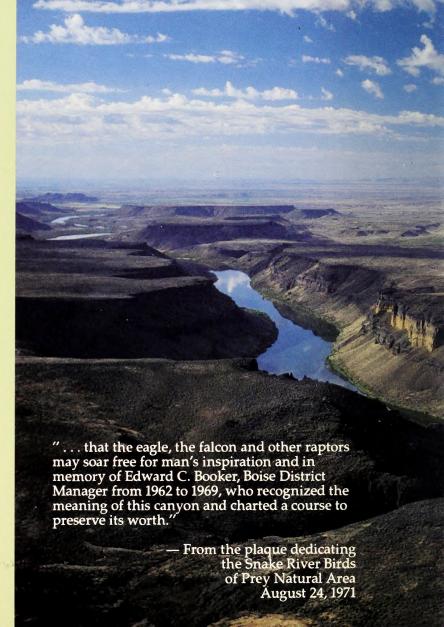
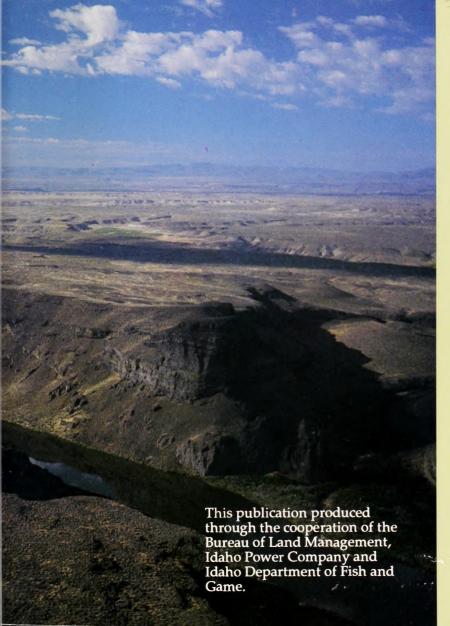


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FOREWORD

The Snake River Birds of Prey Area in southwestern Idaho was established in 1980 to protect a unique environment which supports one of the world's densest concentrations of nesting birds of prey.

The area is the culmination of the most intensive birds of prey research effort in history. A decade of scientific studies defined the area critical to the future of unique bird populations which have captured national and international attention.

Here falcons, eagles, hawks, owls and vultures in unique profusion and variety follow the natural rhythms of life in the sometimes harsh desert environment of southwestern Idaho.

This is nature in the rough. The birds are not on display. For the most part they are wary of man and keep their distance. Public facilities are few and primitive within the area where the nesting birds concentrate. But the birds of prey and their environment offer rich rewards to those who come to the area on its own terms.

This booklet is designed to foster greater understanding and appreciation of the Snake River Birds of Prey Area — a unique and irreplaceable part of our Nation's heritage.

Bureau of Land Management Library Bldg. 50, Denver Federal Center Denvey 20: 80225

THE AREA

The Snake River Birds of Prey Area encompasses 482,640 acres of BLM-administered public land along an approximately 80-mile reach of the Snake River in southwestern Idaho.

The river lies within a deep canyon. Cliffs tower up to 700 feet above the river. Countless ledges, cracks, crevices and pinnacles provide ideal nesting aeries for birds of prey, also known as raptors.

Winds blowing against canyon walls create vertical updrafts which the birds catch to rise out of the canyon to hunt the arid rangelands beyond the rim. Here numerous small mammals, birds, reptiles and insects are prey for raptors.

The land adjacent to the canyon contains a complex mosaic of plant communities dominated by sagebrush with a grass understory.





The area north of the rim has a mantle of deep, finely textured soil deposited by Pleistocene winds. Much of this area seasonally teems with burrowing Townsend ground squirrels. These prolific rodents are the mainstay in the diet of the area's extraordinary prairie falcon population and important to other birds of prey and predatory mammals.

The river canyon and surrounding shrub-grass steppe environments provide habitats for an amazing number and variety of wildlife species. More than 250 species of mammals, birds, reptiles, amphibians and fish are found in the area.

This rich diversity of wildlife captured the interest and hearts of scientists and laymen around the world and resulted in creation of the Snake River Birds of Prey Area.

THE BIRDS

Birds of prey — falcons, eagles, hawks, owls and vultures — are found throughout the world in virtually every climate and terrain from desert mountains to sea-level jungles.

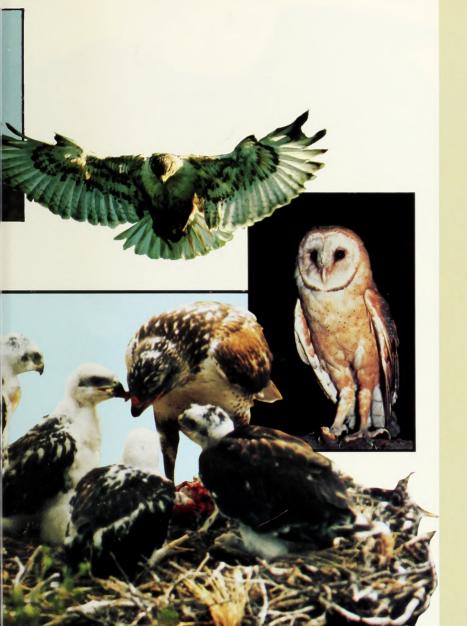
Their prey includes almost every kind of animal, living or dead. Hunting techniques range from vultures' soaring far above the ground watching for dead animals to falcons' diving attacks on flying birds at breathtaking speeds reported to exceed 200 miles per hour.

Birds of prey have extraordinarily keen eyesight. The diurnal species (daytime hunters) — hawks, eagles, falcons and vultures — have full-color vision with from four to eight times the resolving power of the human eye. A soaring eagle, for example, may be able to spot a rabbit two miles away.

The nocturnal (nighttime-hunting) owls' eyes are highly adapted to low light conditions and they have extremely sensitive hearing. Both senses are used to locate prey. Soft feathers specially adapted for silent flight enable owls to noiselessly approach unsuspecting prey.

Hawks, eagles and falcons are among the most beautiful, graceful and fierce of all living creatures. Throughout recorded history they have been both revered and reviled.





They have been prized as hunters by falconers throughout the world for thousands of years. Cultures as diverse as those of early Rome, primitive North Borneo and the United States have accorded various birds of prey great symbolic value.

But man has also been the greatest enemy of the world's birds of prey. Shooting historically has taken a great toll due to occasionally real, but most often imagined competition with man for prey.

The widespread use of certain pesticides has been linked to catastrophic declines in some particularly susceptible raptor populations. Loss of habitat through human disturbance is an ever-increasing threat to raptors.

In recent years there has been increased concern for the plight of birds of prey throughout much of the civilized world. Many protective regulations, laws and international treaties have been enacted.

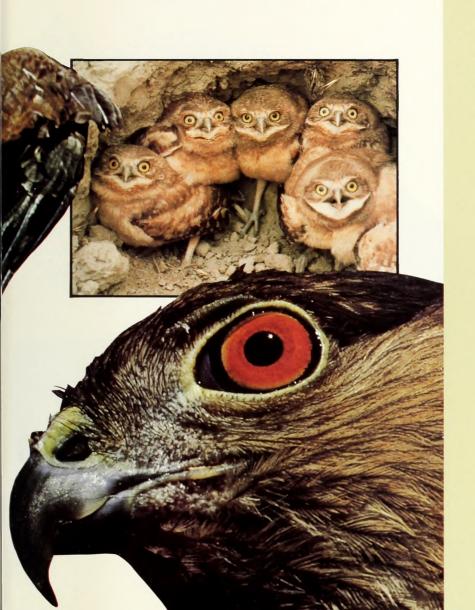
Protection of crucial habitats, like the Snake River Birds of Prey Area, is one of the keystones of worldwide efforts to protect birds of prey. The Snake River Birds of Prey Area supports one of the world's densest concentrations of nesting raptorial birds, including up to 5% of the entire known population of prairie falcons.

Each year more than 700 pairs of raptors representing 14 different species come to the area to nest 6 and raise their young.
Additional species — including the endangered bald eagle and peregrine falcon — inhabit the area during migration and wintering periods.

This extraordinary number and diversity of characteristically unsociable birds of prey make the area unique on a worldwide scale.

The Snake River Birds of Prey Area serves as a giant natural raptor nursery. Some birds produced in the area migrate thousands of miles. Raptors banded and tagged in the area have been found as far east as Kansas, as far north as Washington and Montana and as far south as Guatemala in Central America.





