Owls of Idaho

Juvenile great gray owl

© Kathleen Cameron

A publication of the Nongame Program

Owls of Idaho

- ❑ Mythology
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Barn
Barred
Boreal
Burrowing
Flammulated
Great gray
Great horned
Long-eared
Northern hawk
Northern pygmy
Northern saw-whet
Short-eared
Snowy
Western screech

Idaho residents are fortunate to call fourteen species of owls their neighbors. From the Palouse Prairie to the Snake River Plain up to the rugged Sawtooth Mountains, these creatures of myth and folklore exemplify one of nature's perfectly adapted checks and balances—quietly and inconspicuously helping to keep other species in equilibrium with the environment.

Owls are raptors (birds of prey) classified in the order STRIGIFORMES, which is divided into two groups—the typical owls (STRIGIDAE) and the barn owls (TYTONIDAE). Although there is disagreement, most bird taxonomists believe that the owls' closest kin are the insect-eating nightjars (also called nighthawks).

The owl family is ancient — fossil owls are found in deposits more than 50 million years old. In Idaho, fossil owls related to modern screech-owls, long-eared owls, and burrowing owls have been unearthed in the Hagerman fossil beds, which date back 3.5 million years to the Upper Pliocene period.

Mythology

Owls in Lore and Culture

Owls have been portrayed as symbols of war and feared by the superstitious as harbingers of tragedy and death. They also have been regarded with affection, even awe. In Greek mythology, an owl was associated with Athena, the goddess of wisdom, the Arts, and skills. As a result, owls became symbols of teaching and of institutions of higher learning. They are still portrayed as wise old birds—often cartooned sporting a pair of horn-rimmed spectacles and a mortarboard like a pompous, myopic schoolmaster.

Owls have also been associated with the supernatural. Many utter shrieks, barks, whistles, and mournful hootings guaranteed to make some people nervous. Most hunt at night, and their silent flight and tendency to appear suddenly out of nowhere contribute to their spooky image. The Aztecs and Mayans considered the owl a symbol of death and destruction.

Cameroon

Too evil to name, the owl is known only as "the bird that makes you afraid."

Celtic

The owl was a sign of the underworld.

China

The owl is associated with lightning (because it brightens the night) and with the drum (because it breaks the silence)

France

If a pregnant woman hears and owl it is an omen that the baby will be a girl.

Greenland

To the Inuit, the owl is a source of guidance and help.

Israel

In Hebrew lore, the owl represents blindness and desolation and is unclean.

Japan

Owl pictures and figurines have been placed in homes to ward off famine or epidemics.

Mongolia

The Burial people hang up owl skins to ward off evil.

New Zealand

To the Maoris it is an unlucky bird

Russia

Hunters carry owl claws so that, if they are killed, their souls can use them to climb up to Heaven.

Scotland

It's bad luck to see an owl in daylight.

Wales

If a woman is pregnant and she alone hears an owl hoot outside her house at night then her child will be blessed.

(source: www.owlpages.com)

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Biology

Appearance/Identification

Owls are easily recognized by the appearance of a large round head and a facial disc. In addition, the so called "ear tufts" found on some owls have nothing to do with hearing, but are merely bundles of feathers that can be raised or lowered. They may be used to communicate mood or may serve to break up the outline of the head, helping camouflage the bird

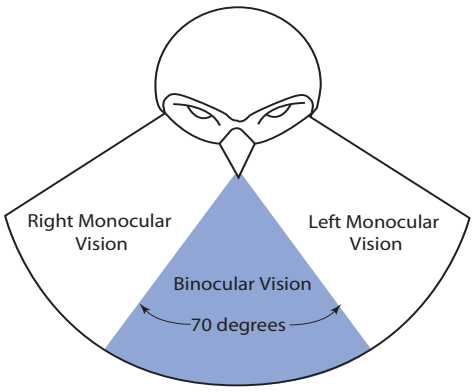
Most owls roost in trees or dense underbrush during the day, so camouflage is an important defense against predators and harassment by smaller birds. Accordingly, owls tend to have drab gray, brown, or buff coloration, streaked and striated to merge with a tree trunk, or the dappled shade of foliage. Although similar in appearance, female owls tend to be 25% larger than the males.

In common with diurnal raptors (the hawks and eagles of the order FALCONIFORMES), owls have powerful talons with flexible and moveable toes for striking and gripping, and a strong downward-facing curved beak for tearing flesh. They hunt a wide variety of prey from small mammals and birds (including smaller owls) to amphibians, reptiles, and invertebrates. They swallow their prey whole and regurgitate the indigestible parts (bones, fur, feathers, claws, teeth, and chitin) in the form of compact, oval pellets.

Vision

Although some owls hunt during the day (diurnal), most are nocturnal (active at night) or crepuscular (active during the early morning or late evening hours). They have a variety of features enabling them to locate and capture prey in poor light. Owls can see well during the day, but at night their vision is truly remarkable and thought to be the best in the animal kingdom. The more strictly nocturnal owls can see prey almost in total darkness, their eyes structured to use every scrap of available light.

Like humans, owls have binocular vision which provides excellent depth perception. However, they have large pupils which enable them to discern objects in one-tenth to one one-hundreth the amount of light we need to effectively see clearly. The large and forward-facing eyes of owls cannot move much in their bony sockets, but owls make up for their narrow field of vision by having an extremely flexible neck. With 14 vetebrae, twice as many as humans, owls are able to rotate their heads through a range of 270 degrees.



