streams and rivers. Canoeists often see them soaring above streams. Although they are more likely to be seen in the Ozarks and Mississippi Lowlands, red-shouldered hawks live throughout the state—even in suburbs with wooded draws. Migrating birds from the north increase the numbers seen in winter. Adults are striking in appearance, with black and white barring on wing feathers and tail, rounded wing tips and rusty shoulders.





## Broad-winged Hawk

*Buteo platypterus*

LENGTH—16 INCHES

WINGSPAN—33 INCHES

The smallest of the buteos in Missouri, broad-wings may nest and breed in forested regions of the state, especially in the Ozarks and Ozark Border regions, but are more commonly seen during migration. In flight, the underside of adult birds is light-colored, with the wings bordered in black all the way to the tip, which tapers to a point. Broad-wings are one of the few North American raptors that flock during migration. Kettles of hundreds of these hawks are sometimes seen in Missouri in late April and the third week of September, and kettles of tens of thousands of birds can be seen during migration in the southern United States, Mexico and Central America.



## Rough-legged Hawk

*Buteo lagopus*

LENGTH—22 INCHES

WINGSPAN—56 INCHES

Rough-legged hawks nest on cliffs in the far northern Arctic, and are occasionally seen in Missouri during the winter, when the birds migrate to the northern United States. In Missouri, these large hawks hunt in open grasslands and crop fields, soaring with their long wings slightly uptilted, or perching in small trees. During years when their prey to the north decreases, more birds are likely to be present in Missouri. This hawk gets its name from its feathered legs—all the way to the toes. There are light and dark color morphs of these hawks, which can be identified as to sex by their tail bands. Its strong but small feet are adapted for hunting small rodents.



# ACCIPITERS

Unlike most buteos, accipiters mainly frequent wooded areas. They have shorter, rounded wings and longer tails. This body form allows them to weave in and out of tree branches and brush in pursuit of prey. They often capture other birds—their main prey—in flight. Accipiters are most abundant during spring and fall, when songbirds are migrating. Accipiters are becoming more common in Missouri, probably due to the reduction of long-lived pesticides in the environment. Bird feeders apparently play a role in accipiter abundance, as well, by attracting a concentration of bird prey.

## Sharp-shinned Hawk

*Accipiter striatus*

LENGTH—11-14 INCHES

WINGSPAN—22-28 INCHES

Sharp-shinned hawks look like smaller versions of Cooper's hawks. They differ in the following ways: The sharp-shin's tail is squared off at the tip, rather than rounded, and has a slate-gray head and neck, in contrast to a Cooper's black cap of feathers. A sharp-shin's flight is less direct than a Cooper's, and both alternate flapping and sailing. Sharp-shinned hawks occupy the same habitat as Cooper's, but rarely reside in Missouri year-round. Sharp-shins are most often seen here during migration and in winter.



ART DANIELS



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## Cooper's Hawk

*Accipiter cooperii*

LENGTH—15-18 INCHES

WINGSPAN—30-36 INCHES

Cooper's hawks reside in Missouri year-round, but little is known about their nesting success. Cooper's hawks mainly hunt in forests, but are increasingly common in wooded suburban and urban areas and will perch on telephone poles as well as trees. If you see a crow-sized hawk near your bird feeder, chances are it is a Cooper's hawk, hunting for songbirds. Adult Cooper's hawks have blue-gray wings above, and are sometimes called blue-darters. From below, they have horizontal, rusty barring. Their black-and-white barred tail is rounded at the tip.



ART DANIELS

## Northern Goshawk

*Accipiter gentilis*

LENGTH—21-25 INCHES

WINGSPAN—40-46 INCHES

These large accipiters live year-round in the extreme northern United States, Canada and western states. They are rarely seen in Missouri, but venture here in winter when hare populations are scarce. They hunt in hedgerows, along tree lines and sometimes in urban areas. They are about the same size as a red-tailed hawk, but in flight their wing tips appear more tapered. Northern goshawks have a distinct white "eyebrow," and adults are gray above and light gray below. In the photo at left, the Northern goshawk is molting into alternate adult plumage.



# FALCONS

Falcons are overall the smallest and fastest group of raptors. They have pointed, angled wings and are master flyers.

## American Kestrel

*Falco sparverius*

LENGTH—9-11 INCHES

WINGSPAN—20-23 INCHES

Formerly called sparrow hawks, American kestrels are the most common falcon in North America. In Missouri, they reside year-round in open countryside and urban areas. They are most likely to be seen in spring and fall, hovering over grassy highway medians before they dive to the ground to seize prey. Adult males are the most colorful raptor in North America. They have a bright, rusty back and tail, bluish-black wings, orange-brown breast, blue and rusty head, and dark and light barring on the neck. Rather than building nests in the open, in trees or atop platforms or cliffs like other raptors, American kestrels nest in cavities, in eaves of buildings or in kestrel nest boxes.