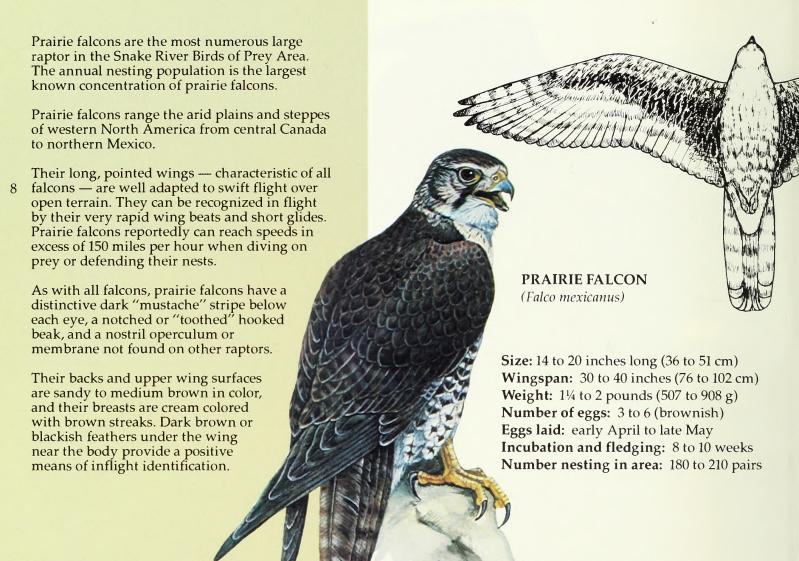
Species that nest in the area are:

Prairie falcon
Golden eagle
Ferruginous hawk
Red-tailed hawk
Swainson's hawk
Northern harrier (marsh hawk)
American kestrel (sparrow hawk)
Turkey vulture
Great horned owl
Long-eared owl
Short-eared owl
Western screech-owl
Burrowing owl
Common barn-owl

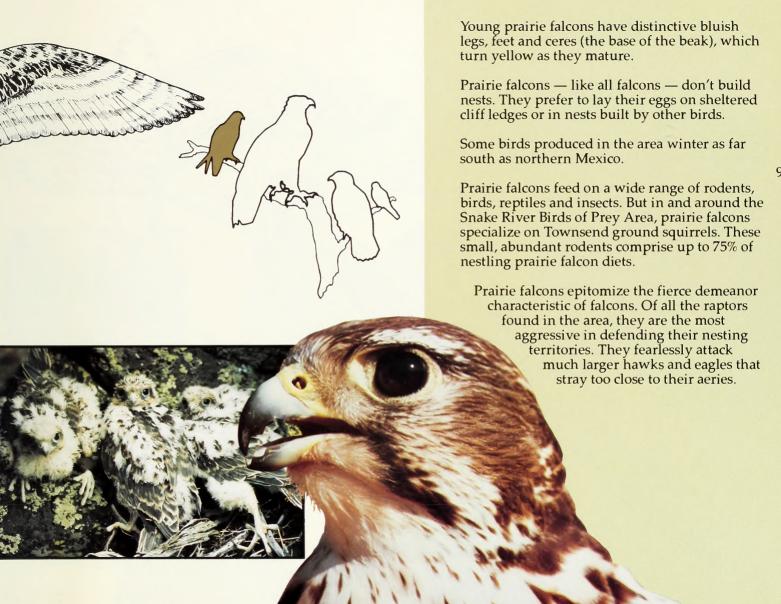
Species that migrate through or take up temporary residence in the area but don't nest there include:

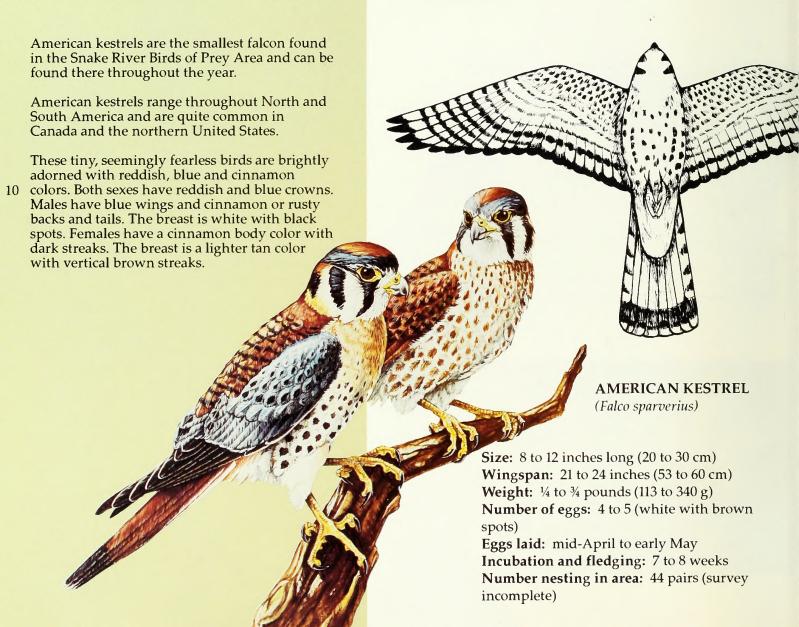
Bald eagle
Peregrine falcon
Osprey
Rough-legged hawk
Northern goshawk
Sharp-shinned hawk
Cooper's hawk
Merlin (pigeon hawk)

In the following pages, the relative size of each bird discussed is compared to the most common nesting raptors in the Snake River Birds of Prey Area. These silhouettes are for general size comparison only, and are not intended to illustrate identification characteristics described in the text.





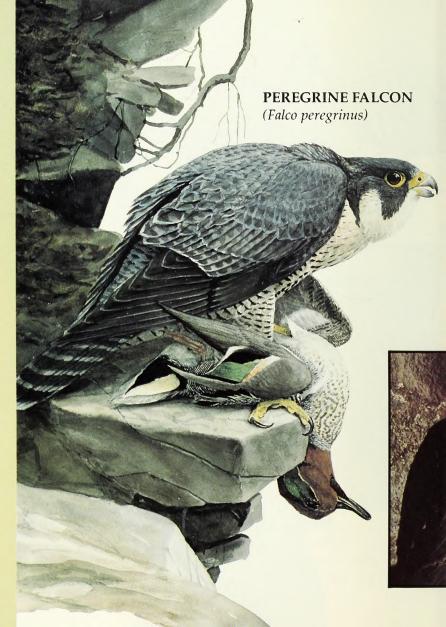






Peregrine falcons do not presently nest within the Snake River Birds of Prey Area, but do occasionally pass through as migrants. The last known resident peregrine was a lone female in 1975. The last nesting pair disappeared in the early 1950's.

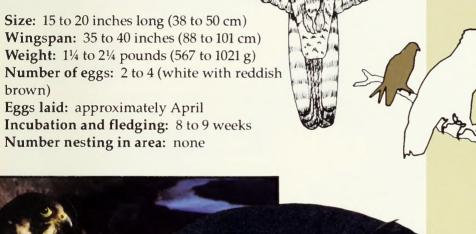
Peregrine falcons were once found worldwide, except for Antarctica. Their range and numbers now are greatly reduced. A major factor in this decline and the decline of several other raptors, may be attributed to environmental accumulations of toxic pesticides, most notably DDT. The peregrine falcon has been so reduced in numbers that it is formally classified as an endangered species.





Adult peregrines' backs are slate grey in color.
Their underparts are cream-colored with dark
narrow barring on the flanks and
belly from breast to tail-tip.
The head is dark blackish
with a broad black
mustache below each eye. The
tail is slate grey with black bars and
a white tip. The feet, legs, and cere are
yellow.

Peregrine falcons are thought to be the fastest of all the raptors, reportedly reaching speeds of 200 miles per hour when diving. They prey on birds up to the size of ducks and usually take them in flight.



Golden eagles are the largest raptors nesting in the Snake River Birds of Prey Area.

Golden eagles are widely distributed throughout the Northern Hemisphere, ranging as far south as northern Africa and Mexico.

These majestic flyers have broad wings and

round tails which enable

them to
soar
effortlessly
for long
periods of
time.

Golden eagles get their name from the golden colored feathers on the head and upper neck. They require at least four years to obtain their full dark adult plumage. Their legs are completely feathered to the toes.