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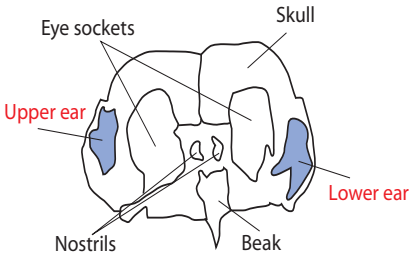
Hearing

Owls' hearing is thought to be the most accurate in the animal kingdom. They can hear rodents moving through thick snow even when they can not see them with their keen eyesight. Experiments have shown that barn owls can catch mice in total darkness by listening for prey movements. The facial disc, formed by stiff feathers, acts like a radar dish guiding sounds toward the external ear openings located behind the outer rim of the disc. In some owls, the ear cavities are placed asymmetrically in the skull—one higher than the other which may enable the bird to pinpoint sources of sound by triangulation.



Credit: Owls: Whoo Are They
by K. Jarvis and D. Holt, 1996. Mountain Press Publishing Company, Missoula, MT.

Silent Flight

Hunting efficiency is increased even further by the ability to fly silently. Two factors that reduce noise in flight are the softened, fluted edges of flight feathers and a large wing surface area. The unique design of owl feathers breaks down turbulence which effectively muffles the sound of air rushing over the wing's surface.

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Reproduction

Owls are generally monogamous and they either mate for life or mate for a season. Breeding occurs during the spring and the young are reared to coincide with peak prey abundance. Owls are opportunistic nesters---they do not build their own nests, although some species will add a little more lining material to a preexisting nest. Most smaller owls nest in tree cavities excavated by woodpeckers; larger species use abandoned stick nests built by other large birds, or nest on cliff ledges or on the ground.

Owl eggs tend to be almost round and are usually unadorned white. Common clutch size are two, three, or four eggs, but some owls lay as many as ten. In common with other predatory birds, owls often lay their eggs at intervals of one every two or three days. They hatch in sequence, so the first chick to hatch may be several days older than its youngest sibling. If food is plentiful, all survive, but when there is a shortage, the younger, smaller chicks often perish. This strategy ensures maximum production in good years, and survival of at least one or two chicks when prey is scarce.

Conservation

"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired, in value."
– Theodore Roosevelt

In this fast developing world, the greatest threat to long-term survival of any species is the loss of essential habitat due to human disturbance and activities.

Of the 14 owl species that occur in Idaho, half are primarily forest dwellers. Big snags (dead, standing trees) that are most abundant in stands of old-growth or mature forest are essential for the continued survival of these birds because they contain the woodpecker holes where in the owls nest. The need for forest management policies to take into account the importance of old-growth areas with high snag densities is of great importance. Two forest species, the flammulated owl and the boreal owl, are currently classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy.

Loss of nesting habitat is also threatening two other species of owls. Found in Idaho's southern drylands, burrowing owls appear to tolerate close proximity to humans, however plowing destroys their nest sites and "varmit hunting" often destroys the animals (badgers, ground squirrels, marmots) that burrowing owls rely on to excavate their homes. Burrowing owls have lost critical habitat in southern Idaho (especially the Snake River Plain) in the past century.

Short-eared owls, a primarily grassland species in Idaho, require dense, tall cover for ground-nesting and are the only North American owl that constructs their own nest. Unfortunately, suitable habitat has fallen prey to agriculture and livestock grazing practices. Both burrowing and short-eared owls are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy.

Other human activities pose threats to owls. Draining marshes and wetlands diminishes the hunting grounds of short-eared owls. Poor grazing practices destroy riparian (waterside) vegetation that offers roosting and nesting sites for great horned owls, screech-owls, and long-eared owls. These types of habitat alterations along with logging, urbanization, recreation, and energy and mineral development, pose serious risks to owls.

Chemical contamination of prey poses a more insidious threat. At the top of the food chain, owls are threatened by the bioaccumulation of pesticides in their system since they accumulate large amounts of pesticides from their prey. The retention of these harmful pesticides because they are unable to break down in the environment is what is detrimental to owls. Such contamination particularly threatens species such as barn-owls and burrowing owls, which live in urban and agricultural areas.

BARN OWL

(*Tyto alba*)

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DESCRIPTION:
Barn owls are anatomically quite different from other owls, so they have been placed in a separate taxonomic family. They are distinguished by a heart-shaped face, notched tail, and long legs. Adults have a snowy white face and underparts, and sparsely feathered legs and toes. The chest and belly and thinly covered with black spots. Above, these birds are a light golden brown, finely mottled with black. The eyes are dark.

Although their flitting, moth-like flight and repertoire of shrieks, groans, and hisses have spooked the superstitious, in reality this is a mild-mannered species.

HABITAT AND FOOD:
Barn owls are found on every continent except Antarctica. They prefer a more open habitat than do many other owls, such as meadows, fields, prairies, and marshes. They frequent granaries, barns and other farm buildings, and are even found in cities.

Rodents are the barn owl's most important prey. Adults capture several mice in a single night--more if they have young to feed--thus amply repaying farmers for use of their barnyard and field. Insects and small birds are also taken. Barn owls are strictly noctural hunters, although sometimes seen abroad in daylight.

REPRODUCTION AND STATUS:
Barn owls nest in tree cavities, cliffs crevices, haystacks, artificial nest boxes, barns, church steeples, or building ledges. Usually no attempt is made at nest construction, and the eggs are often laid precariously on bare surfaces. Sometimes a burrow is dug in a vertical sand or dirt bank.

Egg laying starts in late March to early May. Usually four to seven eggs are laid, but there may be up to a dozen. Incubation is about 33 days. The young have voracious appetites; each will eat several mice in a night. They fledge at eight to nine weeks of age. Occasionally barn owls raise two broods of young a year.

