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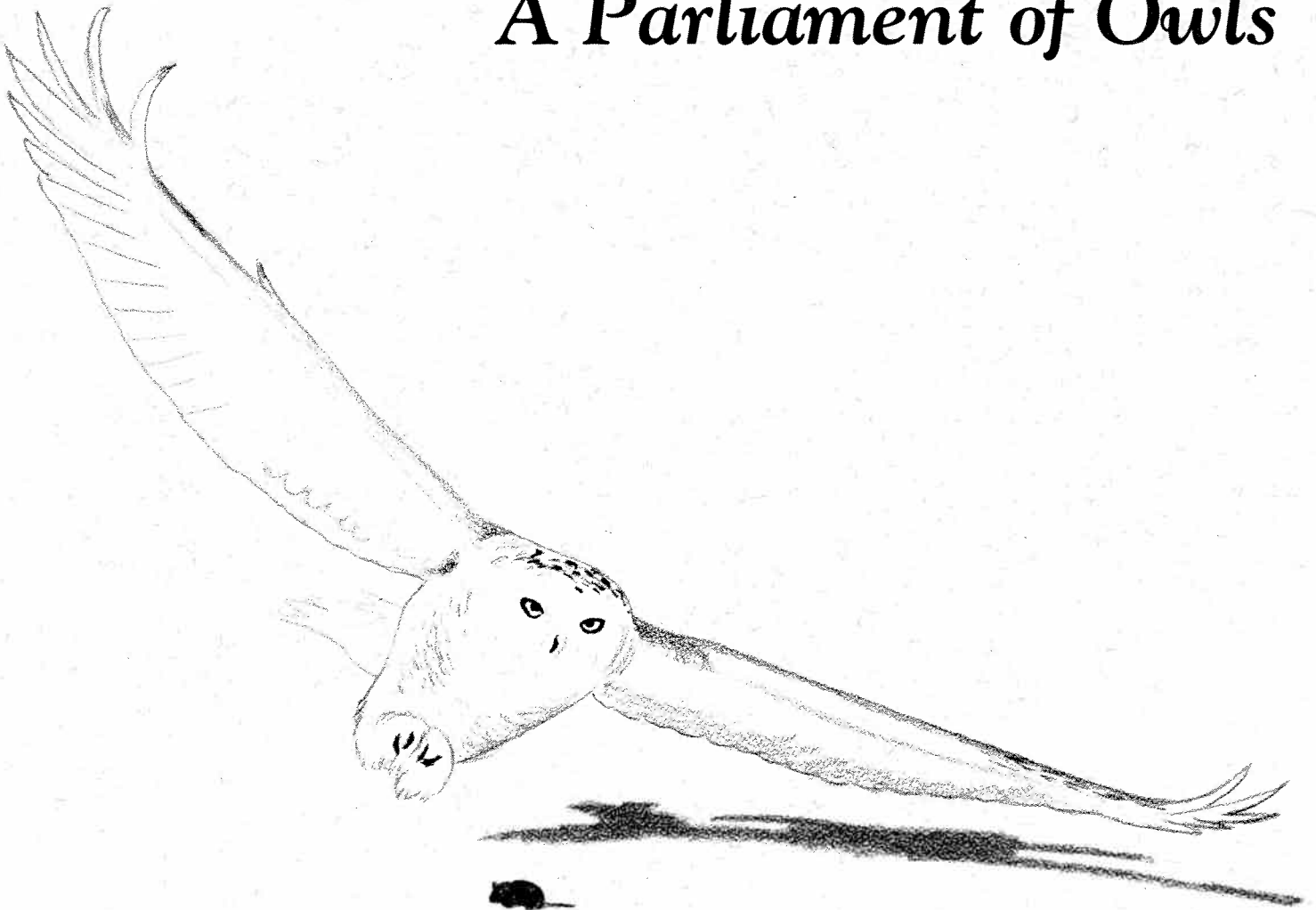


Nongame and Endangered
Wildlife Program



Watchable Wildlife Program

A Parliament of Owls



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snowy owl
based on a photograph by
Jacques Turcotte

Owls — Birds Of The Night

By Mary Taylor Gray

Night descends and a motionless bump on a tree limb comes suddenly to life. Moving silently across the landscape on large, soft wings, a great horned owl begins its nighttime hunt.