Immature golden eagles have a white tail with a broad black band at the end. These young birds also have conspicuous white patches at the base of the flight feathers on each wing. The amount of white lessens with each moult as the birds approach maturity.



GOLDEN EAGLE

(Aquila chrysaetos)

Size: 30 to 42 inches long (76 to 107 cm) **Wingspan:** 74 to 90 inches (187 to 228 cm)

Weight: 7-13 pounds (3178 to 5902 g) Number of eggs: 1 to 3 (dull white with

brown blotches)

Eggs laid: early February to mid-March Incubation and fledging: 15 to 16 weeks Number nesting in area: 30 to 34 pairs





Red-tailed hawks are the most common broadwinged hawk in North America and the most common member of the genus *Buteo* found in the Snake River Birds of Prey Area.

Red-tailed hawks range from northern Canada to Panama, Central America.

Adult red-tailed hawks are readily identified by the

16 red upper surface of the tail. Their backs and upper wing surfaces are dark greybrown, streaked and barred with lighter colors.

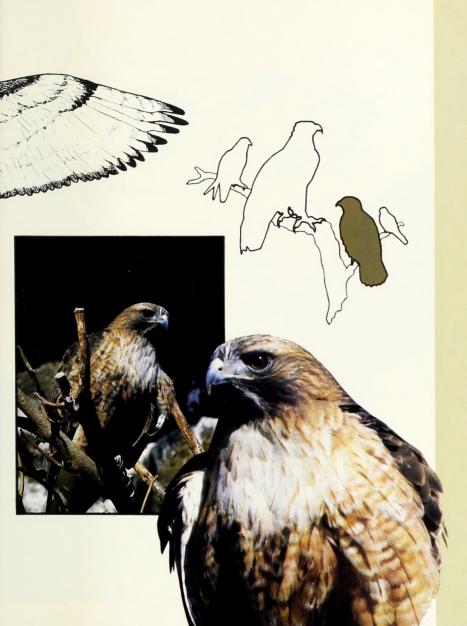


Size: 19 to 25 inches long (48 to 63 cm) Wingspan: 48 to 53 inches (122 to 135 cm) Weight: 1¾ to 3½ pounds (794 to 1589 g)

Number of eggs: 2 to 5

Eggs laid: March to early April

Incubation and fledging: 10 to 11 weeks Number nesting in area: 55 to 60 pairs



In a light color phase, adults' breasts are cream colored and streaked with brown. There is a dark or blackish band across the belly. Dark color phase red-tailed hawks may have red or black bellies, breasts and wing linings. Immature red-tailed hawks begin to obtain adult plumage in their second year. Though young birds look similar to adults, their tails are grayish-brown with fine black streaks.

In the Snake River Birds of Prey Area red-tailed hawks nest primarily on cliffs and in tree tops.

Some birds hatched in the area may migrate as far south as Mexico and Central America. The full extent of the birds' winter range is unknown. Some adults remain in the area year-round.

The red-tailed hawk's primary food in the area consists of Townsend ground squirrels, small rabbits, kangaroo rats, lizards and snakes.

Ferruginous hawks are the largest of the broadwinged hawks in North America.

Ferruginous hawks are only found in the shrub-grasslands of western North America.

They can usually be identified in flight by their large size, whitish tail and dark legs which form a V-shaped pattern against the belly.

Dark color phase ferruginous hawks are less common in the Snake River Birds of Prey Area than light color phase birds and are more difficult to identify since they are often confused with other large, dark raptors.



Size: 22 to 25 inches long (55 to 63 cm)
Wingspan: 50 to 60 inches (127 to 152 cm)
Weight: 2 to 5 pounds (908 to 2270 g)
Number of eggs: 3 to 5 (white and brown

blotched)

Eggs laid: early April to early May Incubation and fledging: 10 to 11 weeks Number nesting in area: 20 pairs







Ferruginous hawks winter as far south as Mexico. They usually arrive in southwestern Idaho in late February or early March to begin courtship.

They prefer open nesting sites, often in the tops of sagebrush, juniper trees or on small buttes. In the Snake River Birds of Prey Area, these hawks will also utilize the ledges of smaller cliffs in the canyon.

Ferruginous hawks in the area feed mainly on Townsend ground squirrels but also take rabbits and pocket gophers. Swainson's hawks do not commonly nest in the Snake River Birds of Prey Area.

Swainson's hawks are birds of the open prairies and rangelands. They breed in western North America from Alaska to northern
Mexico.

The back and upper wing surfaces are brown. The throat is white, the breast brownish chestnut and the belly and legs are dull white. When seen from below, the forward or leading edge of the wings is white while the trailing edge is dark. Swainson's hawks are the only hawks in the area with this color pattern on the underside of the wings.



(Buteo swainsoni)

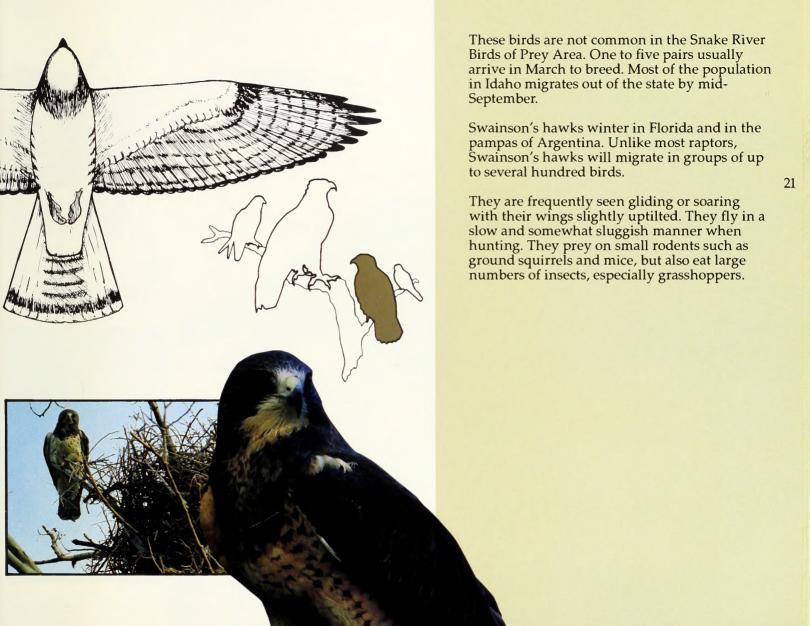
Size: 19 to 22 inches long (48 to 56 cm) Wingspan: 48 to 54 inches (122 to 137 cm)

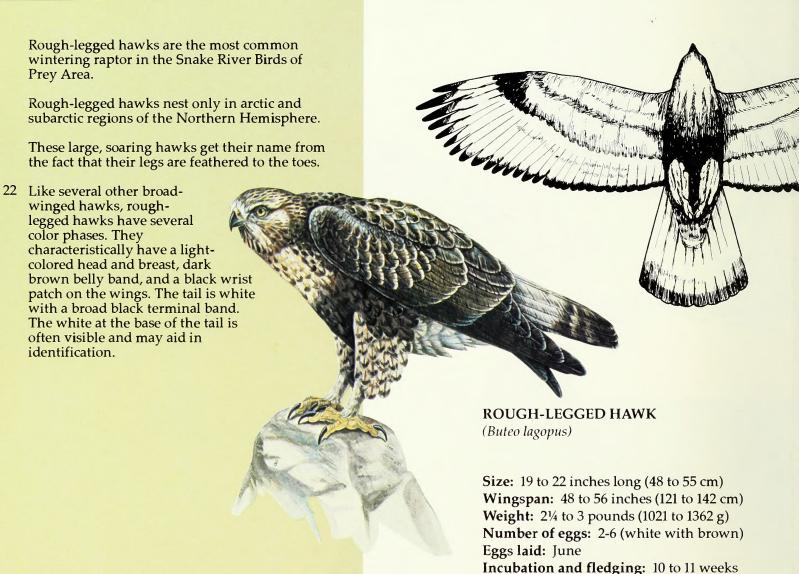
Weight: 1¼ to 2¾ pounds (567 to 1248 g) Number of eggs: 2 to 3 (white spotted with

brown)

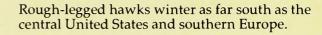
Eggs laid: April to May

Incubation and fledging: 8 to 11 weeks **Number nesting in area:** 1 to 5 pairs





Number nesting in area: none



In the Snake River Birds of Prey Area, roughlegged hawks prey on small mammals, rabbits and occasionally birds. They are the only large North American hawk that commonly hovers like the kestrel when hunting.