In Idaho, barn owls are widespread across most of the southwest, less common in the east, and rather rare in the north (although they are present in the lower Clearwater and Snake River Canyons). In southern Idaho, barn owls are falling victim to motor vehicles on Interstate 84. It is believed that barn owls are hunting for prey along the interstate at night and collide with vehicles. Thousands have been killed yearly and this may impact the population. Barn owl numbers have declined across the nation and many biologists believe that this species should be given special protection.

CONSERVATION AND MANAGEMENT:
In Idaho, because vehicle collisions are a threat, the planting of continuous hedgerows or closely spaced trees along roads, especially roads that are level with or raised above the surrounding terrain, may help reduce mortality from collisions. Also, the elimination of vegetation that supports dense small mammal populations near roads will also help. Barn owls nest quite successfully in nest boxes and can be used to maintain healthy populations. Nest box plans at:
http://www.barnowltrust.org.uk/infopage.html?Id=41

BARRED OWL
(*Strix varia)*

DESCRIPTION:
This rather large owl's fluffy plumage gives it a portly appearance. The general coloration is gray-brown. Good field characteristic are the dark brown eyes and horizontal bars around the neck and upper beak that make the bird look as if it is wearing a broad collar. The belly has vertical streaks; the back is blotched with white. Like its close relative, the great gray owl, the barred owl has concentric dark rings within the facial disc.

Barred owls are nocturnal but are sometimes seen hunting during the day in cloudy weather. The call is a repeated "who-cooks-for-you? who-cooks-for-you-all?" plus a variety of screams and chuckles. From late winter into spring, they are quite vocal in the vicinity of their nests, calling during the daylight as well as throughout the night.

HABITAT AND FOOD:
Although barred owls are found primarily in the deciduous forest of the eastern United States, they extend across Canada to British Columbia and are expanding their range southwards into Oregon and Idaho. In the Pacific Northwest, dense stands of hemlock or tall pine provide habitat for barred owls, particularly in old-growth forests, which are more likely to have suitable nesting hold. They also frequent woodland streams and the edges of swamps.

Despite their large size, they fly skillfully in dense forest undergrowth. Their relatively small talons are adapted to killing smaller amphibians, reptiles, birds, and mammals such as mice.

REPRODUCTION AND STATUS:
Barred owls nest in natural tree cavities or in nests built by other raptors. Courtship begins in February, and by April two to three eggs have been laid. Incubation lasts about 28 days. The owlets stay in the nest for four to five weeks, and although they can fly at three months, they stay with the parents through the summer and early fall.

Sighting of barred owls in the Pacific Northwest have increased in the last two decades. The owls are fairly common in North Idaho and the Frank Church-River of No Return Wilderness. They have been sighted as far south as Cassia and Twin Falls counties. Confirmed breeding records have been reported in northern Idaho and breeding is suspected in the north-central regions of the state.

MANAGEMENT AND CONSERVATION:
Encourage forest managers to properly manage barred owl forest ecosystems. Barred owls will use nest boxes if suitable nesting cavities are not available. Nest box plans at:
http://www.dnr.state.md.us/wildlife/wabarrowlplan.html

© Terry Gray

BOREAL OWL

(*Aegolius funereus*)

DESCRIPTION:
This rather small (10 inches tall) chocolate brown owl is best recognized by the black-edging on the facial disc that gives its face a squarish outline. Boreal owl adults sport a conspicuous cluster of fine white spots on their forehead and wing coverts and a yellow bill. Juveniles are more uniform in color, with white eyebrows and cheek spots. Because of the apparent rarity of the species in Idaho, as well as its habitat restrictions, it has been classified as a "Species of Greatest Conservation Need" in the Idaho Comprehensive Conservation Strategy, a Bureau of Land Management Sensitive Species, and a Sensitive Species in Region 1 (northern Idaho) of the U.S. Forest Service (USFS).

HABITAT AND FOOD:
The boreal owl's name is derived from the boreal (northern) forests of North America and Eurasia where it makes its home. In the western hemisphere, they are found in Alaska through central Canada to northern Minnesota, moving south in winters when there is a scarcity of food. Boreals are also known to breed in the Rocky Mountains as far south as Colorado. They prefer mature spruce-fir stands for nesting and summer roosting. Although these stands are relatively rare in the northern Rocky Mountains, a resident population in the Frank Church-River of No Return Wilderness of Idaho uses mixed stands of old-growth timber for nesting and prefers a variety of forest types of hunting.

Boreal owls are mostly active at night, seeking mice, pockets gophers, and other small mammals. An Idaho study has shown that they commonly prey on red-backed voles, an abundant forest rodent. They have been seen hunting in open forest and sagebrush along the forest edge in winter.

REPRODUCTION AND STATUS:
In Idaho, males start singing in late January, females in early February, and these calls are heard rolling across the snow-covered mountain valleys: ten hoots in rapid succession. It has been compared to the "winnowing"' of a snipe. The call lasts for 20 minutes to an hour at a time. The call rates increase

Adult boreal owl © IDFG

Juvenile boreal owl © IDFG

through

March and nesting begins in holes excavated by pileated woodpeckers or flickers. Egg laying takes place mid-April through late May and the two to four eggs are incubated for 30 days. The young fledge 27-32 days after hatching, enough to crowd the female out of the nest.

Boreal owls have been recognized as Idaho residents only since 1980. Since then, biologists playing recordings of their calls have seen or heard answering boreals in remote forested areas of the Panhandle, Clearwater, Payette, Boise, Targhee, Caribou, and Salmon National Forests. Confirmed breeding records from Idaho, Lemhi, and Fremont counties indicate that this species probably has bred in Idaho for a long time, but due to its unobtrusive habits and preference for high-elevation forests, its status and distribution were largely unknown.

