## Idaho's Birds of Prey



Red-tailed hawk © Raymond Parsons

Immature red-tailed hawk, © Raymond Parsons

Humans have had a long and often contradictory relationship with raptors. We have respected and even revered them as symbols of nobility, strength,

> and freedom. The hawk was often represented in ancient Egyptian hieroglyphics. The eagle has been used as a national emblem since the time of Imperial Rome. Native Americans of many tribes believe the eagle and other raptors have sacred powers.

> But raptors also have been viewed as "varmints", as our competitors for wildlife, or killers of domestic livestock. For example, in 1917, a bounty was placed on bald eagles in Alaska because fishermen were worried about decreasing numbers of salmon. More than 100,000 eagles were killed before the bounty was lifted in 1953. In fact, humans had caused the salmon's decline by overharvesting. Most of the

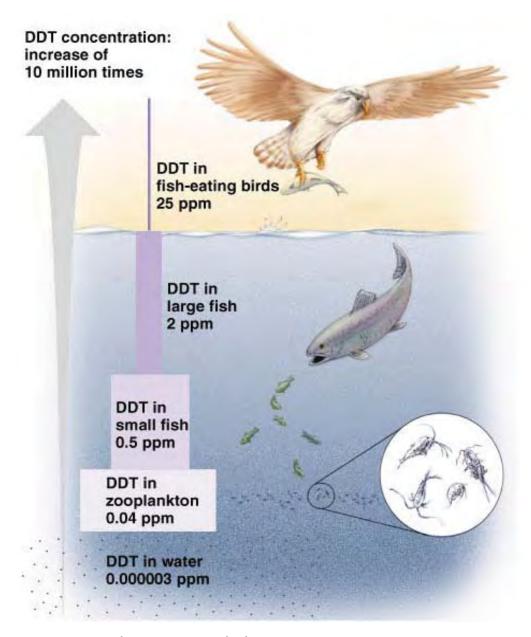
eagles had been feeding on spawnedout, dead, or dying fish that had no commercial use.

Today, some hunters still blame raptors when gamebirds are scarce. But biologists have found that harsh winters, cold, wet springs, and habitat loss have a far greater impact than raptors on Idaho's chukars, grouse, quail, and pheasant populations.

The "chicken hawk" label is slowly dying, but falcons, hawks, and even sometimes eagles are still being shot—despite protection under state and federal laws. Only recently have we begun to appreciate the importance of these birds, not just as symbols or for their beauty, but as key members of natural communities.

From birds of prey, and other predators, we can learn about the health of our environment. If something is harming them, it is likely to endanger us as well. That is because we are predators, too—we are at the very top of the earth's food chain, just like raptors. Any poison that kills or limits reproduction of the animals and plants we eat, or that enters the water we drink, could also harm us if allowed to reach high enough levels.

In the early 1960s, this "early warning system" sounded: birds of many species began dying at alarming rates. Scientists went to work to see why. They found that pesticides such as DDT had been concentrating in the tissues of mammals, birds, and fish the declining



© Pearson Education, Inc. pubishing as Benjamin Cummings

birds were eating. As the poison built up, the birds either died outright, or could not reproduce because their eggshells were so thin they broke before hatching.

Although all raptors were victims, the peregrine falcon and the bald eagle were brought to the edge of extinction. DDT was banned in 1972, but it is still being made and used by other countries. Thus it continues to threaten birds that migrate to these southern regions.

Raptors aid ranchers and farmers by keeping rabbits, rodents, and insects in check. Grasshoppers, which eat crops and forage, are prey for the smaller hawks.

Humans haven't always been grateful for their help. Since 1900, our activities have greatly affected raptors almost everywhere. Perhaps the most damage has come not from illegal shooting or accidental poisoning, or by DDT, but from a steady loss of food and habitat.

An eagle or a falcon must have a large area in which to find enough prey to eat and feed its young. Each bird, or pair of birds, will defend that area as its own territory. So raptors—or any type of predator—are never very abundant even in the best of habitats. It is true that some species, like the kestrel or even the peregrine, can adapt to human presence in farmland or cities. But others cannot survive close to us. As forest and sageland fall under the ax or yield to the plow, native raptors and their prey will diminish.

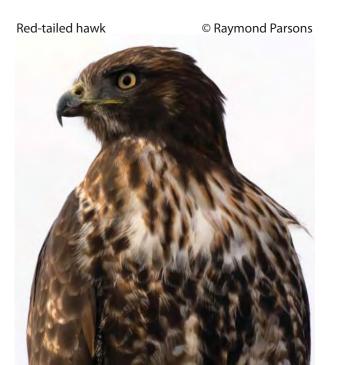
# Biology

#### APPEARANCE/IDENTIFICATION:

Raptors are birds of prey that hunt, kill, and eat animals. They are characterized by:

- powerful feet with curved, sharp talons to capture their prey
- a hooked beak to tear apart flesh
- keen eyesight that helps them hunt for food

Idaho has a rich variety of raptors and is fortunate to call seventeen species of diurnal (active in the daylight) raptors its neighbors. If you have seen an eagle soaring silently past the



towering walls of the Snake River Canyon; if you sighted a kestrel or harrier looking for a meal along a busy highway; if you have heard the wild cry of an osprey high above the morning mist of an Idaho lake, then you already know the unique combination of beauty and efficient design that sets raptors apart from other winged creatures.

Diurnal raptors are classified in the order FALCONIFORMES, which is then divided into four different families:

- New World vultures (Cathartidae)
- falcons (Falconidae)
- hawks and eagles (Accipitridae)
- osprey (Pandionidae)

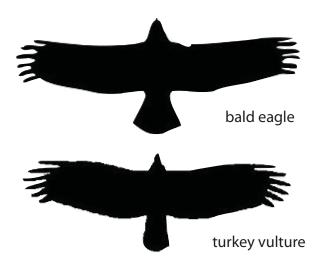
This basic raptor design (sharp talons, hooked beak, and keen eyesight) is modified in certain species, depending on the main prey and method of pursuit and capture. For instance, falcons have a notched upper beak for breaking the necks of small birds and mammals they catch with their feet. Ospreys, which feed exclusively on fish, have an outer toe that can rotate to grip their slippery prey. Since vultures do not kill, but only scavenge on carcasses, their feet are weak (like a chicken's) but their beak is strong for

tearing flesh. Raptors regurgitate the indigestible parts (bones, fur, feathers, claws, teeth, and chitin) in the form of compact, oval pellets.

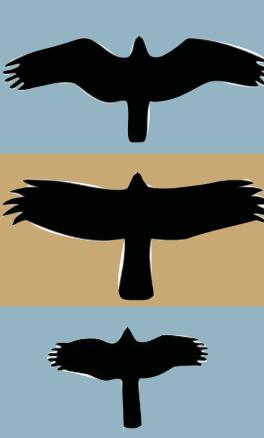
In most raptor species the male and female look very much alike, but the female is generally up to one-third larger than males of the same species. The size difference between males and females allows a mated pair to hunt a greater variety of prey within their territory. Color may vary between individuals, although males and females generally have similar plumage. In addition, some species have color "phases"—individuals that are darker or lighter than most of the population. This is a genetically controlled characteristic; each bird remains in the same phase throughout its life.



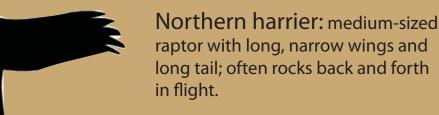
### Flight siloutettes

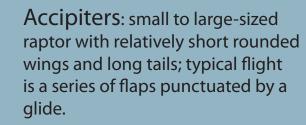


Vultures and Eagles: large to very large, dark raptors with long, broad wings; both tend to soar and glide rather than beat wings; vultures hold wings in a bold dihedral, rocking back and forth in flight, while eagles hold their wings nearly horizontal, or shallowly dihedral, and their flight is steady.



Osprey: a large raptor with sharply crooked wings which create a gull-like appearance; wingbeat is stiff and labored.