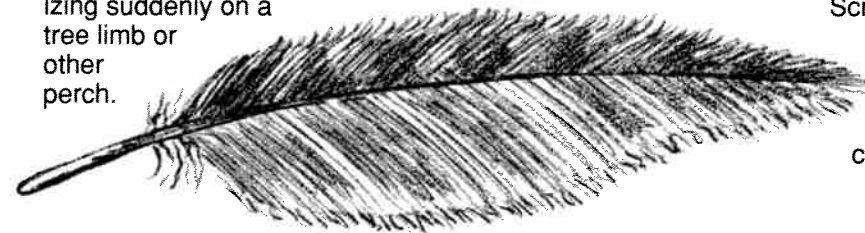
Owls. Something about these birds, with their haunting calls and knowing eyes, fascinates us. Maybe it's the upright posture, round face and large, forward-looking eyes, so like our own, that intrigue us. Or perhaps the owl's familiarity with the night, a world we retreat from, makes owls seem mysterious and otherworldly.

We tend to think of all owls as large-eyed night birds sitting about by the tree full asking the question, *Who?* But there is great variety among owls. Of the 18 species of owls in North America, 13 have been recorded in Colorado. The large, widespread resident owl, the **great horned**, lives throughout the state in nearly every habitat, including our densely populated cities. The larger **snowy owl** visits Colorado occasionally. Our smallest owl is the rare and reclusive **flamulated owl**, only six to seven inches in length. The **long-eared owl** looks like a slender version of the great horned. When threatened it raises its ear tufts and draws its body up to be very long and narrow. The sparrow-sized **pygmy owl** is tiny but fierce, hunting by day for birds and swooping on them in flight like a falcon. With its ear tufts, the **screech-owl** looks like a small great horned. This common owl often lives in city parks and neighborhoods, where its call is heard at night — less a screech than a tremulous *hoo-oo-oo-o-o-o*. The familiar **barn owl** has a unique, heart-shaped face; biologists don't know why its face is so different from other owls. The **Mexican spotted owl**, a subspecies related to the northern spotted owl, nests in coniferous trees in the bottoms of deep canyons in southwestern and south central Colorado.

Most owls are stay-at-home birds, but a few migrate. **Burrowing owls** nest in Colorado and spend the winter in the southwestern U.S. and northern Mexico. Snowy owls nest on the arctic tundra and seem to migrate cyclically, possibly in response to fluctuating populations of arctic lemmings, a primary food. Short-eared owls also move around in response to prey availability.

Some owls have "horns," some don't. These ear tufts, found on owls like the great horned, long-eared and screech, aren't ears at all, but tufts of feathers with no function in hearing. They may alert other owls or communicate mood — horns laid back while relaxed and roosting, up when alert or sensing danger.

Great horned owls are probably the most easily seen owl for wildlife watchers, by virtue of their size, activity, wide distribution, and tolerance for humans. They become active at dusk, materializing suddenly on a tree limb or other perch.



An exceptionally early nester, the great horned owl moves into the old nest of a hawk or some other large bird in late January or early February. Fed by her mate, the female faithfully incubates her eggs even as the snow falls on her back. Great horned owls are attentive parents, feeding their downy, wide-eyed owlets for 60 to 70 days before the babies are ready to leave the nest. **(If you are fortunate enough to discover and watch an owl nest, be very careful not to approach too closely or frighten the adults. Owlets are very subject to predation by mammals and birds, including other owls).**

Many owls nest in tree cavities, but not all owls nest and roost in trees. The burrowing owl is a grassland bird, nesting in prairie dog burrows, and hanging out during the day atop burrow mounds or nearby fenceposts. Snowy owls lay their eggs in grass-lined depressions on the arctic tundra. Barn owls often take up residence in barns, attics and abandoned buildings.