CONSERVATION AND MANAGEMENT:
Boreal owl populations in Idaho are considered imperiled, thus they are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy. The clear-cutting of timber poses the greatest threat to this species. Due to slow forest succession it may be one to two centuries before a clear-cut site will be suitable for foraging, roosting, and nesting. Management should involve retention of large-diameters snags and establishing a system of nest boxes. Nest box plans at:
http://www.50birds.com/MPb071614-212-412.htm

BURROWING OWL

(*Athene cunicularia*)

© Tom Munson

DESCRIPTION:
Seen standing on fence posts or on their burrow mounds, these small (8 to 10 inches long) ground-dwelling owls' upright stance and long legs make them easy to identify. They are crepuscular (active during dawn and dusk) but may hunt any time of day or night.

They are generally sandy brown with dusky barring on the breast and belly and a few white spots on the wings and head. When perched, they swivel their heads from side to side; if danger threatens they bob and weave before flying away or disappearing down their burrows.

Burrowing owls are very vocal and have a variety of chattering calls exchanged with other individuals. The song is a mellow "cooo-cooo." If a predator approaches the burrow, the young owls may make a rattlesnake-like buzz.

HABITAT AND FOOD:
Burrowing owls live on deserts, prairies, and farms from Canada to South America with isolated populations in Florida and the Caribbean. These owls do not dig their own burrows, but occupy abandoned badger holes in open sites, or marmot burrows in rocky sites. The owls will enlarge or modify these burrows, an activity that appears to be part of courtship. Natural rock cavities or crevices in lava flows also may be used. Good breeding habitat in Idaho is characterized by short, sparse vegetation (not dense sagebrush) and the availably of burrows. These owls migrate to California, Arizona, New Mexico, Texas, and parts of Mexico in winter, returning to Idaho in mid-April.

REPRODUCTION AND STATUS:
Burrowing owls mate for life and breed in loose colonies of up to a dozen pairs. Three to 12 (usually seven or eight) glossy white eggs are laid in an underground chamber at the end of a tunnel that may be up to 20 feet long (they will also use underground nest boxes). The chamber is lined with a variety of materials such as cow dung, bones, and torn pieces of cloth. The eggs are laid in April or May. The young fledge about a month after hatching, but remain near the burrow entrance and scurry underground if danger threatens. Natural enemies include snakes, badgers, weasels, and raptors.

This species once lived on the Palouse but is now found only in southern Idaho, mostly in the southwest. Burrowing owls associate with irrigated agriculture, and have higher productivity near these fields than in "natural" landscapes. The loss of nesting burrows (likely resulting from hunting and subsequent decline of badgers) is a bigger problem here in Idaho. However, high-intensity agriculture, such as in Canada, is a serious problem for this species as a whole. For this reason, burrowing owls are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy.

CONSERVATION AND MANAGEMENT:
Burrowing owls rely on pre-existing badger burrows for nesting. The protection of American badger populations, as well as deployment of artificial nest structures in appropriate habitat, should be explored. Pesticides are a potentially significant threat through direct contact or consuming prey that has been sprayed. Monitoring of impacts of pesticide spraying on nesting burrowing owls should be implemented.

FLAMMULATED OWL

(*Megascops flammeolus*)

DESCRIPTION:
"Flammulated" means "red," but in fact these little owls vary in color, some individuals being gray and others reddish. The plumage is generally streaked and mottled with brown, providing excellent camouflage for the bird roosting close to a tree trunk. Although the sexes are alike in appearance, the female has a higher-pitched whining call. Scarcely bigger than a sparrow (6 to 7 inches long), they may be distinguished from their close relatives, the screech-owls, by their smaller size and barely discernable ear tufts. Another good field characteristic is eye color. Unlike those of most other owls, the eyes of flammulated owls are dark brown and rimmed by a circle of dark rufous feathers.

© Tom Munson

HABITAT AND FOOD:
Flammulated owls are found in the western part of North America from British Columbia south to Mexico and Guatemala. They frequent transition coniferous forests and appear to prefer stands of mature ponderosa pine, although in the mountains south of the Snake River they have been found in scattered Douglas-fir stands. In winter they migrate to the southern part of their range.

Their food consists almost entirely of insects and other invertebrates. While feeding young, adults may visit the nest cavity 75 to 100 times each night.

© Michael Woodruff

REPRODUCTION AND STATUS:
Flammulated owls nest from mid-April through the end of May in old woodpecker holes or natural tree cavities and lay three to four eggs. Incubation lasts for 25 to 29 days. The young fledge about 30 days later.

These owls are hard to spot because of their small size and good camouflage. Sometimes one may be seen in late evening flitting bat-like to and from a perch high in a conifer. One of the most vocal owls during late spring, the flammulated owl utters an unending series of "boot-boots" spaced about three seconds apart. The voice is surprisingly low-pitched for such a small bird, and is quite ventriloquial, making the owl difficult to locate.

During the breeding season, flammulated owls appear throughout Idaho in suitable habitat. South of the Salmon River, where ponderosa pine predominates, they may be quite abundant (several pairs per square mile). As an insectivore, these owls are highly migratory and leave Idaho after the breeding season to overwinter in areas from central Mexico to Guatemala.

CONSERVATION AND MANAGEMENT:
Due to widespread anthropogenic manipulations of their breeding habitat and changes in forest structure that may impact forest insect abundance during the breeding season, flammulated owls are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy. Guidelines for management of flammulated owls and their habitat are being developed due to the special concern status. These owls do not readily nest in boxes perhaps due to the placement and type of box being used.