Buteos: medium-to large-sized raptors with broad wings and short tails; buteos soar frequently and wingbeats are slow, heavy, and methodical.



Falcons: small to large raptors with long, tapered wings pointed at the tips and long tails; flight is fast and direct, wingbeats are often continuous throughout flight.

## Reproduction

Raptors nest in all types of habitats, from deserts to grasslands, forests to tundra, wetlands to mountains, and even cities. Some begin nesting in late January, like bald eagles along the Boise River. Others begin in March and April like prairie falcons in the Snake River Birds of Prey area. Still others don't begin nesting behavior until May or June, like northern harriers and ospreys.

Many raptors return to the same nesting territory each spring. Most raptors are long-lived birds; mated adults will defend the same feeding and nesting territory for many years.

The number of eggs that a raptor lays varies between species. This number is often related to the size of the raptor and the amount of prey available. Generally, larger raptors lay fewer eggs. If prey is abundant, the female may lay a larger clutch. Where food is scarce, the clutch size may be only 1 or 2 eggs, or none at all. Usually the female incubates the eggs and protects the young in the nest. Both sexes feed the young when they are ready to fly (fledge). "Immature" birds are almost as large as adults but usually sport a different plumage than their elders.



Osprey © Tom Munson

### American kestrel

(Falco sparverius)

Length: 8-10 in. (male); 9-11 in. (female)

Wingspan: 20-22 in. (male); 21-24 in. (female)

Weight: 3.4-4.5 oz. (male); 3.6-5.3 oz. (female)

Habitat: desert, open forest, marsh, grassland, farmland, and urban areas



#### REPRODUCTION:

Kestrels usually nest in tree or cliff cavities, building crevices, old crow or magpie nests, woodpecker holes—even man made nest boxes. They pair in April and 4 or 5 eggs are laid by mid-May. Incubation lasts about a month; the young fledge in July.

#### CONSERVATION AND MANAGEMENT:

American kestrels are considered to be abundant through most of its North American range and are not in need of management. However, nest boxes encourage breeding in areas with limited nest sites.

### Share your backyard with a Kestrel!

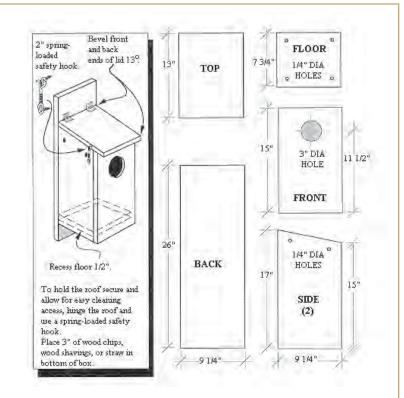
#### Materials:

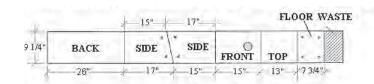
- (1) 1" x 10" x 8' board
- (2) 2" hinges
- (1) 2" spring-loaded safety hook
- (22) 2" wood screws
- (2) 1 ½" galvanized nails

Wire

#### Construction:

- 1- Mark and cut out the pieces as shown.
- 2- Cut a 3" diameter entrance hole in the front piece, 11 ½" from the bottom edge.
- 3- Drill two ¼" holes near the top edge of both side pieces.
- 4- Drill four 1/4" holes in the floor piece, as shown, to allow for drainage.
- 5- Assemble the box as shown in the diagram.
- 6- Attach the roof on top of the box using two hinges, for easy cleaning access.
- 7- Place one nail in the side of the roof and one nail in the face of the adjoining side piece, as shown in the diagram, so that they line up vertically. Use wire tied around the two nails to keep the roof closed to predators.
- 8- Place 2-3" of sawdust on the bottom of the box.





Credit: http://www.dnr.state.md.us/

## Bald eagle

(Haliaeetus leucocephalus)

Length: 30-34 in. (male); 35-37 in. (female)

Wingspan: 72-81 in. (male); 79-90 in. (female)

Weight: 8-9 pounds (male); 10-14 pounds (female)

Habitat: Large lakes, rivers, and coastlines

#### **DESCRIPTION:**

Bald eagles have large bodies and long, broad wings with very distinct fingerlike feathers at the tips. They usually soar for long periods without flapping their wings and in the

spring their wings spring can often be seen doing spectacular mating displays in the sky. The adult bald eagle is easy to identify by its white head and tail, dark brown body, and yellow eyes, feet, and beak. These

traits do not appear until age three or four. The young are variably dark brown with white scattered throughout their plumage. Both immature and adult bald eagles have larger beaks and longer tails than golden eagles.

Photo © Tom

Munson

#### **HABITAT AND FOOD:**

As our national symbol, the bald eagle is found only in North America. They occur across the U.S. and into the Canadian provinces from Alaska and the Pacific Northwest to Newfoundland and the northeastern U.S., south locally to Arizona, New

Mexico, Texas, and Florida. They are less common in the interior of the U.S., although breeding sites have been documented in almost all of the lower 48 states. They usually live near large bodies of water containing abundant

food, primarily fish and
waterfowl. They hunt
from tree perches
near water or
pursue birds in
flight. In winter,
bald eagles take

injured waterfowl and also scavenge dead fish and other carrion.

#### **REPRODUCTION:**

In Idaho, bald eagle nests are concentrated in three areas—eastern Idaho along the Snake River, northern Idaho within the Pend Oreille River drainage and Kootenai Valley, and around Cascade Reservoir in west-central Idaho. During the winter more

than 800 bald eagles can be found on Pend Oreille and Coeur d'Alene lakes (Wolf Lodge Bay), and on the Clearwater, Kootenai, and Snake River systems. In Boise, bald eagles nest within five miles of the state capital along the Boise River; during the winter, they hunt from cliffs and tall cottonwood trees overlooking the river from January to March.

Most bald eagles in Idaho migrate north by April to breed in Alaska and Canada. In fall they fly south to ice-free waters and roost communally in trees that shelter them from storms and human disturbance. Over 200 pairs occupy territories in Idaho and the number of territories and number of young fledged continue to increase on an annual basis.

Eagles mate for life and return to the same nest every year. Built high in a tree, the nest may be as large as seven feet across, made of sticks piled up to ten feet deep and weighing several hundred pounds during the first year. After a few years, the nest may reach 20 feet in height and over 9 feet in diameter, weighing some several tons! The females lay 1 to 3 eggs in March or April. Eaglets hatch in about 35 days and fledge 10 weeks later.

#### **STATUS:**

On August 9, 2007, the bald eagle was removed from the federal list of Threatened and Endangered Species. After nearly disappearing from most of the United States decades ago, the bald eagle is now flourishing across the nation.

The two main factors that led to the recovery of the bald eagle were the banning of the pesticide DDT and habitat protection afforded by the Endangered

> Species Act for nesting sites and important feeding and roost sites.

**CONSERVATION AND MANAGEMENT:** Even though they are delisted, bald eagles are still protected by the International Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. It is illegal to own any part of one of these birds, including

the feathers, without a permit. Idaho Department of Fish & Game lists the bald eagle as a protected nongame species for which it is illegal to collect, harm, or otherwise remove from its natural habitat.

Bald eagles have few natural enemies. People, directly and indirectly, remain the greatest source of mortality: illegal shooting, poisoning, environmental contaminants, collisions with buildings, bridges, and powerlines (electrocution), ingestion of lead and plastic, and oil spills. Human developments along rivers results in loss of foraging, nesting, perching, and roosting sites. For these reasons, bald eagles in Idaho are classified as a "Species of Greatest Conservation Need" in Idaho's Wildlife Comprehensive Strategy. The maintenance of healthy rivers and lakes, riparian areas, and cottonwood stands, are important to bald eagles year-round.