Bald eagles, which are found only in North America, are winter visitors to the Snake River Birds of Prey Area.

Although bald eagles nest in eastern and northern Idaho, the eagles that winter along the Snake River in Southwestern Idaho probably come from nesting grounds in northern Canada.

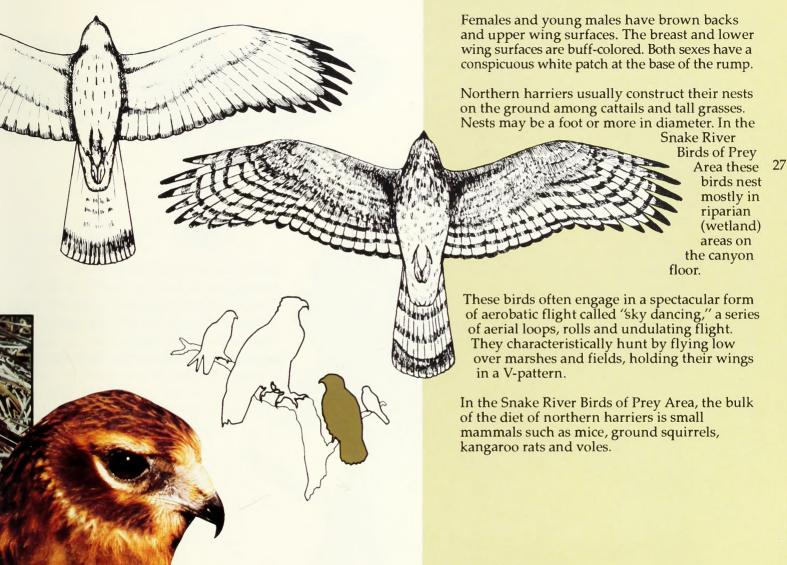
Adult bald eagles are easily identified by their white head and tail. In their first year, however, bald eagles are completely brown and can be confused with golden eagles. From age one to four — or until they get their adult plumage — bald eagles have a mottled appearance, most noticeable on their undersides and tails. The legs of bald eagles are unfeathered; the legs of golden eagles are feathered to the toes

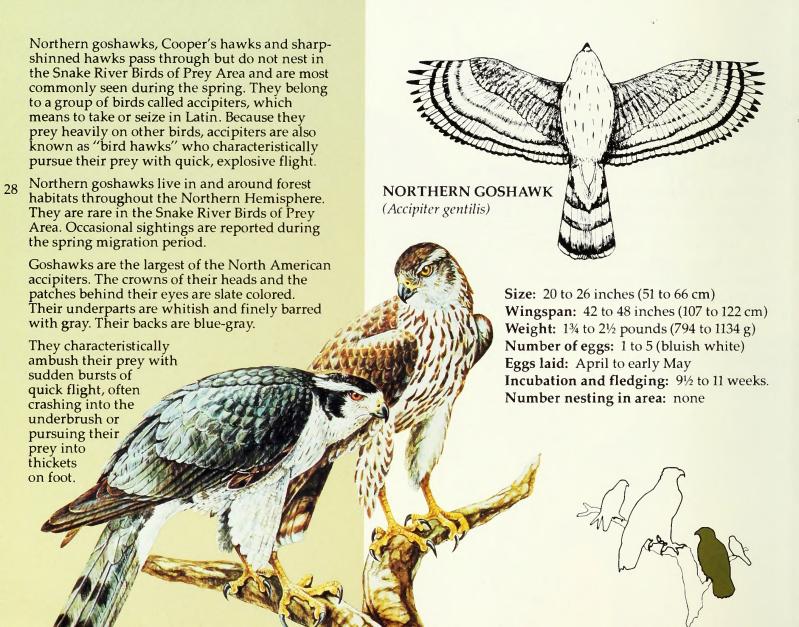


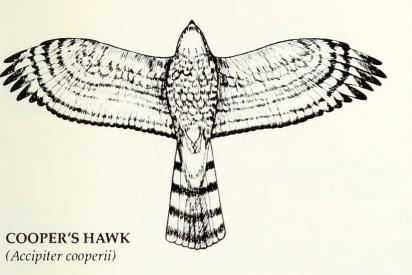








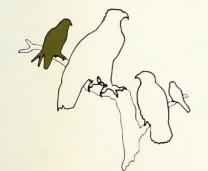




Size: 14 to 20 inches (36 to 51 cm)
Wingspan: 27 to 36 inches (69 to 91 cm)
Weight: ¾ to 1¼ pounds (340 to 567 g)
Number of eggs: 3 to 6 (whitish, rarely with spots)

Eggs laid: late April to mid-May Incubation and fledging: 8½ to 9 weeks

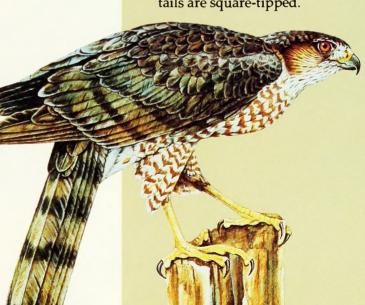
Number nesting in area: none



Cooper's hawks inhabit woodlands and forest edges in the United States, southern Canada and northern Mexico. They are occasionally seen in the Snake River Birds of Prey Area during the spring migration period and rarely at other times.

Cooper's hawks are smaller than goshawks and larger than sharp-shinned hawks, averaging slightly smaller than a crow. The color and pattern of their feathers is very similar to that of 29 the sharp-shinned hawks, blue-gray on the back and rusty colored on the breast.

The heads of Cooper's hawks are black whereas sharp-shinned hawks' heads are dark bluish gray. Another distinguishing characteristic is the Cooper's rounded tail whereas sharp-shins' tails are square-tipped.

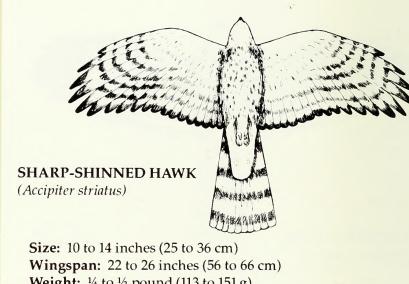


Sharp-shinned hawks are the smallest North American accipiter. The adult male may have one-fourth the wingspan and one-tenth the weight of an adult female goshawk.

They have long tails, short, rounded wings and a notched or square-tipped tail. Adult birds have blue-gray backs and rusty-barred breasts.

Characteristic of the accipiters, the flight of sharp-shinned hawks is marked by several quick beats and a glide. They are among the most agile fliers of all raptors. They often catch their prey after high speed pursuit through dense cover.

30



Weight: 1/4 to 1/3 pound (113 to 151 g)

Number of eggs: 3 to 8 (bluish white, spotted

and blotched with brown)

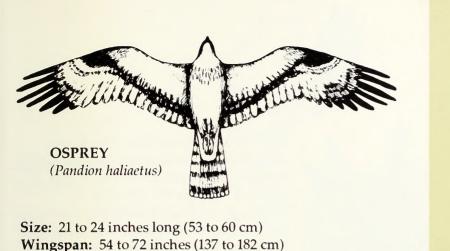
Eggs laid: mid-May to mid-June

Incubation and fledgling: 7½ to 8 weeks

Number nesting in area: none







Weight: 3 to 3½ pounds (1362 to 1589 g)

Incubation and fledging: 12 to 13 weeks

Number nesting in area: none

blotches)

Eggs laid: May

Number of eggs: 3 to 4 (cream with red-brown

Ospreys, often called fish hawks, frequent the Snake River Birds of Prey area during spring and fall, but do not nest there.

The osprey is the only species of the genus *Pandion*. Found world-wide, except for Antarctica, this large bird is one of the most widely distributed of all raptors.

The osprey characteristically has a dark brown

back and upper wing surface with the underside being white. The head is white with a dark brown stripe through the eye. The underside of the wing has a black wrist patch easily seen when the bird is in flight. The long narrow wings have a conspicuous crook and a downward bend.

In the Snake River Birds of Prey Area and throughout their range, ospreys frequent lakes, reservoirs, rivers and streams in pursuit of fish, which comprise their entire diet.

By November the birds have left the area. Most winter in Central and South America.

Great horned owls, the familiar "hoot owls," are year-round residents in the Snake River Birds of Prey Area.

Great horned owls are widely distributed throughout North and South America.