GREAT GRAY OWL

(*Strix nebulosa*)

Adult great gray owl © Terry Thomas, IDFG

Juvenile great gray owls © IDFG

DESCRIPTION:
Dense, fluffy plumage and long tail feathers make this owl appear much larger than it really is. Although it may be more than 30 inches long, the great gray weighs only two to three pounds, about the same as a barred owl. The plumage is mottled gray to grayish brown. The chest appears to have vertical stripes, while the belly has horizontal bars (exactly opposite the configuration of the barred owl). The head appears very large due to the big, almost circular facial disc, and the yellow eyes appear much smaller than those of other owls. Other distinguishing features are the concentric rings within the facial disc and white chin stripes.

Its territorial song is a sequence of six to eight descending mellow hoots. It also utters a variety of rasping, screeching, and whistling noises.

HABITAT AND FOOD:
Great grays have circumpolar distribution through Europe, Asia, and northern North America. They breed from central Alaska through Canada southward through the western mountains to central California; in Idaho, western Wyoming and Montana; and in northwestern Minnesota. In years when prey is scarce, they fly farther south in search of winter food. They are almost always found associated with mountain meadows in coniferous forests of pine or spruce, but they also use stands of larch, poplar, and aspen.

Their staple diet is small mammals such as voles and mice (pocket gophers are preferred in the Island Park area) although they sometimes take small to medium-sized birds and larger prey. The great gray is much more active in daytime than other owls and is usually seen hunting in evening or early morning. Its hearing is acute enough to locate a mouse moving beneath the snow. When this happens, the owl swoops down from its perch and, folding its wings at the moment, dives feet first into the snow to grasp the luckless rodent in its talons.

REPRODUCTION AND STATUS:
Males start their courtship displays in late winter, sometimes feeding the females small voles or shrews. This "courtship feeding" initiates and strengthens the pair bond. In mid-February the pair starts looking for a nest—usually one abandoned by a hawk. Three to four small eggs are laid in mid-March to June. In about 30 days they hatch and the owlets fledge two months later, but they remain dependent on the adults for up to 30 days longer.

In Idaho, great gray owls are known to breed in the northern panhandle, along the Montana-Wyoming border of eastern Idaho, in west-central Idaho, and in the Frank Church-River of No Return Wilderness. They are also found in many high-elevation areas where wet meadows are associated with lodgepole pine or subalpine fir.

CONSERVATION AND MANAGEMENT:
The greatest potential impact on great gray owl populations is from timber harvests. Because some timber management practices reduce live and dead large-diameter trees used for nesting, as well as leaning trees and dense canopy closures in stands used by juveniles, it is important that known nest sites are protected. In addition, enhancing habitat by opening up dense forest stands will create opportune areas from which great gray owls can readily hunt. Human-made nesting platforms have enhanced local breeding in some areas.

GREAT HORNED OWL

(*Bubo virginianus*)

DESCRIPTION:
This impressive owl is probably also the fiercest and most aggressive. The female is about 2 feet tall (a little larger than the male) with a wingspan of almost 5 feet. Apart from size, the most prominent features are the large "horns" or ear tufts that give this owl its name. In flight, the wings appear long and broad, the ear tufts are not visible, and the neck is tucked into the body. The upper parts are dark brown mottled with black and gray; underparts are gray-white barred with brown. There is a white patch on the throat. Great horned owls utter a wide variety of whistles, screams and shrieks, as well as a choking sound. The song is a mellow hooting "ho-ho-hoo hoo hoo" rather like a far-off foghorn or a distant mourning dove. They are mainly nocturnal, but often seen on overcast days.

Adult great horned owl © Tom Munson

HABITAT AND FOOD:
Occupying some of the most diverse habitats, great horned owls are well adapted to live just about anywhere. Primarily a forest species, they are found from low elevations to cool high slopes below timberline throughout the western hemisphere. They also live in more open country such as woodlands, swamps, river valleys, canyons, and city parks.

They are fearless hunters and take a wide variety of prey, from birds to small mammals such as rabbits or mice. They will prey on other owl species and even hawks. Reputedly, they are the only predator that attacks and kills skunks regularly. Adept at catching fish, they can wade up to their stomachs in shallow water. Their pellets, up to 4 inches long, often are found under roosting trees.

REPRODUCTION AND STATUS:
Usually solitary, these owls pair-bond primarily during the mating season. Courtship takes place from November to January, when the female selects a nest site in an abandoned hawk or magpie nest, or natural tree hollow. She lays two to four eggs and after about 33-35 days, the eggs hatch. It takes the young about 6 months before they are skillful enough hunters to live on their own.

In Idaho, great horned owls are common and widespread except at the very highest elevations. They frequent large trees for shelter—look for them along a river in daytime perched high in a cottonwood tree.

CONSERVATION AND MANAGEMENT:
Great horned owl populations in Idaho are healthy and not in need of management. However, artificial nest sites encourage breeding in areas with limited nest sites.

Juvenile great horned owls © Kathleen Cameron

LONG-EARED OWL

(*Asio otus*)

DESCRIPTION:
About the same size as the short-eared owl (13 to 16 inches long), this owl is slimmer and has long ear tufts usually displayed prominently (except in flight, when they are held close to the head). Do not confuse it with the great horned owl, which is much larger with widely spaced ear tufts and a white chin patch. Long-eared owls are generally barred and mottled with dark brown and buff or tawny on the underparts. The breast is dark brown with white spots and the belly buff with long streaks and fine crossbars. The facial disc is sometimes bright orange but more often tawny brown.

The song, heard from January or February to May, is a series of low monotonic hoots at three to five-second intervals. Shrieks, whines, and meows are also uttered. Long-eared owls fly in a rather fluttery, moth-like manner. Being strictly nocturnal, they are seldom seen. Daylight hour are usually spent resting in thick cover low in a tree or shrub.