## Cooper's hawk

(Accipiter cooperii)

Length: 14-16 in. (male); 16-19 in. (female)

Wingspan: 28-30 in. (male); 31-34 in. (female)

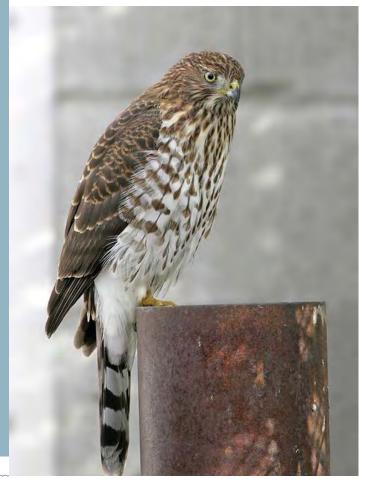
Weight: 8-12 oz. (male); 13-19 oz. (female)

Habitat: open woodlands, dense forests, riverbanks

#### **DESCRIPTION:**

This accipiter (the scientific name comes from the Latin word accipere, meaning to take or seize) is also known as the "blue darter" because of its blue-black back and wings. With short, rounded wings and a long, narrow, rounded at the tip tail, these birds are well adapted to maneuver through the forest chasing their prey.

© Tom Munson



Adults have blue-gray upperparts, a white breast and belly with reddish cross bars, and a black cap or crown. The tail is usually rounded and crossed by four or more obscure blackish bars with a broad white terminal band. Immature birds exhibit brown upperparts and a white breast and belly streaked with brown. When perched, this hawk's tail is longer than its folded wings and is rounded at the end, unlike the square-tipped tail of the otherwise similar sharp-shinned hawk.

#### **HABITAT AND FOOD:**

Cooper's hawks are forest-dwelling raptors. They breed from southern Canada throughout the United States, and migrate as far south as Central America for the winter. They are spring and summer visitors to Idaho's forests; some stay year-round. Banding recoveries from the Idaho Bird Observatory show that the majority of Cooper's hawks migrating through southwestern Idaho spend their winters in western Mexico along the Sea of Cortez in the state of Sinaloa. Spring and summer band recoveries of Cooper's hawks come from westcentral British Columbia. The Idaho population is partially migratory.



© Raymond Parsons

Cooper's hawks hunt birds, flying low after sighting them from a hidden perch. In Idaho, their diet consists of mainly medium- size birds such as starlings, thrushes, and quail. They will also eat some birds as large as an adult Ruffed Grouse, small birds, small mammals, reptiles, and amphibians.

#### **REPRODUCTION:**

These hawks return to Idaho each April to breed. They nest in various locations, from riverside vegetation to mature conifer stands but tend to nest in more mature forests with a developed understory and usually prefer to be near edges or openings. In May, 3 to 5 eggs are laid in shallow stick nests 14-30 feet above ground. Incubation is shared by both sexes and lasts about 3 weeks; the young fledge about a month after hatching.

CONSERVATION AND MANAGEMENT: Cooper's hawk populations in Idaho appear stable. They have expanded their habitat preferences in winter to include more urban and suburban areas in response to prey feeding at bird feeders.

## Ferruginous hawk

(Buteo regalis)

Length: 20-26 in. (male); 22-27 in. (female)

Wingspan: 48-56 in. (male); 53-60 in. (female)

Weight: 2.4 pounds (male); 3-4 pounds (female)

Habitat: open grasslands and sagebrush prairies (unfarmed)

#### **DESCRIPTION:**

Named for its ferruginous (rust-colored) feathers, the ferruginous hawk is the largest buteo in North America. The most common color phase seen in Idaho is recognized in flight by light underparts contrasting with a "V"-shaped pattern

formed by dark legs against a pale belly. Adults are typically chestnut brown above with a lighter head. Like the rough-legged hawk, it has feathers down to its toes; unlike its cousin, it does not hover while hunting.

HABITAT AND FOOD: Ferruginous hawks are found in the western United States, southwestern Canada, and northern Mexico. They prefer the open plains, short-

grass prairies and desert uplands. In Idaho, ferriginous hawks can be found throughout the southern part of the state, especially in shrub-steppe communities at the periphery of western piñon-juniper woodlands.

Rabbits, ground squirrels, and pocket gophers comprise more than ninety percent of the ferruginous hawk's diet; birds and reptiles are sometimes taken. It hunts from a perch or while soaring.



© Raymond Parsons

#### **REPRODUCTION:**

A relatively uncommon species, it is estimated that there are about 625 breeding individuals in Idaho. Ferruginous hawks usually arrive in Idaho in late February or early March to begin courtship. Although they prefer open nesting sites, often atop sagebrush, juniper trees, or small buttes, they also nest on low hillsides, power line structures and haystacks. Three to 5 eggs are laid in April. Usually three young survive to fledge about 6 weeks after hatching.

The ferruginous hawk is primarily found in the Snake River Plain. Mostly absent from Idaho during the non-breeding season, ferruginous hawks winter as far south as Mexico. Some reside year-round in limited numbers in extreme southern Idaho.

#### **STATUS:**

Primary threats are agricultural development and cultivation of native grasslands. Over forty percent of the ferruginous hawk habitat in southern Idaho has been altered and their numbers have dwindled. A more recent concern is the development of wind farms, such as those in southern Idaho, where hawks could potentially collide with turbines during spring and fall migration. For these reasons, ferruginous hawks are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy.

#### **CONSERVATION AND MANAGEMENT:**

This species can benefit from actions focused on maintaining sagebrush habitats and prey populations (ground squirrels, jack rabbits, etc.), mitigating development impacts from wind farms, mining, and urbanization, and enhancing nest substrate. Artificial nesting platforms to increase the hawk's numbers and distribution have been used in suitable areas.



## Golden eagle

(Aquila chrysaetos)

Length: 29-35 in. (male); 32-40 in. (female)

Wingspan: 60-84 in. (male); 72-96 in. (female)

Weight: 5-10 pounds (male); 6-14 pounds (female)

Habitats: mountains, forests, and deserts



where upwind drafts help them take off and soar. Golden eagles live year-round in many parts of Idaho, taking smallto-medium sized mammals, especially jackrabbits, and scavenging on carrion in the winter.

#### **REPRODUCTION AND STATUS:**

High, rocky cliff ledges or trees cradle their nests, which may be up to 8 feet in diameter. They are built of sticks and branches and lined with grasses. A pair may return to the same nest year after year, or use one of several alternative nests. After a late February courtship, 1 to 3 eggs are laid in March. The young fledge 10 weeks later.

#### **STATUS:**

Golden eagles are protected by the International Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. They have few natural enemies and people, indirectly and directly, remain the greatest source of mortality: electrocution, collisions with vehicles, power lines, wind turbines, poisoning and illegal shooting. Human disturbance around nests can lead to nest abandonment.

#### CONSERVATION AND MANAGEMENT:

Habitat change due to urbanization, agricultural development, and wildfire decreases available habitat and reduces prey populations. In southwestern Idaho, managers should strive to maintain shrub stands within 3 km of a nesting site. This goal can be achieved through fire suppression and revegetation efforts.



## Gyrfalcon (Falco rusticolus)

Length: 19-24 in. (male); 20-26 in. (female)

Wingspan: 43-51 in. (male); 49-64 in. (female)

Weight: 1.8-3 pounds (male); 2.6-4.6 pounds (female)

Habitat: tundra, plains

#### **DESCRIPTION:**

The largest falcon in the world is also the swiftest bird of prey. Their coloring may range from nearly pure white to black, with variable barring and streaking; most are gray. The feet and bill are yellow and the eyes are dark. Immatures are similar to adults, but more heavily marked on the breast and belly, and streaked instead of barred or spotted like adult. Their cere (base of the beak) and feet are bluegray.

#### **HABITAT AND FOOD:**

The gyrfalcon is an arctic and subarctic species found in both interior and coastal regions and frozen steppes of northern Canada, Alaska, and Eurasia as far south as the northern rim of the boreal forests. It is an opportunistic hunter, feeding on a wide range of birds and mammals in summer but restricted to rabbits, ptarmigan, and seabirds in winter. Gyrfalcons are unique in their ability to pursue prey at high speeds over long distances.