The use of eagles, falcons, hawks and other raptors in falconry, which is the difficult and highly regulated sport of hunting wild game with trained raptors, has been practiced for thousands of years and continues today in Missouri and around the world. For more information, contact the Missouri Falconer's Association ([www.missourifalconersassociation.org](http://www.missourifalconersassociation.org)).







ART DANIELS

## Peregrine Falcon

*Falco peregrinus*

LENGTH—15-21 INCHES

WINGSPAN—38-45 INCHES

Peregrines are the fastest living animal. While pursuing bird prey, they can dive at speeds up to 200 miles per hour! Peregrines are uniformly white and dark narrow-barred below and gray-blue above. They live everywhere except Antarctica, but are rather uncommon worldwide. The last known cliff nesting of a peregrine in Missouri was in 1911.

Once threatened with extinction, in part due to DDT, they have made a remarkable comeback. In the 1990s, several organizations in Missouri reintroduced peregrines from other states, and hacking programs took place in St. Louis, Kansas City and Springfield. Hacked birds were released from balconies of tall buildings, which mimicked the birds' natural cliff dwellings. There are now a handful of nesting peregrines in St. Louis and Kansas City. Peregrines are sometimes seen in these urban areas, diving after pigeons and other urban birds, and eating them on office or apartment window ledges. In recent years, utility companies hacked peregrines in the New Madrid and Thomas Hill areas.



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## Merlin

*Falco columbarius*

LENGTH—10-12 INCHES

WINGSPAN—22-25 INCHES

If you see a merlin in Missouri, it will most likely be in the winter. Small numbers of these falcons reside here statewide during the cold months, foraging for prey in grasslands and crops fields near woodlands. Merlins chase flocks of birds, often taking the weakest bird. They also fly low over the ground in a zig-zag pattern with rapid wing beats. Adult males are blue-gray above and white/brown streaked below. Females and immature birds are brown above. All birds have a light “eyebrow” and a dark tail with narrow light bands.



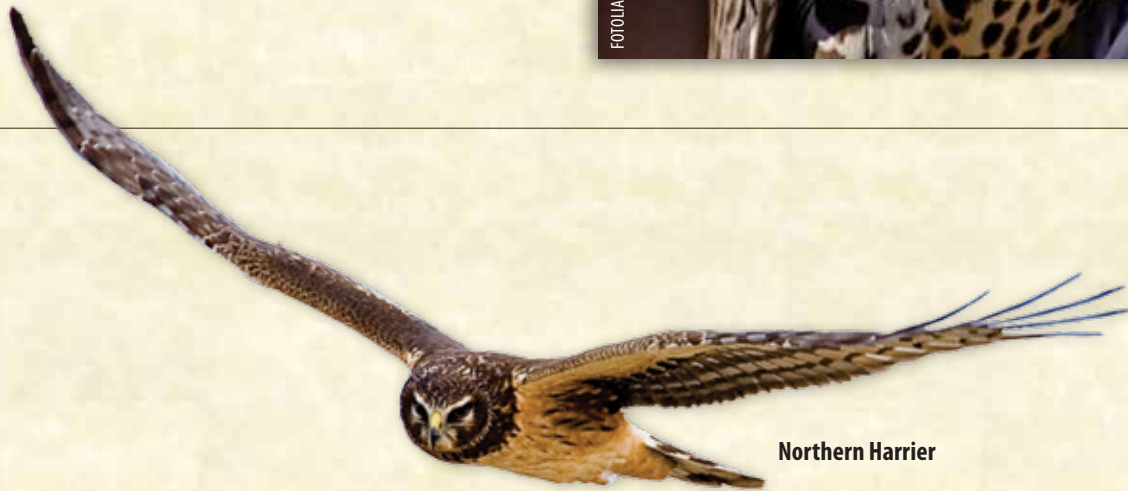
## Prairie Falcon

*Falco mexicanus*

LENGTH—16-19 INCHES

WINGSPAN—38-43 INCHES

Only rarely seen in northwest Missouri, prairie falcons live in the western United States and southern Canada but sometimes venture to Missouri's floodplains and open grasslands in winter. From below, prairie falcons have light wings with darker markings at the wing bases. From above, they are uniformly brown. Prairie falcons are aggressive and excitable and will harass larger hawks and eagles. They prey upon birds and small mammals by flying rapidly close to the ground.



### *Want to learn more?*

- Numerous articles on raptor species are available online at [www.MissouriConservation.org](http://www.MissouriConservation.org).
- Join a local Audubon chapter.
- Consult raptor reference materials at a Conservation Nature Center.
- Visit the World Bird Sanctuary at 125 Bald Eagle Ridge Road, Valley Park, MO 63088 (636-225-4390 or [www.worldbirdsanctuary.org](http://www.worldbirdsanctuary.org)). The World Bird Sanctuary's mission is to preserve the earth's biological diversity and to secure the future of threatened bird species in their natural environments. The sanctuary fulfills its mission through education, captive breeding, field studies and rehabilitation.
- Purchase a copy of *Birds in Missouri* by Brad Jacobs at [www.natureshop.com](http://www.natureshop.com) or by calling toll-free 877-521-8632.