© Tom Munson

HABITAT AND FOOD:
Long-eared owls are found in the northern hemisphere and south into Africa. They prefer dense groves of deciduous or coniferous trees, but hunt in adjacent clearings. They often roost in willow thickets bordering streams in otherwise open country. Sometimes they are seen in city parks, but seldom nest there. In winter these owls roost communally.

Acute hearing and soundless flight help make the long-eared owl an efficient nocturnal predator of small rodents, small birds, and insects. In the Snake River Birds of Prey National Conservation Area, a study has shown that rodents make up 97% of a long-eared owl's diet.

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REPRODUCTION AND STATUS:
Long-eared owls nest in abandoned stick nests made by other raptors, crows, magpies or herons. In March or April, five to seven glossy white eggs are laid and the female incubates them for about 27 days. The eggs are vulnerable to predation by crows and magpies if the owl is disturbed from the nest at this stage. Owlets leave the nest after about 3 weeks then clamber around in the tree branches for about 2 weeks until they fledge. They are cared for by the parents for up to 10 weeks, but the family may stay together even longer.

Long-eared owls live throughout the state, especially at low elevations with suitable nesting and roosting habitat. They are most common in southern Idaho, uncommon to rare elsewhere. In the Palouse of northwestern Idaho they may be found nesting and roosting in hawthorn thickets.

CONSERVATION AND MANAGEMENT:
The loss of riparian woodlands and isolated tree groves is detrimental to long-eared owls. The maintenance of healthy riparian areas is beneficial to this species.

NORTHERN HAWK OWL

(*Surnia ulula*)

DESCRIPTION:
It is easy to mistake the northern hawk owl for a hawk. Its small head, light plumage and long tail (often held at an angle or flicked up and down) resemble those of a hawk or falcon. Like a diurnal raptor, it often perches on the top of a dead conifer or post. In the air the pointed wings and rapid, direct flight strengthen this resemblance. Even its cry—a wailing trill—is hawk-like.

The hawk owl's back and wing coverts are a rich brown flecked with white. The white breast and belly are neatly barred. The facial disc is pale, with deep brown semi-circular outer edges that look like sideburns.

HABITAT AND FOOD:
Northern hawk owls are birds of the open boreal forests of Alaska, northern Canada, and northern Eurasia. They prefer brushy, tangled areas around swamps or streams, or the forest edge near muskeg (peat bogs). They often choose a grove of dead trees that serve as lookouts. Normally daytime or twilight hunters, they move through brushy undergrowth almost like a Cooper's hawk swooping down from a high perch and maneuvering skillfully through the forest undergrowth. Prey are usually small rodents such as mice, voles, and lemmings in summer, with birds like ptarmigan and grouse added in winter.

REPRODUCTION AND STATUS:
Hawk owls nest in tree cavities or the abandoned stick nests of other raptors. Four to eight eggs are laid from March to May. The female incubates them and the male brings food to her and defends the nest fiercely. The eggs hatch after 25 days and the young fledge about a month later. Families tend to stay together until the following spring.

This owl is a winter visitor to northern Idaho, leaving its northern homelands in years when food is scarce and when voles are more numerous further south. It is a rare breeder in Idaho's northern Boundary County.

© Michael Woodruff

CONSERVATION AND MANAGEMENT:
Populations are considered stable and secure, thus barring any major habitat modifications in northern boreal forests, this species existence is not threatened.

NORTHERN PYGMY OWL

(*Glaucidium gnoma*)

DESCRIPTION:
At 7 inches long and 1.5 ounces, this is the smallest owl species in Idaho. Despite its size (or perhaps because of it!), the north pygmy owl is one the boldest and fiercest of owls.

A causal observer could easily confuse this owl with a shrike since it is a day flier, swooping down from a perch atop a dead conifer and flitting and out of heavy cover. At twilight it could be mistaken for a bat. The wings make a noise whirring sound, unusual for an owl.

When perched, the pygmy owl holds its long tail at an angle to its body and shows an alert, intelligent expression. The upper parts are dark gray-brown to reddish, the underparts are while streaked with dark brown. The crown, forehead, and sides of the head are finely speckled with white. There is a strange distinctive pattern on the back of the neck: two huge, dark "eyes" rimmed with white and separated by a white "beak." Some experts believe this pattern diverts the attention of small birds that like to "mob" the owl, thus protecting the owl's real face.

The song is a dove-like cooing or a wooden knocking sound that can continue for hours and is audible up to a mile away.

HABITAT AND FOOD:
Pygmy owls are found at elevations of 3,000 to 10,000 feet in forested areas adjacent to openings such as meadows or swamps.

Very pugnacious, this owl takes on surprisingly large prey. With tiny talons sunk deep in the victim's throat, it can fly back to its perch with a meal many times its own weight. Although it hunts mice and chipmunks, the main food item is probably small birds up to the size of a meadowlark.

REPRODUCTION AND STATUS:
These tiny owls are cavity nesters, usually choosing old flicker holes 8 to 24 feet off the ground. Four to six round eggs are laid in May or June. Incubation is thought to last about 22 days and the young fledge at about four weeks of age.

© Terry Gray

© Michael Woodruff

© Michael Woodruff

Little is known about the status of this owl in Idaho. It is probably found throughout the state in suitable forest habitats.

CONSERVATION AND MANAGEMENT:
Populations are considered secure, thus barring any major habitat alterations that affect prey species or woodpeckers—the primary nest excavators—and nest cavities, this species existence is not threatened.

NORTHERN SAW-WHET OWL

(*Aegolius acadicus*)

DESCRIPTION:
This owl looks as small as a fox sparrow when perched (7 to 8.5 inches long) but seems larger in flight due to its long, broad wings. More often heard than seen, it is inconspicuous perched low in a tree in dense cover. The saw-whet owl is similar to the boreal owl but smaller and lacking the black border of the facial disc. Its crown is streaked and its bill is black. The head often appears misshapen due to the huge, asymmetrical ear opening. Juvenile saw-whets are colorful, with a bright buff belly, chocolate brown upper parts and a white triangle on the forehead.