In lean years when prey is scarce, they range as far south as the Snake River Plain in Idaho, where they have been recorded as occasional winter visitors.

#### **REPRODUCTION:**

Gyrfalcons return to the same nesting territory every year, laying 2 to 5 eggs in late April to mid-May. The typical eyrie is on a cliff ledge under an overhanging rock that may have been built by another species. Incubation is about 32 days; the young remain in the nest 50 days after hatching. At 6.5 to 7.5 weeks of age, the immatures leave the nest, though they may associate with their siblings through the following winter.



© Tom Munson



#### **STATUS:**

Climate change, oil development, mining, and logging are the greatest threats to this arctic breeding species. Changes in prey abundance and habitat alteration could have negative implications for the gyrfalcon.

**CONSERVATION AND MANAGEMENT:** No evidence of long-term population changes in North America.

## Merlin

(Falco columbarius)

Length: 9-11 in. (male); 11-13 in. (female)

Wingspan: 21-23 in. (male); 24-27 in. (female)

Weight: 4.4-6.6 oz. (male); 6.4-8.3 oz. (female)

Habitat: forest, prairie, lakes, coasts, urban

#### **DESCRIPTION:**

These small falcons may be mistaken for kestrels, although they seldom hover in flight or pump their tails up and down when landing. Ten subspecies of merlins are recognized worldwide, five of which occur in North America and three of which have been documented in Idaho. Average adult males have slate-gray backs and brown-streaked bellies with a heavily barred tail. Females and immature birds are similar but generally browner. Merlins have a less-striking facial pattern than other falcons and a fainter "mustache."

**HABITAT AND FOOD:** 

Merlins are found throughout the northern hemisphere in coniferous

forests, prairies, and tundra edges. In winter they migrate to southern portions of their range. In Idaho, merlins are a common migrant and locally abundant winter resident, but a rare breeder.

They tend to hunt in open areas and usually fly and

hunt in a fast direct manner, taking small to medium-sized birds, rodents, insects, and occasionally bats, but they also can stoop (dive) from great heights onto their prey.

#### **REPRODUCTION:**

A rare breeder in Idaho, merlin nests have been found in the northern and southeastern part of the state. Typically, merlins use abandoned crow, magpie, or raptor stick nests. They generally choose an open site, often near water. Four or 5 eggs are laid; the young leave the nest just under a month after hatching.

During winter, merlins frequent cities, towns, feedlots, and dairies where small-bird prey is abundant.





© Keith Carlson

#### **STATUS:**

Due to lack of population trend information, merlins have been classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy. West Nile Virus and avian influenza pose threats during summer months when mosquito vectors are active. In addition, merlins may be poisoned by avicides used to control European starlings at feedlots during winter.

### **CONSERVATION AND MANAGEMENT:**

There are too few breeding merlins in Idaho to implement habitat management activities designed specifically to benefit this species; and wintering numbers are sufficiently stable to suggest that few local problems exist. However this species would benefit from any actions that protect, enhance, or restore potentially suitable foraging and breeding habitat.

## Northern goshawk

(Accipiter gentilis)

Length: 20-23 in. (male); 23-25 in. (female)

Wingspan: 38-41 in. (male); 41-45 in. (female)

Weight: 1.5-3 pounds

Habitat: dense coniferous forests, woodland edges in winter

#### **DESCRIPTION:**

The northern goshawk is the largest accipiter in North America. Immatures are brown above and heavily streaked below with whitish underparts that have broad dark streaks. The tail is dark brown with jagged dark bars. The pale eyebrow stripe is usually visible on a brown head. Both sexes have yellow eyes, and as the bird matures, the eyes change from orange to red.

Adults are dark blue-gray above with light marbled-gray underparts and blackish cheeks and crowns set off by bold white eye streaks. These eye streaks distinguish them from Cooper's hawks. Both sexes have red eyes when fully mature.

#### **HABITAT AND FOOD:**

Goshawks can be found across northern America and Eurasia. In the United States, they breed from Alaska throughout most of Canada to New England, the northern Great Lakes region, and the Rockies, Cascades, and Sierra Nevada. In winter they may move out of the forest to more open areas in search of prey. Some goshawks move to nearby valleys and while others migrate to the southern part of their range in winter.

Because of their size, goshawks prey on the larger forest birds like jays and grouse; they also hunt rabbits and ground squirrels. Their short wings and long rounded tails help them make the quick turns and twists necessary to pursue and capture prey in thick forests.

#### **REPRODUCTION:**

Goshawks nest in dense coniferous forests in Alaska, Canada, and the northern United States, including Idaho. They prefer mature forests consisting of a combination of old, tall trees with intermediate canopy coverage and small open areas within the forest for foraging. In Idaho, goshawks nest in the Sawtooth National Forest near Stanley. Nest construction begins in April, usually in mature forest (or aspen thickets at higher elevations). Stick nests lined with leaves and bark are well hidden in the green canopy 50 to 70 feet above the ground. The female defends her nest aggressively during the 28day incubation of her 2 to 4 eggs. Usually only 1 or 2 young fledge 5 weeks later.



#### **STATUS:**

Northern Goshawk populations have declined in some areas of the western United States since the mid-1980s. Drought cycles are thought to be the cause. However, a recent review concluded that too little is known about goshawk population trends, demography, and habitat relations to adequately assess its conservation status. This review recommended intensive, long-term research to address these data gaps.

**CONSERVATION AND MANAGEMENT:** The greatest potential impact on northern goshawk populations is from timber harvests that eliminates prey and leads to some destruction of nests. Goshawks occur even in fragmented forests, but prefer large contiguous forested areas.

## Northern harrier

(Circus cyaneus)

Length: 16-18 in. (male); 18-20 in. (female)

Wingspan: 38-43 in. (male); 43-48 in. (female)

Weight: 10-14 oz. (male); 14-21oz. (female)

Habitat: open grasslands, marshes, and grasslands

#### **DESCRIPTION:**

Unlike most raptors, male and female harriers (formerly called "marsh hawks") differ in color. Seen from above, adult males are pale gray with black wing-tips, females are larger and browner with a streaked breast. Immature harriers look like females, with a rusty breast. The small head, long wings, and long narrow tail of both sexes are distinctive features, as is the conspicuous white rump patch. Harriers have a facial "disc" of feathers similar to that of owls. In flight, these slim hawks hold their wings in a shallow "V."

HABITAT AND FOOD:

Harriers
are found
throughout
North America
and northern
Eurasia in
medium to tall
prairie grass, wetlands,
and marshes. Northern
harriers will usually perch on the
ground, but will use fence posts,
or other low perches. In winter,
they use communal ground

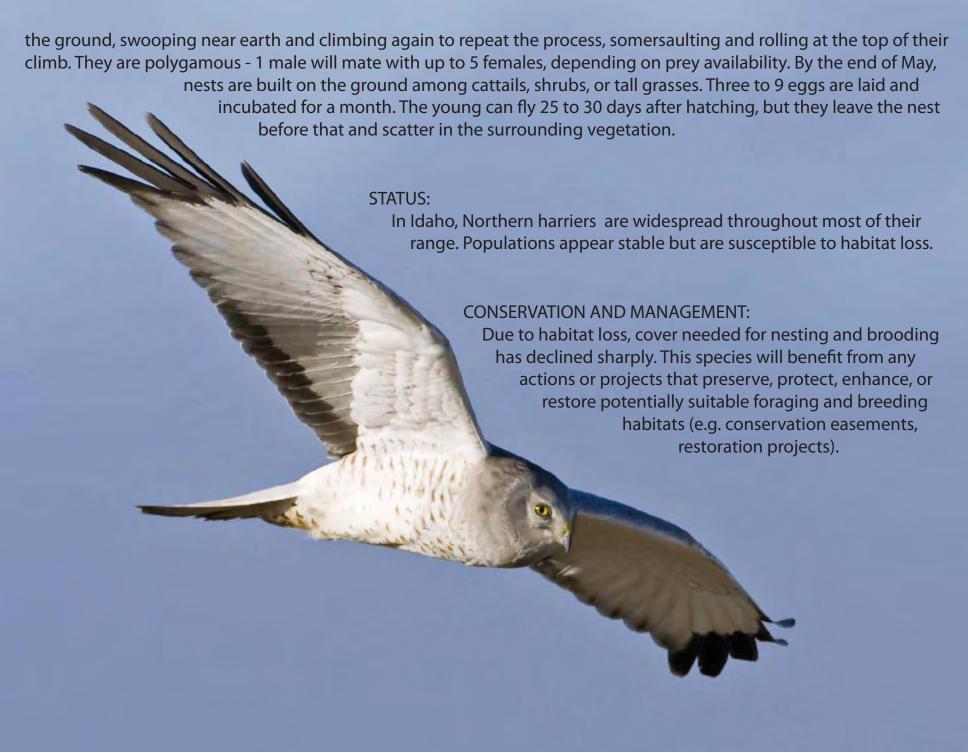
roosts, sometimes found with shorteared owls. They are common in Idaho all year, more so in the south than the north.