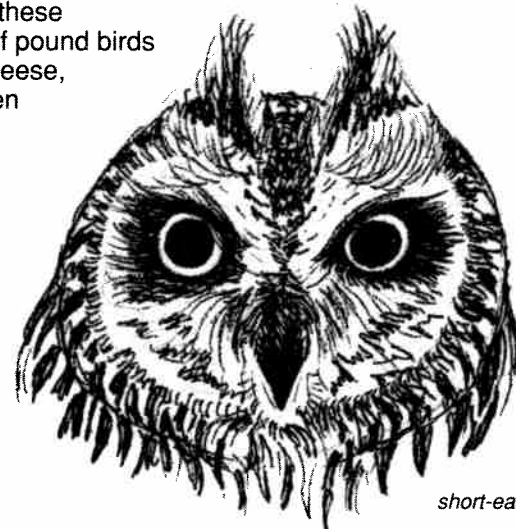
All owls are hunters, but their diets differ. Great horned owls have been nicknamed "winged tigers" for their fierceness and the sheer numbers of prey animals they kill. Though rabbits are their preferred dish, these three-and-a-half pound birds will kill ducks, geese, house cats, even porcupines and skunks (with relatively little sense of smell, they are apparently impervious to skunk perfume). A study of barn owl pellets estimated the birds each

consume an average of 2000 rats and mice a year. That's five to six rodents a night, no mean feat of rodent control.

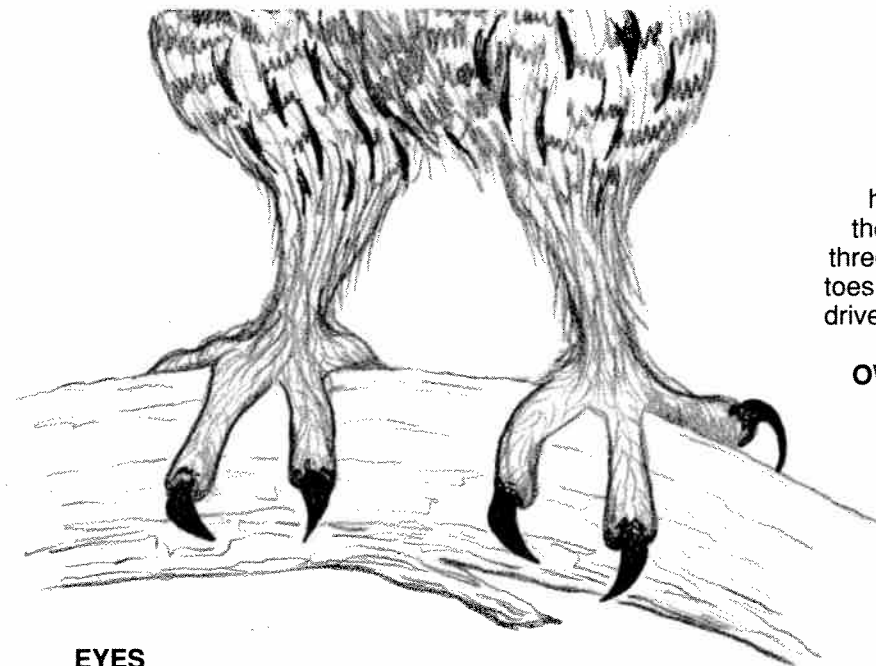
Smaller owls, like the pygmy owl, hunt birds. Burrowing owls consume a great many grasshoppers and ground beetles. Screech-owls are known for their indiscriminate palates, eating anything and everything — all kinds of insects, spiders, lizards, shrews, bats, mice, and birds. The tiny flamulated owl feeds largely on insects.

Owls fill niches occupied during the day by hawks. Sometimes direct parallels can be seen between species using the same hunting methods, habitat, and prey.