Saw-whets emit a variety of calls, from a group of four metallic twangs repeated over and over to a tinkling sound like dripping water. The "saw-whet" call, which sounds like a saw being sharpened, is heard only during the breeding season. In mid-summer, "begging" calls of juveniles may be heard at dusk and on into the night. They sound like short bursts of air from an aerosol can!

HABITAT AND FOOD:
This species inhabits mountainous areas of the western United States from southern Canada to New Mexico. Saw-whets prefer coniferous forests (particularly those in the Douglas-fir zone, where they may be the most abundant owl) but use a variety of forest types.

They hunt mouse-sized mammals as well birds, bats, and amphibians. Sometimes they kill prey much larger than themselves, such as squirrels or weasels. Smaller prey is swallowed whole, head-first.

REPRODUCTION AND STATUS:
In April or May, saw-whets make their nests in tree-cavities, usually old squirrel or woodpecker holes. They also will use artificial nest boxes. Five to six eggs are laid and incubation is about 24 days. Young fledge at four weeks but may depend on the adults for food until late July or August.

Saw-whets owls are found throughout Idaho in the more heavily forested areas. Some appear to migrate to lower elevations in winter.

Adult saw-whet owl © Michael Woodruff

Juvenile saw-whet owl © Tom Munson

CONSERVATION AND MANAGEMENT:
Northern saw-whet owls appear to favor mature and old growth forest stands for breeding. Increased logging practices have destroyed suitable breeding habitat and nesting snags. However, this species will readily nest in nest boxes.
Nest box plans at: http://www.shawcreekbirdsupply.com/plans_saw_whet_owl.htm

SHORT-EARED OWL

(*Asio flammeus*)

DESCRIPTION:

This owl is about the size of a large crow: 13 to 17 inches long. Its long wings extend to or beyond the tail tip when the bird perches. In flight the short-eared owl can be identified by black "wrist" patches and the pale trailing edges of the wings. The underside is buff or white with bold black streak that are dense near the upper part of the breast. The back is dark brown mottled with buff. The ear tufts are not a good distinguishing feature, for they are short and inconspicuous. The bright yellow eyes are rimmed with dark feathers in an otherwise pale facial disc, giving the eyes a deep-set look.

Short-eared owls are generally silent birds, but during the breeding season they voice a variety of soft hoots, yapping barks and whistles. Because they are more active in the daytime than other owls, short-eared owls are seen frequently.

Adult short-eared owl © Tom Munson

HABITAT AND FOOD:

A widespread species, the short-eared owl lives on every continent except Australia. This bird prefers open country—tundra, moorland, marsh, sagebrush grassland, meadow and even city parks. Like the long-eared owl, it roosts communally in winter.

Short-eared owls hunt in late afternoon or early evening, when they can be seen coursing (alternately flapping and gliding) low over open terrain, like the northern harrier. In fact, the two species' hunting territories often overlap but they

Juvenile short-eared owl © Kathleen Cameron

normally hunt at different times of the day. When prey is spotted, the short-eared owl hovers briefly then spills the air from its wings and "falls" on its victim with outstretched talons. These owls feed mostly on rodents such as meadow voles but also take small birds and insects.

REPRODUCTION AND STATUS:

In early spring, the males perform spectacular courtship flights, flying to real heights, hooting and clapping wingtips together, then finish the display with a breathtaking tumbling dive earthward.

The nest usually is built on the ground in a shallow depression or a tunnel in long grass. Six to nine eggs are laid in April or May. They hatch in about 28 days. About two weeks later the owlets leave the nest, but stay nearby to be cared for by their parents for about six weeks.

Short-eared owls are common throughout southern Idaho in suitable habitat and also live on the Palouse and Camas Prairie. Although Idaho residents, they appear to be quite nomadic, following prey concentrations. Some individuals migrate south in winter, but others arrive to take their place.

CONSERVATION AND MANAGEMENT:

Due to habitat loss by overgrazing, cover needed for nesting and brooding has declined sharply. Thus, short-eared owls are classified as a "Species of Greatest Conservation Need" in Idaho's Comprehensive Wildlife Conservation Strategy. This species benefits from any actions or projects that protect, enhance, or restore potentially suitable foraging and breeding habitats (e.g., conservation easements, restoration projects). Monitoring for use of agricultural lands prior to ground disturbing actions also would beneficial.

SNOWY OWL
(*Nyctea scandiaca*)

DESCRIPTION:
This beautiful raptor is easily recognized, being generally all-white with a variable amount of dusky barring on the head, back, and belly. Males have less barring than females and may be almost pure white. The eyes are bright yellow. The large head appears almost round because there are no visible ear tufts.

Snowy owls are the largest owl in North America, with a body length of 23-27 inches and a wingspan of more than 5 feet. Females are considerably larger than males.

HABITAT AND FOOD:
This is an arctic species with circumpolar distribution. In this hemisphere snowy owls live in the coastal regions of Canada and Alaska and inland in the tundra. Opportunistic feeders, they take a variety of small mammals, birds, carrion and even fish. However, in their breeding range their diet consists mainly of Arctic hares and lemmings—small mammals with fluctuating cycles of abundance. When numbers are low, snowy owls migrate south in search of food. These "irruptions" (invasions) to the northern tier of the United States occur every few years.

When snowy owls come south, they may be found on open ground (such as marshes, meadows or prairies) preying on voles, squirrels, waterfowl—whatever is available.