They are an agile and acrobatic raptor, covering large distances while skimming low over open terrain. The harrier's facial disc helps them locate prey by hearing. More than two-thirds of their diet is small rodents, but they sometimes take birds, reptiles, and frogs.

#### **REPRODUCTION:**

In March and April, harriers perform spectacular courtship flights. The males execute an elaborate series of dives from 50 to 100 feet above





## Osprey

(Pandion haliaetus)

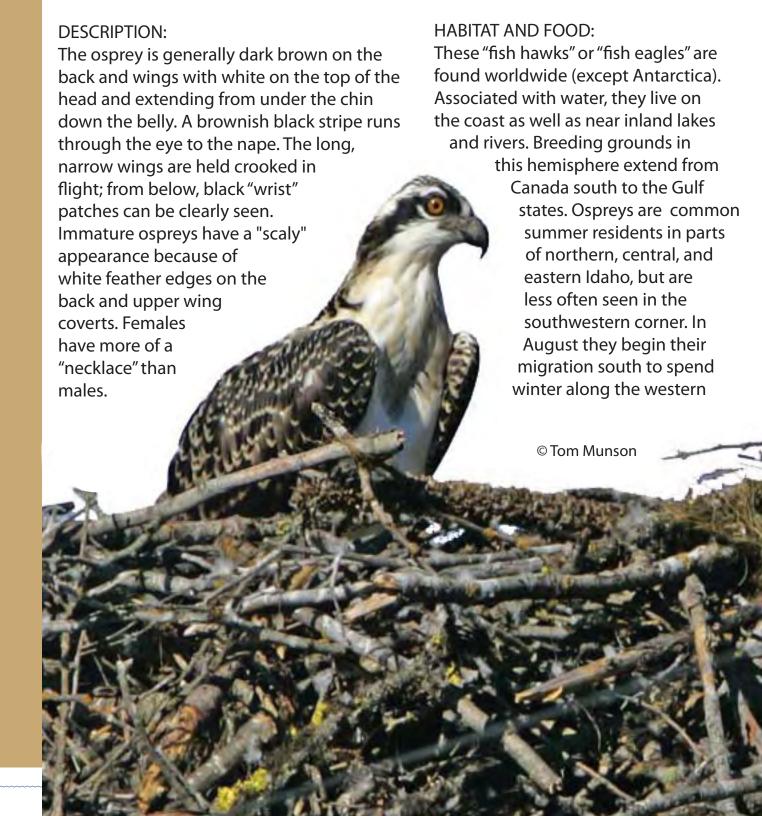
Length: 21-26 in.

Wingspan: 58-72 in.

Weight: 2.2-4 lbs

Habitat: lakes, rivers, and

reservoirs



coasts of Central and South America; birds banded in Cascade, Idaho have been sighted as far south as Ecuador.

Ospreys feed only on live fish, hunting from perches near water or while soaring. They may disappear completely beneath the surface for a moment after plummeting, talons-first, after prey. Their slit-like nostrils close on impact. Osprey feet are specially designed to capture fish. Sharp spines called spicules, which aid the birds in gripping their prey, cover the bottoms of their feet. They also have a flexible outer toe that allows them to grip their prey with two toes in front and two toes in back. Their talons are also more curved than most raptors and they even have a long talon on the outer toe, unlike other raptors. Osprey carry fish "torpedo" style - headfirst.

#### **REPRODUCTION:**

Osprey nests are bulky masses of limbs and debris built in the tops of dead trees or on rocky pinnacles near water, although the birds sometime nest on artificial platforms or utility poles—anything that offers an unrestricted view. Both sexes build the nest, but the female spends the most time incubating the 1 to 3 eggs she lays in may. Incubation lasts about 42 days; the young stay in the nest 60 days after hatching.

In northern Idaho, the lower Saint Joe and Coeur d'Alene Rivers are important osprey nesting areas as well as Lake Cascade in west-central part of the state. In Boise a pair of osprey nests every year at Memorial Stadium, home to the Boise Hawks baseball team, on a platform in centerfield.

#### **STATUS:**

Osprey populations in Idaho are very robust. In northern Idaho, the stronghold of the state's population, ospreys continue to thrive.

#### **CONSERVATION AND MANAGEMENT:**

From the 1950s to the 1970s, osprey populations drastically declined from pesticide poisoning and eggshell thinning. After the ban of DDT, populations increased rapidly. Clean water and fish that are free of heavy metal contaminants, like mercury, are important ways to ensure that osprey populations remain robust in Idaho.



## Peregrine falcon

(Falco peregrinus)

Length: 14-15 in. (male); 16-18 in. (female)

Wingspan: 37-39 in. (male); 40-46 in. (female)

Weight: 16-24 oz. (male); 25-32 oz. (female)

Habitat: open areas, near cliffs, especially along rivers and floodplains

#### **DESCRIPTION:**

The crow-sized peregrine falcon is also known as the "duck hawk." Adults sport a dark slate-blue back, buff undersides, strongly barred tail, and a black cap dipping below the eyes to cover the cheeks, which resembes a thick mustache. With sleek, compact bodies and long, pointed wings, they are thought to be the fastest raptors while plunging toward earth at speeds close to 220mph. Males are much smaller than females.

#### **HABITAT AND FOOD:**

Peregrines are adaptable, migratory raptors that are found world-wide (except in Antarctica), in a variety of habitats—from the tropics to the deserts, maritime to the tundra, and from sea level to 12,000 feet. In Idaho, peregrines are associated with mountains, major river corridors, reservoirs, and lake basins. They have large home ranges.

Peregrines hunt in open areas such as lakes, rivers, canyons, marshes, and valleys where prey has little chance to hide. They hunt several hundred species of birds, including shorebirds

and pigeons, as well as smaller songbirds; females tend to take larger prey than males. Peregrines use a high-speed stoop, striking prey birds in mid-air. When striking a bird, they will hit with talons either balled or open. They may also grab larger birds (like goose or pheasant) and ride them to the ground. Peregrines will also chase land birds offshore to tire them out.

#### **REPRODUCTION:**

Peregrine falcons nest from Alaska and Canada south to Mexico. In Idaho, this species nests on cliffs, man-made towers, and (2) urban settings. There are ~40 known peregrine nesting territories in Idaho. Males establish



© Tom Munson

the same breeding territories every
February, usually near lakes, rivers,
or marshes. Females pick secluded
ledges, small cavities, or even
building ledges and bridges,
and lay their first egg
by early April
in a

shallow depression. Both parents share the month-long incubation of 2-4 eggs. By August, the adults are teaching their young how to maneuver, stoop, and catch prey in mid-air.