Screech-owls replace kestrels; short-eared owls take over for harriers; the great horned replaces the red-tailed hawk and the barn owl the rough-legged hawk. Though these two groups feed on the same food source, they avoid direct competition by working different "shifts."



short-eared owl



EYES

Owl eyes are amazingly adapted to night and exceptionally large. The eyes of bigger owls are about the same size as a human's, but 100 times more acute. Unable to move their eyes, owls rotate their heads instead. With 14 neck vertebrae (humans have seven), owls can swivel their heads through an amazing arc — as much as 270 degrees either direction from front center. This means owls can turn their heads to look directly behind themselves, and beyond. They can whip their heads back around so quickly many observers think owls move their heads in a complete circle. Curiously, owls have upper eyelids, unlike any other birds. Their ability to blink adds to their human-like demeanor.

HEARING

Studies of barn owls show hearing is the premier sense owls use to find prey at night. Owls hear frequencies up to about 20,000 cycles per second (8500 cycles per second is the high range for human hearing), so they can pick up the high-pitched squeaking of mice and small mammals. Feathers around the face form a disc that acts like a giant external ear, funneling sounds to the ear openings. The ears are asymmetrical — one above the line of sight, the other below. Sounds reach each ear at a fractionally different time. As the owl orients its head to equalize, the source of the sound is aligned to the bird's line of vision, and it targets in for the attack. Owls can pinpoint and strike a prey animal accurately to within a fraction of an inch, even in total darkness. The large, spread talons of the striking owl compensate for any slight variance in accuracy, or movement of the target.

Even equipped with such incredible tools for vision and hearing, owls rely greatly on familiarity with their hunting territory. Most owls hunt the same patch of ground all their lives. Knowing where the best perches are, how high from the ground, where the branches and obstacles are when flying through a pitch dark forest, are essential elements of hunting success.

FEATHERS & FEET

The advantages of stealth and night hunting would be lost if the owl were a noisy flier, so its feathers have

evolved for silent flight — long, soft and rounded. The leading edge of the flight feathers is serrated, which breaks up the flow of air across the wing, deadening any noise.

Owl feet are another important tool. Owls have four toes — two facing forward, one back, and the fourth reversible so the bird can grip two and two, or three and one. The talons are very sharp and the feet and toes incredibly strong. Grabbing a prey animal, the owl drives its talons into the body, killing the prey.

OWL TALK

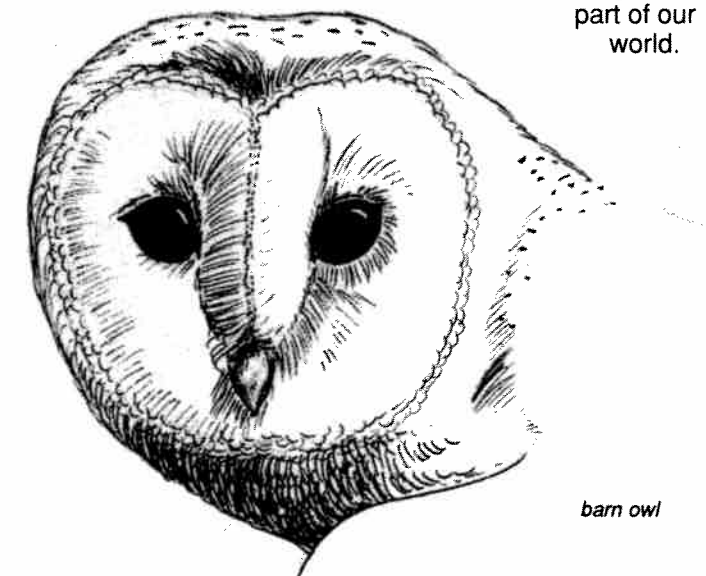
Owls don't just *who*, they make all sorts of sounds. They hoot, trill, whistle and moan. They click and snap their bills in warning or when courting. The **saw-whet** owl makes a sound reminiscent of a saw blade being sharpened. Young burrowing owls make a rattling sound, probably to mimic a rattlesnake and scare off danger.