Like all the owls, they have a feathered facial disk, highly sensitive hearing, eyes adapted to low light conditions, and soft feathers for noiseless flight. They generally hunt at night.

Great horned owls are easily recognized by their large size and prominent ear tufts. Of all the raptors in the Snake River Birds of Prey Area these large birds are surpassed in strength only by the eagles.

Like the golden eagle, the great horned owl may lay eggs as early as February. The nest is usually in a cliff cavity or in a tree. Sometimes old stick nests constructed by hawks, magpies or crows will be used.

Although they occasionally forage in daylight, great horned owls usually hunt at night. They typically hunt from perches and capture a wide variety of prey ranging in size from shrews and mice up to jack rabbits. They also eat fish, scorpions and a variety of birds, including the young of other raptors.

GREAT HORNED OWL

(Bubo virginianus)

Size: 20 to 25 inches long (50 to 63 cm)
Wingspan: 50 to 60 inches (127 to 152 cm)
Weight: 1½ to 4 pounds (681 to 1816 g)

Number of eggs: 2 to 3 (white) Eggs laid: February and March

Incubation and fledging: 11 to 12 weeks Number nesting in area: 35 to 44 pairs



Size: 10 to 14 inches (25 to 35 cm) Wingspan: 36 to 40 inches (91 to 102 cm) Weight: ½ to ¾ pound (227 to 340 g) Number of eggs: 3 to 7 (white) Eggs laid: March or April Incubation and fledging: 9 to 10 weeks Number nesting in area:

LONG-EARED OWL

(Asio otus)

45 to 65 pairs

Long-eared owls are year-round residents of the Snake River Birds of Prey Area; some individual birds are migratory.

Long-eared owls nest throughout the central and northern United States and Canada.

This species has a streaked gray breast, buffy face and close-set ear tufts. In contrast, screech owls are smaller and have a gray face, and great horned owls are much larger and have no streaking on the breast. In flight the long-eared owls' ear tufts are held flat against the head, and they look very much like the lightercolored short-eared owls.

Occasionally these birds nest in cliff cavities but more often nest in trees using old stick nests constructed by black-billed magpies and crows. The female blends well with the stick nest and usually sits very still when approached. However, if the adult is flushed from the nest during the day, the nest becomes extremely vulnerable to predation.

In winter, long-eared owls gather in communal roosts of up to 20 birds. The roost site is usually on the lower branches of willows in the canyon bottom.

Long-eared owls are active only at night. They have very long wings and fly low over open areas to capture deer mice, voles, kangaroo rats, pocket mice and other small mammals.

Short-eared owls inhabit the Snake River Birds of Prey Area year-round.

Short-eared owls range over most of North and South America, Europe and Asia. In their appearance and daytime hunting habits they are the most hawk-like of the owls found in the Snake River Birds of Prey Area.

These medium-sized owls are best identified by 34 a buffy plumage, inconspicuous ear tufts and the habit of flying low over marshes and meadows in daylight.

Like the barn owls and long-eared owls, shorteared owls have long wings for silent, buoyant flight.

In winter they gather in communal roosts on the ground, sometimes numbering 30 or more owls per roost. Some short-eared owls that winter in the area probably come from breeding areas farther north. Some local nesters may move south after breeding.

Short-eared owls nest on the ground concealing their eggs in dense grass cover or beneath shrubs. The buffy plumage aids in camouflaging the female on her nest. The ground nesting habit makes the nests vulnerable to predation.

Short-eared owls hunt in both darkness and daylight. They feed on small mammals.

SHORT-EARED OWL

(Asio flammeus)

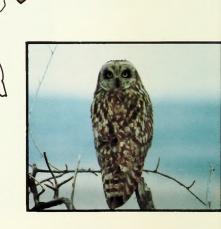
Size: 12 to 13 inches long (30 to 33 cm) **Wingspan:** 38 to 44 inches (96 to 111 cm) **Weight:** ½ to 1 pound (227 to 454 g)

Number of eggs: 4 to 8 (white)

Eggs laid: April

Incubation and fledging: 9 to 10 weeks Number nesting in area: 2 to 4 pairs (survey

incomplete)



WESTERN SCREECH-OWL

(Otus kennicottii)

Size: 7 to 9 inches long (17 to 22 cm) **Wingspan:** 21 to 23 inches (53 to 58 cm) **Weight:** ¼ to ¾ pound (113 to 300 g)

Number of eggs: 4 to 5 (white) Eggs laid: March and April

Incubation and fledging:

8 to 9 weeks

Number nesting in area:

20 pairs

The western screech-owl is a year-round resident of the Snake River Birds of Prey Area and the smallest raptor found there.

Western screech-owls frequent woodlands from southeastern Alaska to central Mexico.

This small owl is closely related to the eastern screech-owl and is nearly identical in appearance. They are best distinguished by the differences in their calls. Together their ranges encompass the 48 contiguous states as well as parts of Mexico and Canada.

Western screech-owls are gray in color and have conspicuous ear tufts. Their small size makes it easy to distinguish them from the other owls found in the Snake River Birds of Prey Area.

They often nest in tree cavities constructed by northern flickers, a species of woodpecker.

Screech-owls also use artificial nest boxes and are thought to nest in cliff cavities as well. In some instances they use old magpie nests.

When seeking prey, screechowls behave much like great
horned owls. They hunt
from perches and feed on
a diversity of prey
including insects,
scorpions, amphibians,
reptiles, small mammals and
birds. They are normally
active only at night.

Common barn-owls, the most numerous and secretive of the owls found in the Snake River Birds of Prey Area, live there year-round.

Common barn-owls are the most widespread of all owl species, inhabiting every continent except Antarctica.

Their appearance is very distinctive: heart-shaped faces, dark eyes and large, sparsely
36 feathered legs. Females tend to have a buffy-colored breast while that of the males is almost pure white. Both sexes are a sandy golden color on their backs and wings.

Although barn-owls are thought to be the most numerous owls in the area, their strictly nocturnal hunting behavior makes them difficult to study.

They prefer to nest in sheltered sites and typically select cavities in cliffs, dirt banks or haystacks. They will also use artificial nest boxes. Unlike other North American owls, they occasionally raise two broods of young in a single year.

Barn-owls use their keen eyesight and hearing to locate prey on even the darkest of nights. Their hearing is so highly developed they can locate and capture prey in total darkness. On long wings they cruise low over open areas with mothlike buoyancy, capturing

voles, deer mice, pocket gophers,

kangaroo rats and other small mammals.

COMMON BARN-OWL

(Tyto alba)

Size: 14 to 16 inches long (35 to 40 cm) Wingspan: 42 to 46 inches (106 to

116 cm)

Weight: ¾ to 1¼ pounds (340 to

567 g)

Number of eggs: 4 to 12 (white)

Eggs laid: February and March

Incubation and fledging:

14 to 15 weeks

Number nesting in area:

45 to 65 pairs





BURROWING OWL

(Athene cunicularia)

Size: 7 to 9 inches long (17 to 22 cm) Wingspan: 20 to 24 inches (50 to 60 cm) Weight: 1/4 to 1/2 pound (113 to 227 g)

Number of eggs: 6 to 9 (white)

Eggs laid: April

Incubation and fledging:

8 to 10 weeks

Number nesting in area:

10 to 24 pairs

Burrowing owls are the only species of owl found in the Snake River Birds of Prey Area that doesn't commonly winter there.

Burrowing owls inhabit open country throughout the western United States and from southwestern Canada to the southern tip of South America.

The range of burrowing owls has been reduced due to a decline in colonies of burrowing rodents. In Idaho, burrowing owls are classified as a sensitive species, one that may reach low population levels if its remaining habitat is modified without consideration of its needs.

Burrowing owls are easily recognized by their small size, long legs, and habit of perching on the ground or on fence posts. Burrowing owls are unique among North American raptors in their use of underground nest sites.

Despite their name, burrowing owls do not dig their own burrows. They scratch with beak and claw to modify burrows constructed by other animals. In the Snake River Birds of Prey Area, most burrowing owls nest in unoccupied badger holes.

Burrowing owls hunt by day as well as by night. Most prey is captured at dawn and dusk. The owls are frequently seen hovering a short distance above the ground, searching for their next meal. They feed primarily on insects. Amphibians, small mammals and

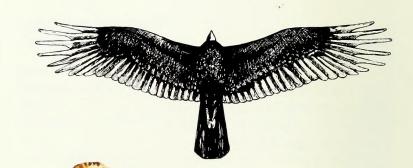
birds comprise the rest of their diet.