These raptors were brought to the brink of extinction by the indiscriminate use of the pesticide DDT. In the United States, its numbers and range were so reduced between 1950 and 1970 that it was placed on the Endangered Species List. In Idaho, less than 28 historic peregrine nest sites were known and peregrines were extirpated as a breeding species by 1974. Through successful restoration efforts and the banning

of DDT in 1972,
peregrines made a
triumphant comeback.
They were removed from
the Endangered Species List
in 1999, and are a regular,
if still uncommon sight in
many large cities. Peregrine
eyries are widely scattered
and some individuals
remain near urban nest sites in Nampa
and Boise year around. Peregrines
from Idaho are known to migrate
southern California in winter.

#### **STATUS:**

Due to population declines, peregrine falcons are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy.

**CONSERVATION AND** MANAGEMENT: Illegal shooting and contamination from chemicals remain threats to this species. Efforts should be made to maintain the integrity of wetlands adjacent to known peregrine eyries. Idaho's peregrine recovery remains relatively slow and limited to central and eastern Idaho. Few pairs are found in large portions of the state, suggesting that peregrine populations would continue to benefit from several "hack" (specially built structures including towers and nest boxes) sites in southern and western Idaho. Using captive-bred young peregrines, young produced from urban pairs, or young produced on easily accessible towers, could improve the distribution of breeding peregrines throughout the state.

# Prairie falcon

Length: 14-16 in. (male); 16-18 in. (female)

Wingspan: 36-38 in. (male); 41-44 in. (female)

Weight: 16-20 oz. (male); 25-32 oz. (female)

Habitat: hot, dry open country near rocky buttes or rim-rock

#### **DESCRIPTION:**

Like all falcons, prairie falcons sport a black malar stripe running vertically below each eye. Both sexes are sandy brown above and creamy white with brown vertical streaking below. They are slightly smaller than the peregrine falcon, with fainter facial markings.

#### **HABITAT AND FOOD:**

Prairie falcons live in western North American deserts and arid foothills from central Canada to northern Mexico. Idaho's Snake River Birds of Prey Area boasts the largest concentration of breeding pairs up to 200 pairs in 80 miles of the Snake River Canyon. Elsewhere in the state they are uncommon, but may be seen from valleys to high mountain elevations.

Ground squirrels, small birds, reptiles, and, insects form their diet. They hunt from perches or soars and fly low and fast to take prey on or near the ground after a low angled swoop from above.

#### **REPRODUCTION:**

These falcons begin pair formation in early March and lay 3 to 6 eggs by late April. Nests—actually nothing more than shallow depressions in rock called "scrapes"--are on protected ledges or in cliff cavities. Occasionally, nests of other cliffnesting species are used. Eggs are incubated for about a month; the young fledge by June.

#### **STATUS:**

The Bureau of Land Management (BLM) considers this an imperiled species in Idaho - it is experiencing declines in populations

© Zach Smith



or habitats and is in danger of regional or local extinctions in Idaho in the foreseeable future. Land use changes associated with agricultural development and urbanization already may have contributed to population declines in parts of Idaho, especially the southwest portion of the state.



© Tom Munson

#### **CONSERVATION AND MANAGEMENT:**

Keys to proper management include maintaining open landscapes and habitats that support populations of ground squirrels, as well as bird species like the horned lark and western meadowlark. For breeding individuals, maintain cliffs with suitable recesses for use as eyries, and protect nest sites from disturbance by designating buffer zones.

### Red-tailed hawk

(Buteo jamaicensis)

Length: 19-25 inches

Wingspan: 48-53 inches

Weight: 1.75-3.5 pounds

Habitat: mountains, plains, farms and deserts

#### **DESCRIPTION:**

The red-tailed hawk is the most common hawk in Idaho. A typical buteo, this soaring hawk has broad wings and tail. They are stocky and usually dark-headed, with a dark brown back and a reddish, fanshaped tail. A light underside with dark belly band is a key identification characteristic. "Red-tails" have 4 notched primaries visible in flight.

Plumages are highly variable; lightmorph and dark-morph forms are distinguishable. In the western US and Idaho, the dominant subspecies seen is *Buteo jamaicensis calurus*.

**HABITAT AND FOOD:** 

The most common buteo in North America, the red-tailed hawk is found from Canada to Central America. It is widely distributed throughout Idaho, found in various settings from open woodlands and forests to desert and agricultural lands; wherever it can find rodents and nesting sites

Although opportunistic, in Idaho

this raptor prefers rabbits, ground squirrels, and mice; small birds, insects, and snakes are sometimes taken. It usually soars when seeking prey, but also hunts from a perch. Prey selection depends on relative prey densities and diet.



© Raymond Parsons



© Raymond Parsons



© Raymond Parsons

#### **REPRODUCTION:**

Red-tailed hawks begin breeding at age two. A pair may use the same nesting site for several years. Nests are large, flat, shallow masses of sticks or twigs, lined with bark or greenery, usually in the top half of a tall tree. They are extremely sensitive to disturbance during nest building, and may even abandon the nest. In March and April, 2 to 5 eggs are laid; both sexes incubate and the young fledge in about 3.5 weeks.

#### **STATUS:**

Some red-tailed hawks live in Idaho year-round, but most are partial migrants—they migrate south and are replaced for the winter by hawks from more northerly areas. Banding recoveries from the Idaho Bird Observatory show that red-tailed hawks that pass through southwestern Idaho during fall migration, winter in California's central Valley.

#### **CONSERVATION AND MANAGEMENT:**

The greatest threats to the red-tailed hawk are posed by shooting, automobile collisions, and direct human interference with nesting activities. Although populations in Idaho are abundant and secure, the maintenance of healthy habitat is important to all raptor species. Continued raptor education efforts and rigorous law enforcement are critical to red-tailed hawk conservation.

## Rough-legged hawk

(Buteo lagopus)

Length: 19-22 inches

Wingspan: 48-56 inches

Weight: 2.25-3 pounds

Habitat: open farmland,

prairies

#### **DESCRIPTION:**

This large buteo has a light-colored head and breast, a dark-brown belly band and a black "wrist" patch on its underwings; color may vary from bird to bird. White tail feathers with a broad dark tip further identify it. Rough-legged and ferruginous hawks are the only hawks with legs feathered to the toes (hence the name rough-legged).

#### **HABITAT AND FOOD:**

Rough-legged hawks nest in the Arctic tundra and boreal forests of northern Canada, migrating to the Lower 48 states for winter. By mid-October large numbers reach Idaho, where they can be seen until March or April perched on utility poles or hovering over fields. They can be found throughout the state and are one of the most commonly seen hawks in open, unwooden terrain.

This hawk, unlike the ferruginous

hawk, hovers or circles 30-100 feet above its prey before making a short dive on a small mammal like a vole or mouse. They occasionally eat birds and insects. On its breeding grounds, lemmings are an important food source.

#### **REPRODUCTION:**

Once back in its Canadian or Alaskan breeding ground, the rough-legged hawk builds a stick nest on a rock



ledge, hillside, or short tree and lines it with moss or feathers. The nest sometimes contains the bones of caribou along with sticks. In June, 2 to 6 eggs are laid; the young fledge 40 days after hatching.

#### **STATUS:**

Rough-legged hawk populations appear stable. Population sizes and abundance of rough-legged hawks are strongly influenced by prey populations. For example, in breeding areas, rough-legged hawk populations have been observed to increase and decrease with rodent prey availability.

#### CONSERVATION AND MANAGEMENT:

Rough-legged hawk populations are considered healthy and not in need of management.

Conservation and management of the rough-legged hawk depends on factors affecting habitat in Canada and the United States. In Idaho, the protection of open fields, plains, and marshes in their wintering areas will provide critical habitat needed. In addition, the policies presently being enacted to protect large birds in general from trends such as electrocutions and vehicle strikes, will benefit this hawk.