OWLS IN DANGER

Though many animals prey upon owls, humans are their greatest enemy. Owls have long been killed by farmers and hunters because they sometimes prey on livestock and poultry. However, their value as controllers of rodents far overshadows any bad habits, and this fact is finally being realized. People of many cultures have feared owls as night creatures, much like many people loathe bats, and killed them whenever possible. Owls also suffer secondhand poisoning by eating rodents that have devoured poisoned baits. Owls are now protected by state and federal laws. They may not be killed or possessed without a permit, and harassment of owls is illegal.

As with so many species, habitat loss is hurting owl populations. While the case of the northern spotted owl and logging of old growth forest is the most well-known example, nesting and hunting habitat for many owl species is lost as wooded areas are developed. In Colorado we may be losing burrowing owl populations as their prairie dog town nesting grounds are destroyed to make room for houses, office complexes and agriculture.

Our continued efforts for conservation and habitat preservation are essential to keep these wonderful birds of the night a part of our world.

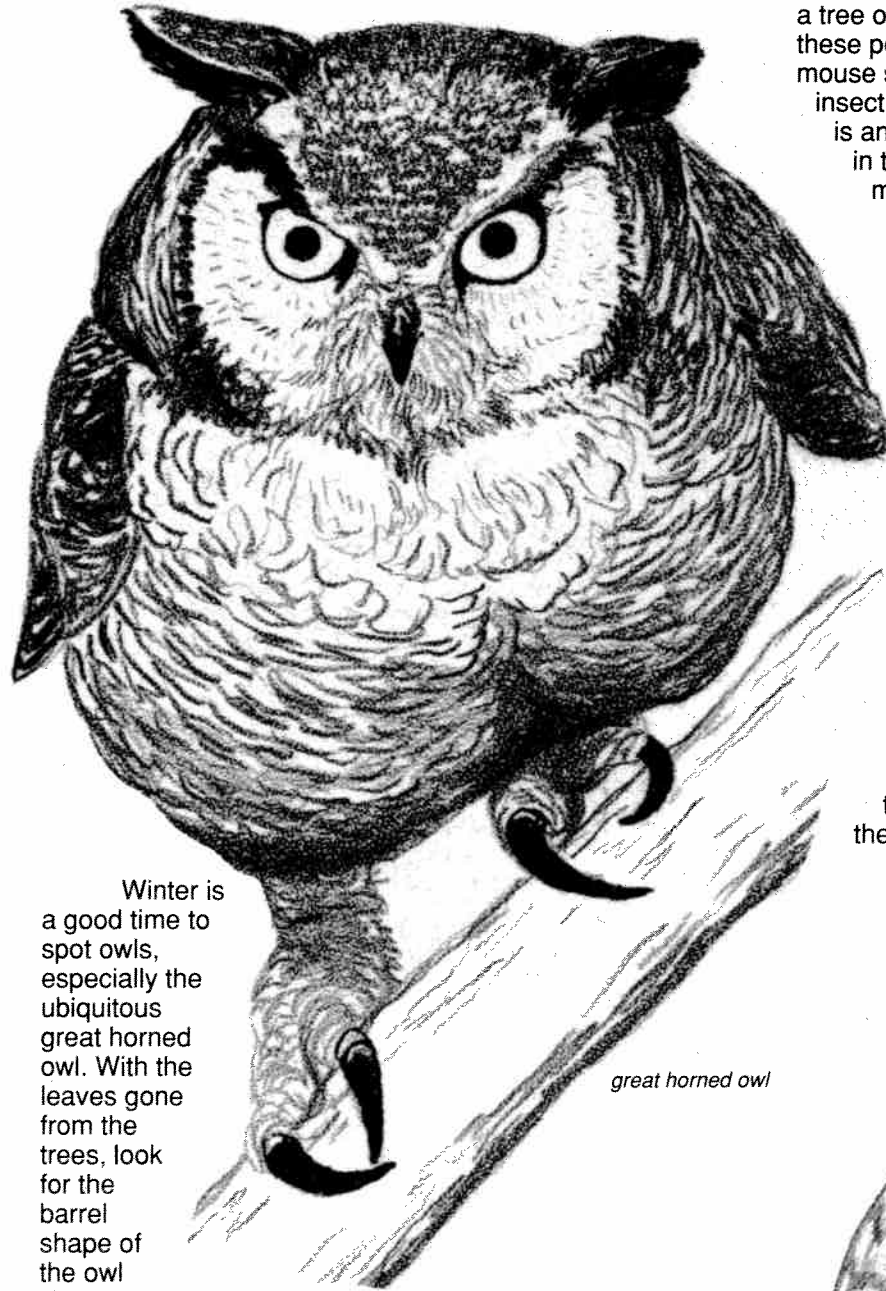


barn owl

Owl Watch

By Mary Taylor Gray

Most owls are nocturnal birds with secretive habits, not easily viewed by wildlife watchers. In fact, if you've spent any time along Colorado's river bottoms among large cottonwood trees, you've probably passed beneath the perch of an owl with no idea the bird sat above you.



great horned owl

Winter is a good time to spot owls, especially the ubiquitous great horned owl. With the leaves gone from the trees, look for the barrel shape of the owl sitting on a branch close to the trunk.

An owl's shape is very typical — rounded, blocky body with large, round head and little apparent neck. At a distance perching owls can be distinguished from hawks by their large, round heads. In flight owls have large, rounded wings. Great horned owls can often be seen flying at dusk.