Turkey vultures, which do not commonly nest in the Snake River Birds of Prey Area, are the only representative of the genus *Cathartes* found in the area.

Turkey vultures range over most of the Western Hemisphere from southern Canada to the southern tip of South America.

They are slightly smaller than golden eagles and appear to be almost black. The head is featherless (naked) and red, and the beak light yellow in color with red at the base. The wings of turkey vultures are broad with a black leading edge and a lighter or gray trailing edge when seen from below. Their tails are long, rounded and black. In flight, the wings are held in a definite V-shape, and the birds tilt quickly and frequently from side-to-side.

The talons of turkey vultures are not very strong, therefore the birds are ill-equipped to kill their own prey. They make their living as scavengers. Their extremely keen eyesight and ability to soar effortlessly make them adept at locating dead animals which make up the bulk of their diet.



TURKEY VULTURE

(Cathartes aura)

Size: 26 to 32 inches long (66 to 81 cm)
Wingspan: 68 to 72 inches (172 to 182 cm)
Weight: 2 to 5 pounds (908 to 2270 g)

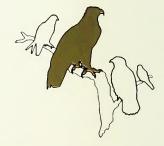
Number of eggs: 1 to 3 (white with dark

blotches)

Eggs laid: April

Incubation and fledging: 15 to 16 weeks

Number nesting in area: 1 to 2 pairs





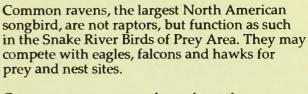
Size: 21 to 27 inches (53 to 69 cm)

Wingspan: 45 to 50 inches (114 to 127 cm) Weight: 2½ to 3½ pounds (1134 to 1588 g) Number of eggs: 4 to 7 (blue with brown

blotches)

Eggs laid: March to May

Incubation and fledging: 9 to 10 weeks Number nesting in area: 100 to 150 pairs



Common ravens range throughout the Northern Hemisphere — Europe, Africa, most of Asia, Greenland, and North and Central America.

Ravens are one of the most numerous and frequently sighted birds in the Snake River Birds of Prey Area and occur there year-round.

They are large and shiny black with a thick beak, shaggy ruff of feathers at the throat and a wedge-shaped tail. They are among the most intelligent of all the world's birds.

Ravens nest on cliffs and utility poles in the Snake River Birds of Prey Area. They roost communally. Groups of several hundred birds may roost on a single support tower for electric transmission lines.

They are primarily scavengers, but may also capture rodents, lizards, small birds and insects.

PREY & OTHER PREDATORS

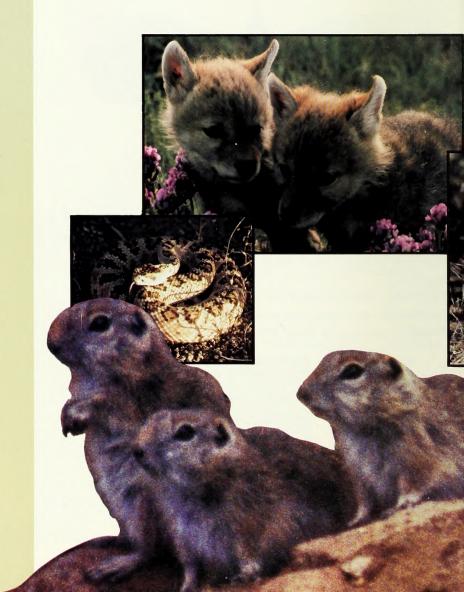
Hawks, eagles, falcons, owls and vultures are the most spectacular, and during the nesting season, most evident wildlife in the Snake River Birds of Prey Area.

But raptors collectively comprise only a small fraction of the more than 250 animal species found in the area. And the raptors are only present in such profusion and variety due to abundant prey including other birds, small mammals, reptiles, amphibians and insects.

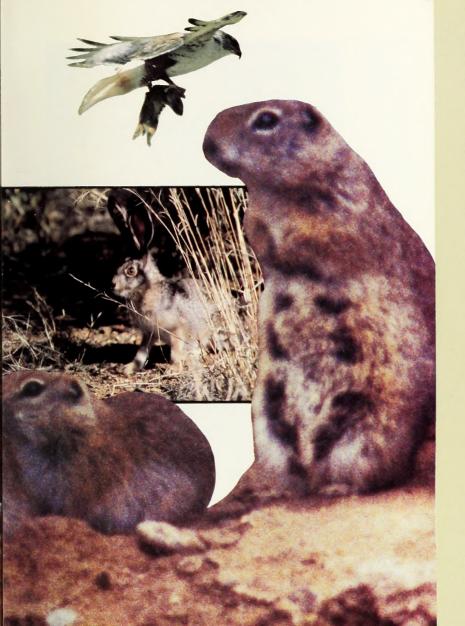
The Townsend ground squirrel and black-tailed jack rabbit are particularly important prey species.

The deep, finely textured soils adjacent to the north rim of the Snake River canyon support extraordinarily large numbers of Townsend ground squirrels. These small rodents are important prey for a number of mammals and a variety of raptors in the area; they are particularly crucial to the large nesting population of prairie falcons.

Researchers documented a strong relationship between the abundance of Townsend ground squirrels and prairie falcon reproductive success. In short, the more ground squirrels, the more young prairie falcons survive to flight.



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Townsend ground squirrels are active only about six months of the year, from mid-January through mid-July. They spend the rest of the year sleeping in their burrows.

Adult ground squirrels begin to emerge from hibernation to breed (and become available as prey) at about the same time adult prairie falcons return to the area to court and begin nesting.

The female squirrels give birth to their single litter of four to ten young in mid-March. By early April, the young ground squirrels begin to emerge from their burrows. This occurs just at the time prairie falcon eggs are beginning to hatch, creating a great demand for the emerging supply of young ground squirrels.

As the season progresses, the ground squirrels' food, succulent grasses and forbs, begins to dry and wither. The ground squirrels begin their six-month sleep. Adult males are first to begin aestivation. Adult females follow in about two weeks.

Because young-of-the-year ground squirrels need to build up body fat reserves for their first extended sleep, they are the last to disappear into their burrows. By about mid-July, areas once teeming with ground squirrels appear deserted.

Concurrent with the disappearance of Townsend ground squirrels as prey, large numbers of adult and young-of-the-year prairie falcons begin to leave the area.

Golden eagles in the Snake River Birds of Prey Area are as dependent upon black-tailed jack rabbits as prairie falcons are upon ground squirrels.

Jack rabbits are available as prey year-round. They feed on grasses and forbs in spring and summer. In fall and winter they eat mostly shrubs.

42 Jack rabbits breed from late January to about June. Females have up to three litters containing from one to six young each. The vulnerable young jack rabbits become available as prey just when golden eagles have the greatest need for food for their young.

Unlike Townsend ground squirrels, jack rabbits are valuable prey for wintering raptors as well as for those that nest in the area.

Other important prey species for raptors include cottontail rabbits, yellow-bellied marmots, antelope ground squirrels, kangaroo rats, pocket gophers, western meadowlarks, horned larks, pigeons, pheasants, gopher snakes, rattlesnakes, western fence lizards and insects.

These secondary prey species become more important to raptors in years of decreased abundance of Townsend ground squirrels and jack rabbits. Availability of these secondary prey species also enables late nesting birds of prey to feed their broods once the ground squirrels have gone underground for the year.

Raptors are not the only predators attracted to the area by the large number and variety of







prey species. Ravens, badgers, coyotes, bobcats and snakes share in the wealth of this food supply.

The Snake River Birds of Prey Area contains one of the densest populations of badgers known. These large burrowing animals thrive on the abundant Townsend ground squirrels dug from the deep, finely textured soils. Badgers also prey on rabbits, deer mice, kangaroo rats and other rodents.

Abandoned badger holes often serve as cover or homesites for other animals such as rabbits, birds, lizards and snakes.

Snakes are both prey and predator. They are found throughout the area, but are especially abundant near rocky outcrops and along canyon rims.

The most common snakes in the area are gopher snakes, western rattlesnakes and striped whipsnakes. They feed primarily on Townsend ground squirrels, lizards, other snakes, small mammals and birds.

Less frequently observed are night, longnose, western ground, racer, and western terrestrial garter snakes.