© Raymond Parsons

## Sharp-shinned hawk

(Accipiter striatus)

Length: 9-11 in. (male); 11-13 in. (female)

Wingspan: 20-21 in. (male); 23-26 in. (female)

Weight: 3-4 oz. (male); 5-8 oz. (female)

Habitat: broken woodland and brush (high and low elevations)

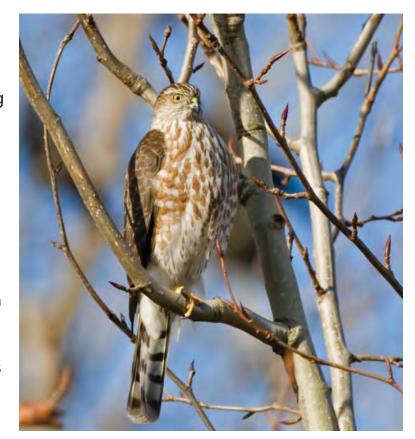
#### **DESCRIPTION:**

The sharp-shinned hawk, bluish-grey with short, round wings, looks like a smaller version of the Cooper's hawk, except for the squared-off tail. Adult or immature plumage is white, streaked with cinnamon; the tail is barred with four dark bands. In flight the small head barely projects beyond the leading edge of the wings.

#### **HABITAT AND FOOD:**

These hawks are found throughout North America as far north

as forests grow. They are widespread in Idaho, where some stay all winter. Large concentrations can be seen along mountain ranges during spring and fall migrations. They often migrate as far south as Central America. Banding recoveries from the Idaho Bird Observatory show that the majority of sharpshinned hawks migrating through southwestern Idaho spend their winters in western Mexico along the Sea of Cortez in the state of Sinaloa; spring and summer recoveries of Idaho migrants come from west-central British Columbia. The Idaho population is partially migratory -- pushed



© Raymond Parsons

into lower elevations and into southern Idaho during winter.

Shy and secretive, the sharp-shinned hawk preys on songbirds or an occasional insect, mammal or frog. Both sharp-shinned hawks and Cooper's hawks are occasionally seen in urban areas, harassing songbirds at winter bird feeders.

#### **REPRODUCTION:**

Most sharp-shinned hawks return to Idaho in April and begin nest-building in May. They collect small sticks and weave them into a nest that will contain 3 to 5 eggs. Less than a month after hatching, the young fledge.

Sharp-shinned hawks prefer coniferous forests for nesting, and are more commonly found nesting in the mountains, and often associated with water. This species benefits from strip plantings, clearcuts, hedgerows, and other practices that generate a diversity of cover heights where it can take small birds by surprise.

#### **STATUS:**

Sharp-shinned hawk populations in Idaho appear stable; they have adjusted their habitat preferences, especially during the winter, to more urban and suburban areas and have a habit of adopting neighborhood bird feeders as a dependable food source in winter.

#### **CONSERVATION AND MANAGEMENT:**

Barring any major habitat modifications in forests where sharp-shinned hawks breed, this species' existence is not threatened.



© Tom Munson

### Swainson's hawk

(Buteo swainsoni)

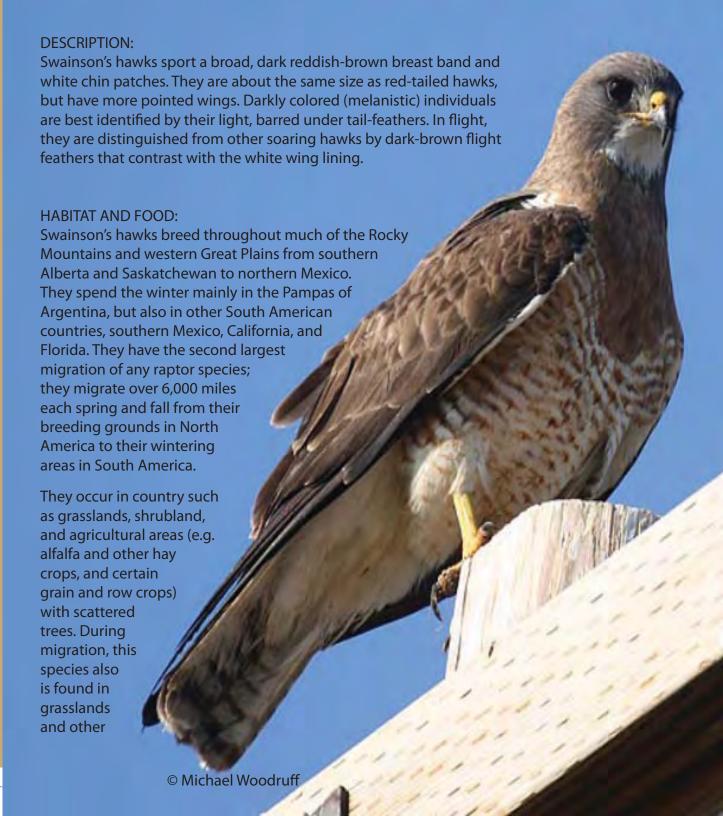
Length: 18-23 inches

Wingspan: 48-54 inches

Weight: 1.25-2.75 pounds

Habitat: agricultural lands, dry

open country



open country. In May, look for Swainson's hawks soaring above Idaho's rangelands and deserts.

These small-footed buteos are mainly insectivorous—feeding on grasshoppers, crickets, and locusts that have been overturned during agricultural practices. They can take ground squirrels, pocket gophers, mice, birds, and an occasional frog or snakes also are eaten. They often hunt alone, but groups of four to 12 soaring birds are common in late summer or early fall.

#### **REPRODUCTION:**

In Idaho, Swainson's hawks breed throughout the southern half of the state in the Snake River plain, as well in the Palouse region of the northwest. They prefer to nest in trees or shrubs near riparian zones adjacent to agricultural lands. It is generally absent from the Idaho panhandle except as an uncommon fall transient. There are an estimated 16,800 breeding individuals in Idaho.

Swainson's hawks nest in trees along wetlands and drainages, in windbreaks, and around farmsteads. The shallow nest is flimsily built with twigs and lined with greenery and bark. Between April and May, 2 or 3 eggs are laid and incubated for almost a month. By July a dozen or more young from different nests can be seen sitting on fence posts or utility poles along roadsides.

#### STATUS:

Conversion of sagebrush rangeland to tilled fields may be affecting their distribution in southern Idaho. In addition, programs to control the principal prey species (grasshoppers) are probably detrimental to Swainson's hawk populations, as a declining prey base has been linked to diminished reproductive success.

Most of the state's Swainson's hawks migrate south by mid-September to winter as far away as Argentina—they rely heavily on insects during the winter. In Argentina, agricultural use of organophosphate insecticides has resulted in deaths of large numbers of wintering birds due to direct exposure and consumption of poisoned grasshoppers. Although the most notorious of the insecticides (monocrotophos) has been banned, other organophosphate insecticides remain in use.

Due to threats during migration and on wintering grounds, Swainson's hawks are classified as a "Species of Greatest Conservation Need" in Idaho's Wildlife Comprehensive Strategy.

## CONSERVATION AND MANAGEMENT:

The decline of Swainson's hawks is a factor of habitat destruction, a reduction in its main prey species, and pesticide use. On the breeding grounds,

conversion to woody perennial crops, hay crops, and urban development are known to eliminate Swainson's hawks.

Primary actions should focus on maintaining and/or restoring native grasslands in order to retain adequate foraging and nesting habitats while other areas are inevitably lost to urban development. Migration corridors should be identified and important stopover habitat protected. Alternatively less toxic pesticides should be used that are less harmful to birds and other wildlife.



## Turkey vulture

(Cathartes aura)

Length: 25-32 inches

Wingspan: 67-70 inches

Weight: 3.5-5.2 pounds

Habitat: open arid regions, broken hills



These birds are scavengers. Unlike other raptors, they do not take live prey, feeding instead on carrion (dead animals)—so they do not have strong, grasping talons. Turkey vultures find their food using excellent eyesight and an incredible sense of smell. Their eyesight is well-developed for seeking carcasses while soaring continuously, alone or in groups, on rising air currents.