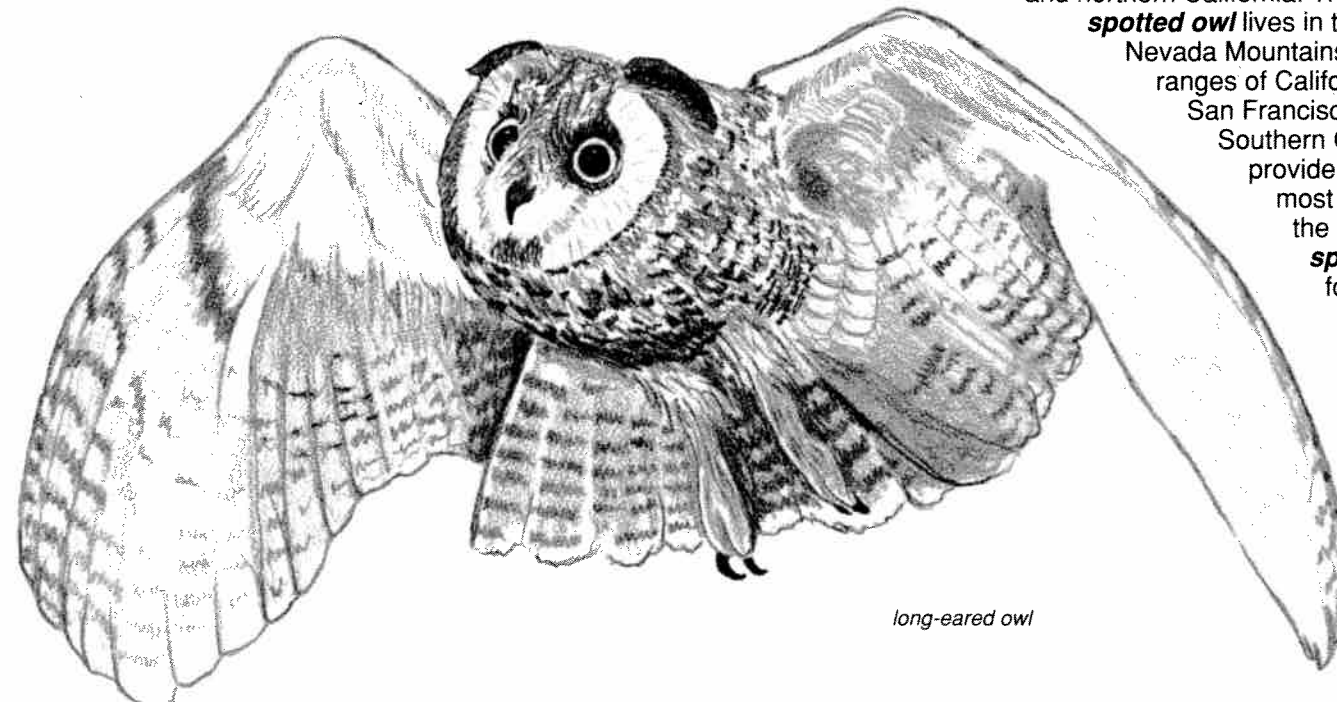


owl pellets

Though we may not see owls, we can easily find the signs they leave. Owls usually devour their prey whole — hair, feathers, bones and all. Their gizzard — the muscular portion of the stomach — accumulates these indigestible bits and packages them into pellets which the bird then regurgitates. An accumulation of pellets beneath a tree or post is a sure sign of an owl roost. Dissected, these pellets give great clues to the bird's diet — whole mouse skulls, jaw bones, thigh bones, bird feathers, insect shells. Whitewash, the accumulation of droppings, is another sign of a bird's favorite roost. Rabbit tracks in the snow that end abruptly amid feathery wing marks are a good sign of an owl strike.

Another clue to the presence of owls is the reaction of other birds. Many songbirds and their young are preyed on by owls and the excited alarm calls of songbirds may indicate an owl in the neighborhood. Jays, blackbirds, sparrows, warblers and other songbirds gather in groups and attack the owl, a behavior called *mobbing*. The songbirds may just scold the owl, or actually dive-bomb it. Some of the smaller owls which tend to prey on birds, such as screech-owls, pygmy owls and short-eared owls, are particularly likely to be mobbed, though any owl may be harassed. The usual owl response is to sit quietly and endure or fly to a perch in deeper cover. Mobbing probably functions to drive off the owl and alert other animals.

Of course, since most owls are nocturnal, night is the time to go on an owl watch. Listen for their hooting, check posts and tree limbs for blocky shapes, and watch the sky for the silent passage of a hunting owl.



long-eared owl

DOW Working For Wildlife

Report: Mexican spotted owl



Mexican spotted owl

Three spotted owl subspecies, differentiated by plumage coloration and geographic range, nest in the United States. The much-publicized **northern spotted owl** is found in the Pacific northwest and northern California. The **California spotted owl** lives in the Sierra Nevada Mountains and coastal ranges of California south of San Francisco Bay.