Coyotes are common in the area. Their diet consists principally of ground squirrels, rabbits and small rodents supplemented with grass, berries and other vegetable matter.

Bobcats are uncommon in the area. The diet of these secretive, largely nocturnal animals consists of rabbits, rodents, reptiles and birds.

MULTIPLE USE

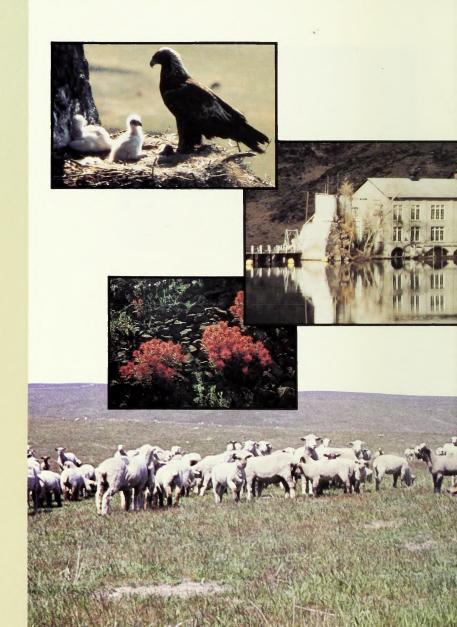
The public land administered by the Bureau of Land Management within the boundaries of the Snake River Birds of Prey Area has captured national and international attention as unique habitat for nesting raptors.

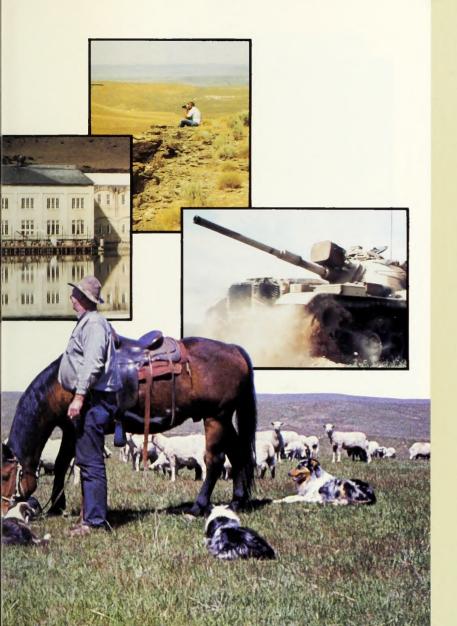
This extraordinary area provided the impetus for locating the World Center for Birds of Prey in nearby Boise, Idaho.

In addition to providing crucial habitat for birds of prey, these lands also provide for a wide range of other compatible uses, activities and values.

Virtually all public land within the area traditionally has been grazed by domestic livestock. Large stands of winterfat (white-sage) provide both food and cover for Townsend ground squirrels. Its palability, high protein content and tolerance to winter grazing also make it valuable as forage for cattle and sheep. Livestock grazing and habitat management for raptors appear to be compatible. More than sixty private livestock operators seasonally graze cattle and sheep in the area under permits issued by the Bureau of Land Management.

Lands within area boundaries are not highly mineralized. BLM issues permits for sand, gravel, clay, ash and cinder removal operations.





The entire area is leased for oil and gas exploration, and much of it is leased for geothermal exploration. These leases contain safeguards to protect nesting raptors.

Under BLM permit, the National Guard annually conducts military training on about 120,000 acres of public land within the area. Training units come from as far away as the East Coast. Activities are concentrated during June, July and August. They include troop movements and the firing of tank, mortar and other field artillery.

Hydroelectric power generation is a major commercial activity within the Snake River Birds of Prey Area. Idaho Power Company owns and operates two dams and reservoirs on the Snake River. These projects produce electrical power and a wide range of outdoor recreation opportunties including fishing, boating and waterfowl hunting.

Swan Falls Dam was completed in 1901 to provide electric power for the mining town of Silver City and nearby mines in the Owyhee Mountains about 30 miles southwest of the dam. Swan Falls was the first relatively large dam on the Snake River. It is one of several historic sites within the Snake River Birds of Prey Area that are on the National Register of Historic Places. Its power plant still produces electricity for southern Idaho.

Idaho Power Company has been a pioneer in efforts to minimize the occasional electrocution of birds of prey by electric distribution lines.

In the relatively treeless western shrub/ grasslands, birds of prey often use power line poles for perches, sometimes with disastrous consequences for the birds.

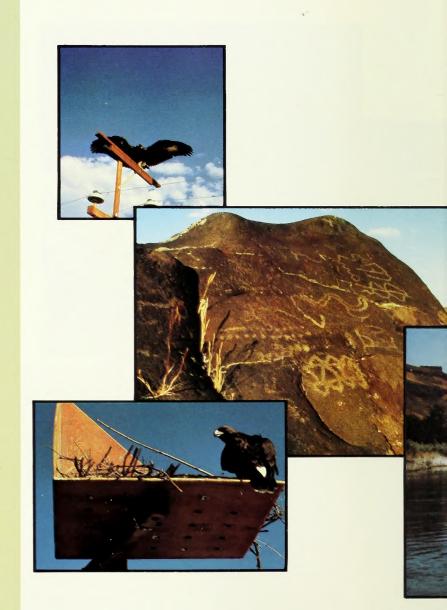
In areas frequented by raptors, Idaho Power

46 Company and other electric power producers have modified existing power lines and designed new power lines to make them safer for birds of prey. These modifications and design changes include constructing safe perches, adding extra insulators to further separate live wires from the poles where raptors perch, as well as other measures to eliminate potential threats to raptors.

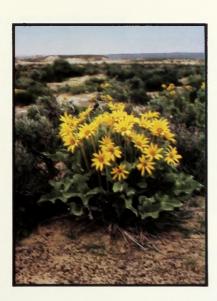
RECREATION

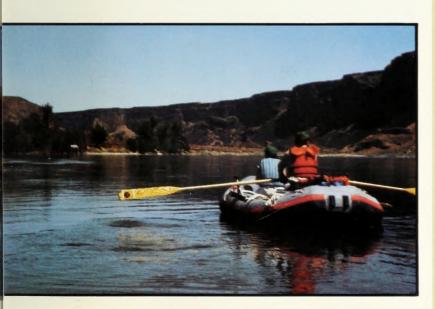
The Snake River Birds of Prey Area provides opportunities for a wide variety of outdoor recreation opportunities. Bird watching, of course, is foremost among them. Other activities available in conjunction with or independent of bird watching include boating, fishing, hunting, hiking, picnicking, photography, archaeological study and camping.

Mid-March through June is the best time to see birds of prey in the area. In the early part of this period, birds are courting and establishing nesting territories. Then the eggs are laid and incubated.









After the eggs hatch, adult birds are preoccupied with the care and feeding of their young. They make frequent hunting trips for prey and actively defend their nesting area.

By July most raptors have left the area; prey has become scarce and mid-summer temperatures typically are extremely high.

Raptors in the Snake River Birds of Prey Area are wary of humans. Nesting and parenting birds are extremely sensitive to human disturbance. Nest areas should be strictly avoided to ensure against causing birds to abandon nests or young.

Binoculars or spotting scopes are essential to view raptors close-up. High-magnification telephoto lenses are required for successful bird photography. A field guide for bird identification will make the trip more informative and enjoyable.

The Snake River Birds of Prey Area contains many prehistoric and historic sites which give an interesting and scientifically valuable dimension to the area.

The Snake River canyon in southwestern Idaho was intensively occupied by aboriginal Native American Indians.

More than 200 prehistoric sites associated with their presence have been identified within the area. These range from small campsites and arrowhead manufacturing sites to a 20-acre boulder field with numerous Indian petroglyphs or rock carvings. Historic sites within the area include the remains of rock houses, gold mines, and — up on the surrounding flatland — clearly visible ruts of the Oregon Trail.

These prehistoric and historic relics of the past are extremely fragile and irreplaceable. They are protected from disturbance by federal law which is stringently enforced.

48 POTENTIAL HAZARDS

The Snake River Birds of Prey Area is managed by the Bureau of Land Management primarily for the welfare of nesting raptors. It has few developed public facilities in close proximity to the major concentration of nesting birds. But the area is very accessible and can be enjoyed without hazard by anyone using reasonable caution.

Spring weather in the area is unpredictable. Sudden high winds can chill hikers and swamp small boats if precautions are not taken.