REPRODUCTION AND STATUS:
In late May or June, snowy owls lay oval eggs in scrapes or hollows in low elevations in the tundra or on rocky outcrops. Clutch size varies with the abundance of prey; in good years as many as 13 eggs may be laid, in bad years as few as three or four. The female incubates the eggs for 32 to 34 days and the young fledge 56 to 60 days later. Nesting on the ground is dangerous, and juvenile snowy owls sustain heavy losses from predators such as Arctic foxes and jaegers.

© IDFG

Snowy owls are occasional winter visitors to Idaho. Although they may be seen in many parts of the state, most sightings have been in the north.

CONSERVATION AND MANAGEMENT:
The most meaningful conservation policy in recent years has been protective measures that prohibit the shooting and trapping of owls. Also, the policies presently being enacted to protect large birds in general from electrocutions, airplane strikes, etc., will benefit the snowy owl.

WESTERN SCREECH-OWL

(*Megascops kennicottii*)

DESCRIPTION:

Western screech-owls are brownish gray, streaked and blotched on the back with dark brown and creamy white. The breast is streaked or striped with black and the pale facial disc has a black rim. Small ear tufts, set wide apart on the head, may be erected or laid flat. This owl is about the same length as a robin but appears larger, with a wingspan of about 21 inches. Despite their name, these owls do not screech. Their song is a series of whistles on one pitch—it has been described as having the rhythm of a bouncing ball. They also utter various barks and yelps. Screech-owls normally call for about a hour after sunset, but are difficult to locate from their ventriloquial calls.

HABITAT AND FOOD:

Screech-owls are found across the United States. The western species favors groves of deciduous trees in low-lying areas. Look for them in riparian habitats, orchards, or city parks. Although widespread, they are seldom seen. They are perhaps the most nocturnal of our owls, roosting concealed in the dense foliage or in tree cavities during the day.

They hunt a wide variety of prey, including small mammals and birds (sometimes much larger than themselves), reptiles and insects. Hunting begins after sunset, when they leave their perches, flitting bat-like over open ground near their roosting trees as they search for prey.

Juvenile Western-screech owl © IDFG

Adult Western-screech owl © Terry Gray

REPRODUCTION AND STATUS:

Four to five round, white eggs are usually laid in a natural tree cavity such a large woodpecker hold. Screech-owls will use nest boxes, too. Often a pair returns to the same hole every year. They are not good housekeepers, so the nest becomes rather foul with the accumulation of waste and prey remains. Egg laying begins in March or April, and incubation lasts for about 26 days. The male feeds his mate while she is incubating the eggs. The young are crowded out of the nest hole after four to five weeks, but their parents continue feeding them for another five weeks.

Screech-owls are found across Idaho below about 4,000 feet. They are probably quite abundant, but because of their resting habits are seldom seen.

CONSERVATION:

Vulnerable to vehicle collisions and degradation of habitat, Western screech-owls are linked to riparian habitats over most of its range. They will readily nest in boxes which could mitigate for loss of critical nesting snags along rivers and lakeshores.

Nest box plans at: http://www.shawcreekbirdsupply.com/plans_screech_owl.htm

© Scott Robinson, BLM

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 online at: http://www.sandpointonline.com/catalog/product_info.php?cPath=21&products_id=152, or by contacting Sara Focht at: sfocht@idfg.idaho.gov.

Here are a few tips to help you enjoy a rewarding wildlife viewing experience while minimizing disturbance to owls or other animals.

Fade into the Woodwork

- Wear natural colors and unscented lotions. Remove glasses that glint.
- Walk softly so as not to snap twigs.
- Crouch behind boulders or vegetation to hide your figure or break up your outline.
- Try not to throw a shadow.
- Remember your reflection may be caught in a pool of water.

Stick to the Sidelines

- Use binoculars or zoom lenses for closer views.
- Give nests a wide berth. Although you mean well, your visit may lead a predator to the nest or cause the parents to abandon it, exposing eggs or young to harm.

How to Use Binoculars

1. Find the subject with your unaided eyes.
2. Bring the eyepieces just under your eyes.
3. Sight the subject over the tops of the eyepieces.
4. Slowly bring the binoculars to your eyes.

Be Easy to Be With

- Relax your muscles; animals can easily detect tension.
- Make yourself as small and unassuming as possible.
- If you must advance, take a roundabout route; never approach directly.

IDAHO BIRDING TRAIL

Idaho Fish and Game's Nongame, Endangered, and Watchable Wildlife Program

The Idaho Department of Fish and Game's Nongame, Endangered, and Watchable Wildlife Program (Nongame Program) was first formed in July 1982. The Department had long been interested in the welfare of nongame wildlife when the Idaho legislature established the state's first tax checkoff on the 1981 income tax form. It was the funds derived from the checkoff that allowed the establishment of a legitimate nongame wildlife program. State taxpayers contributed a portion of their funds to the conservation of species not hunted, trapped, or fished (more than 80 percent of Idaho's wildlife species).

In 1992, the Idaho legislature passed a wildlife license plate bill that allowed a portion of the Bluebird Plate proceeds to benefit the Nongame Wildlife Program. The Elk Plate was introduced in 1998 and the Trout Plate in 2003 to support the increasing demands on the program. Idaho's Nongame Program includes species research, surveys, monitoring, workshops, watchable wildlife viewing sites, wildlife events, and publications like this.

Contribute to the nongame wildlife fund when you prepare your taxes! It is easy, and besides wildlife license plate sales, it is the <u>only</u> state source of income for the Nongame Program.

Acknowledgments

This online leaflet was revised and updated from the original nongame leaflet #4 "Idaho's Birds of Prey, Part 2: Owls" 1987.

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