#### **REPRODUCTION:**

Turkey vultures start arriving in Idaho in late March. They do not construct a "traditional" nest; eggs are laid on a bare surface usually in a cave or hollow tree. The eggs, usually 2, are incubated by both parents for four weeks. The young are fed by a process of regurgitation—their parents pre-digest food then disgorge it for the nestlings. After about 9 weeks, they are ready to leave the nest.

#### **STATUS:**



The Snake River Birds of Prey National Conservation Area (NCA), in southwest Idaho, was established in 1993 to protect a unique environment that supports one of the world's densest concentrations of nesting birds of prey. Falcons, eagles, hawks, and owls occur here in unique profusion and variety. It is part of BLM's National Landscape Conservation System (NLCS).

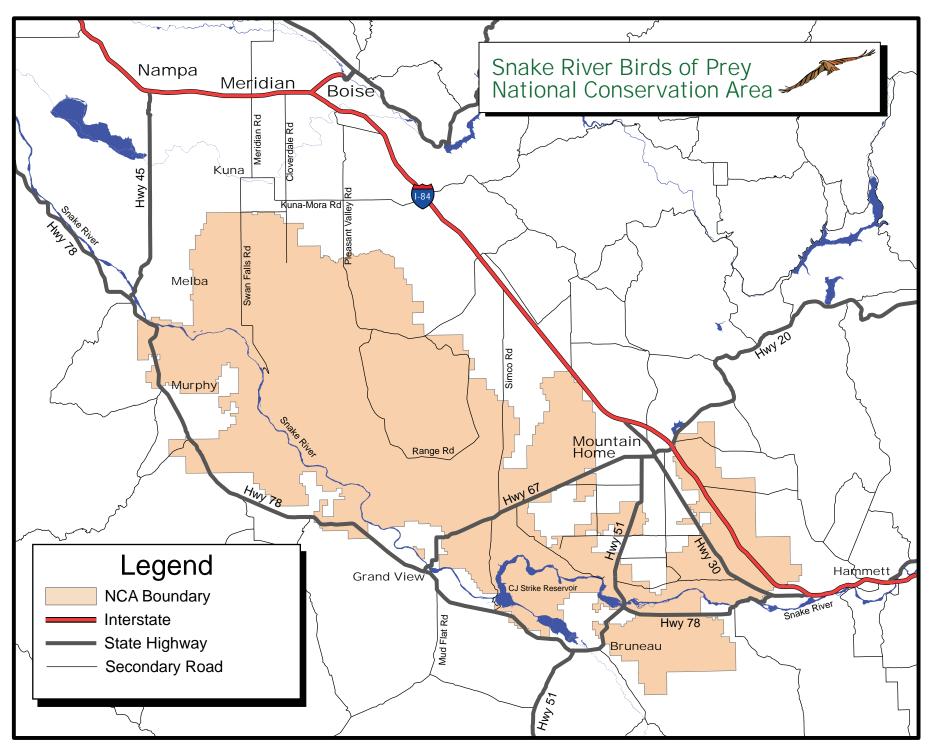
The area was set aside in response to information gained from one of the most intensive raptor research efforts ever undertaken. Decades of scientific studies defined the area critical to the future of unique bird populations which have captured national and international attention.



© Larry Ridenhour, BLM

This unique area encompasses 485,000 acres and hosts about 800 pairs of falcons, eagles, hawks and owls that come here each spring to mate and raise their young. The best time to view raptors is from mid-March through June during morning hours. Numerous other recreation opportunities are available, such as camping, boating, fishing, hiking, picnicking, hunting, OHV riding, and scenic/wildlife viewing. A developed campground is located at Cove Recreation Site and primitive camping is available throughout the area.

The NCA is nature in the rough. The birds are not on display. For the most part they are wary of humans and keep their distance. Public facilities in the area are few, but the raptors and their environment offer rich rewards to those who meet the area on its own terms, and who have the patience to fit into the natural rhythm of life here.



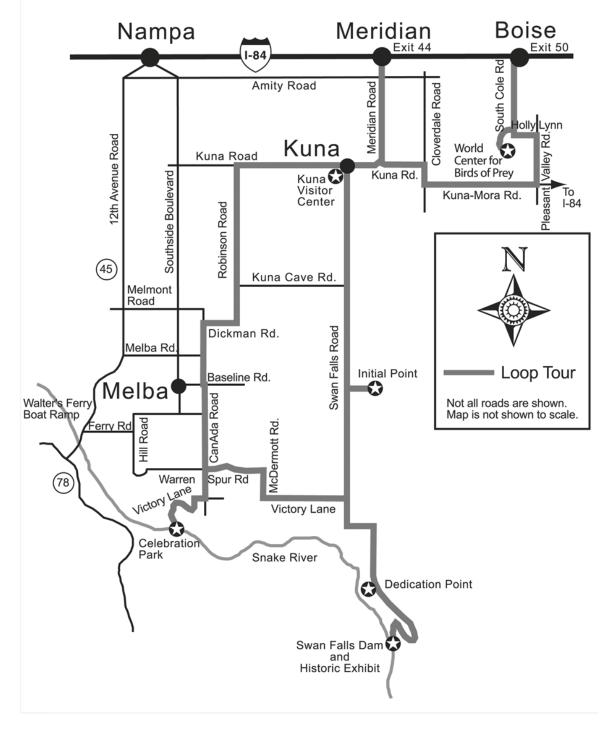
## The loop tour

Allow 3 to 4 hours to follow the high-lighted loop tour to these popular destinations:

- **Initial Point** Idaho's geographic survey reference point.
- **Dedication Point** an impressive view of the Snake River Canyon.
- Swan Falls Dam & Historical Exhibit - history of the dam and Snake River.
- Celebration Park fascinating archaeological and cultural history.

## Other recreational opportunities

- · Wildlife Viewing
- Hiking
- · Horseback Riding
- Bicycle Riding
- Fishing
- Boating
- Camping





#### THE IDAHO BIRDING TRAIL

The Idaho Birding Trail is a statewide trail that provides the best viewing opportunities to see birds in Idaho. With 175 sites and about 2,000 miles of trail, the birding trail represents a collection of bird watching hotspots, diverse habitats, and a glimpse of Idaho's rich natural heritage. Plus, 22 sites are designated as Blue Ribbon sites-"the best of the best" bird viewing opportunities in Idaho.

The trail is a series of self-guided, auto-driven tours, lasting anywhere from an afternoon outing to a week-long expedition. Most sites are easily accessible

and are connected by no more than a 30-minute drive. Along the way, birders will be guided to the best places to see large concentrations of birds, high species diversity, or unique places of high habitat quality and their associated birds.

A 135-page guidebook with directions, descriptions and maps of every site on the trail may be purchased for \$5 at any Idaho Fish and Game Regional office and by contacting Deniz Aygen at daygen@idfg.idaho.gov or (208) 287-2750.



Red-tailed hawk

© Raymond Parsons

This online leaflet was revised and updated from the original nongame leaflet #4 "Idaho's Birds of Prey, Part 1: Eagles, Falcons, Hawks, Osprey, Vulture" 1987. Special thanks to Marissa Buschow, Keith Carlson, Tom Munson, Raymond Parsons, Zach Smith, and Michael Woodruff for donating photos.

Revised 2008 editor: Deniz Aygen, IDFG

Revised 2008 reviewers: Sara Focht and Colleen Moulton, IDFG





Idaho Fish and Game adheres to all applicable state and federal laws and regulations related to discrimination on the basis of race, color, national origin, age, gender, disability or veteran's status. If you feel you have been discriminated against in any program, activity, or facility of Idaho Fish and Game, or if you desire further information, please write to: Idaho Department of Fish and Game, P.O. Box 25, Boise, ID 83707 OR U.S. Fish and Wildlife Service, Division of Federal Assistance, Mailstop: MBSP-4020, 4401 N. Fairfax Drive, Arlington, VA 22203, Telephone: (703) 358-2156. This publication will be made available in alternative formats upon request. Please contact the Department of Fish and Game for assistance.