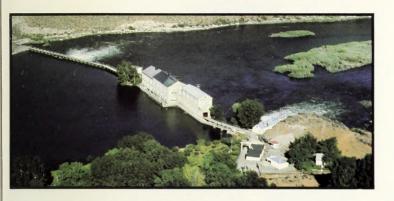
High summer temperatures, low humidity and strong winds are characteristic of the area. Proper dress, carrying plenty of water or other liquids and conservative hiking plans can avert potential problems.

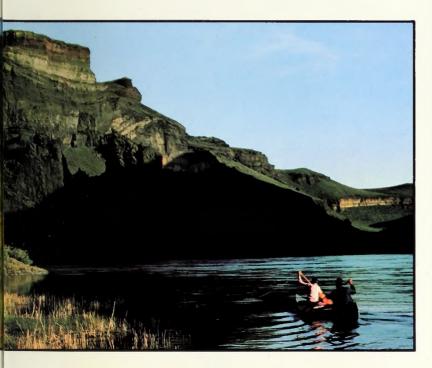
Rocks along the sheer cliffs are very unstable. Climbing, walking along or camping beneath canyon rims are dangerous activities.

Scorpions, rattlesnakes, black widow spiders and poison ivy are part of the natural scheme of things in the area. They can be easily avoided by simply watching where one walks and what one touches.









ACCESS

The northwestern, downstream portion of the Snake River Birds of Prey Area in the vicinity of Swan Falls Dam offers the best opportunity for automobile access to view raptors.

Access is by the Swan Falls Road out of Kuna, Idaho, located about eight miles south of Interstate Highway 84 off the Meridian Exit (Exit 44). Swan Falls road is the only road suitable for passenger cars in this portion of the area. There are no improved facilities or designated campgrounds in this area.

Road access to the southeastern, upstream part of the area is good near the towns of Grand View and Bruneau. To view significant numbers of raptors in this area, however, requires hiking or boating. There are several improved campgrounds, picnic areas and boat launch facilities in this general area. BLM's Cove Recreation Site and Bruneau Dunes State Park are in southeast corner of the Snake River Birds of Prey Area.

Canoeing and rafting are popular ways of visiting the area. The most common trip is from Grand View downstream to Swan Falls Dam, or on to Walter's Ferry, including at least one night's camp-out. Several private commercial outfitters provide guided trips for individuals or large groups who desire this service.

ADDITIONAL INFORMATION

 General information about the Snake River Birds of Prey Area, BLM management plans, detailed access directions, visitor use opportunities, guidelines and restrictions:

Boise District Office Bureau of Land Management 3948 Development Avenue Boise, Idaho 83705 (208) 334-1582

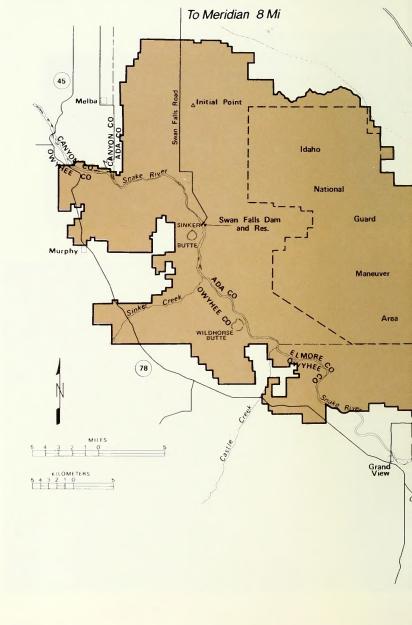
50

Fishing and hunting regulations:

Idaho Department of Fish & Game 600 South Walnut Boise, Idaho 83707 (208) 334-3700

• Detailed topographic maps:

Branch of Distribution Central Region U.S. Geological Survey Box 25286 Denver Federal Center Denver, Colorado 80225



• The World Center for Birds of Prey and its programs:

World Center for Birds of Prey 5666 Flying Hawk Lane Boise, Idaho 83709 (208) 362-3716

• Information on Idaho Power Company recreational facilities:

Idaho Power Company 1220 West Idaho Boise, Idaho 83702 (208) 383-2200 51

Cover - David Boehlke

- 1 Bureau of Land Management (BLM)
- 2 Raven/Albert Bammann; Ground Squirrels/ Margaret Leaman; Fisherman/BLM
- 3 Golden Eagle/Thomas C. Dunstan; White-sage/ BLM; Petroglyph/BLM; Western Screech Owl/ Carl D. Marti
- 4 Prairie Falcon/Ed Riddle; Turkey Vulture/Mark R. Collie; Osprey/Wayne E. Melquist
- 5 Ferruginous Hawk adult and young / David Ellis; Ferruginous Hawk in flight/Gus Wolfe; Common Barn-owl/Carl D. Marti
- 6 Bald Eagles/Buck Miller; Golden Eagle/David Ellis
- 7 Cooper's Hawk/Dave Boehlke; Burrowing Owls/ Rick Kline
- 8 Artwork/Alberta Energy and Natural Resources, Fish and Wildlife Division (ENR)
- 9 Prairie Falcon head/Marc Moritsch; Juvenile Prairie Falcons/John Oakley
- 10 Artwork/Alberta ENR
- 11 American Kestrel head/BLM; Kestrel on post/ David Ellis
- 12 Artwork/Alberta ENR
- 13 Peregrine Falcons/BLM right, David Boehlke left
- 14 Artwork/Alberta ENR; Golden Eagle/David Ellis
- 15 Golden Eagle head/Gus Wolfe; Golden Eagle perched into wind/David Ellis
- 16 Artwork/Alberta ENR
- 17 Red-tailed Hawks/BLM
- 18 Artwork/Alberta ENR; Ferruginous Hawk/Gus Wolfe
- 19 Ferruginous Hawk/BLM
- 20 Artwork/Alberta ENR
- 21 Swainson's Hawk/BLM; Swainson's Hawk on branch/Cal Sandfort
- 22 Artwork/Alberta ENR
- 23 Rough-Legged Hawk head/U.S. Fish & Wildlife Service, Richard P. Howard; Rough-Legged Hawk/BLM left
- 24 Artwork/Alberta ENR
- 25 Bald Eagles/BLM

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- 26 Artwork/Alberta ENR; Northern Harrier/Jeffery S. Marks
- 27 Northern Harrier/David Ellis
- 28 Artwork/Alberta ENR
- 29 Artwork/Alberta ENR
- 30 Artwork/Alberta ENR
- 31 Artwork/Alberta ENR
- 32 Artwork/Alberta ENR; Great Horned Owl/ Michael N. Kochert
- 33 Artwork/Alberta ENR; Long-eared Owl/Jeffrey S.
- 34 Artwork/Alberta ENR; Short-eared Owl/Larry O. Oftedahl
- 35 Western Screech-owl on log/BLM; Screech Owl head/Rick Kline
- 36 Common Barn-owl on log/BLM; Barn-owl face/ Rick Kline
- 37 Artwork/Alberta ENR; Burrowing Owls/Rick Kline
- 38 Artwork/Alberta ENR; Turkey Vultures/BLM
- 39 Ravens/Albert Bammann
- 40 Rattlesnake/Eric Yensen; Covotes/David Ellis; Ground Squirrels/Margaret Leaman
- 41 Ferruginous Hawk/Gus Wolfe; Jack Rabbit/David Ellis
- 42 Ground Squirrel/Thomas C. Dunstan; Rattlesnake/Anne Dolde
- 43 Badger/Wayne E. Melquist; Coyote/Albert Bammann
- 44 Swan Falls Dam/Idaho Power Company; Golden Eagle/David Ellis; Indian Paintbrush/Marc Moritsch
- 45 Sheep/BLM; Tank/BLM; Bird Watcher/Paul Schild
- 46 Golden Eagles/Idaho Power Company; Petroglyph/Thomas C. Dunstan
- 47 Balsam Root/Marc Moritsch; Rafters/Idaho Department of Parks and Recreation
- 48 Petroglyphs/Thomas C. Dunstan; Oregon Trail/ BLM
- 49 Swan Falls Dam and Canoeists/Bill Mullins





As the Nation's principal conservation agency, the Department of the Interior is responsible for most of our nationally owned public lands and natural resources. This includes fostering wise use of land and water resources, protecting fish and wildlife, preserving environmental and cultural values of national parks and historical places, and providing enjoyment through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all Americans. The Department is also responsible for American Indian reservation communities and for several Island Territories under U.S. administration.