Southern Colorado may provide the northernmost habitat for the **Mexican spotted owl**, found primarily in Arizona, New Mexico, and Mexico.

The Colorado Division of Wildlife (DOW) is participating in a cooperative venture with the United States Forest Service, Bureau of Land Management, and National Park Service to determine the range and status of the Mexican spotted owl in Colorado. DOW wildlife biologist Jim Olterman credits Steve Boyle and Melinda Rogers with two summers of surveying owls in southwest Colorado under unusual and difficult conditions.

You see, Mexican spotted owls in Colorado live at the bottom of deep, sheer-walled canyons where they nest and forage in uncut mixed-conifer forests. In search of the nocturnal owl, Boyle and Rogers have kayaked down rivers between soaring rock walls and climbed up steep side canyons in the dark of night, using their voices to imitate the call of the Mexican spotted owl.

Working in parallel with DOW researchers, federal owl survey crews have found Mexican spotted owls in southwestern (Mesa Verde National Park and the Ute Mountain Indian Reservation) and south central Colorado in the Wet or Greenhorn Mountains. Jon Verner, wildlife biologist with the Pike/San Isabel National Forest estimates that 18 Mexican spotted owls have been located in Colorado.

According to Steve Bedard with Rocky Mountain Forest and Range Experiment Station, surveying for the Mexican spotted owl began in 1989 north of Fort Collins in the Poudre Canyon. However, the spotted owl was never sighted that far north and, in fact, it has never been found further north than 80 km above the New Mexico border (probably the northern edge of its range). In addition to locating the birds, federal biologists are marking owls with leg bands and radio transmitters to study their movement patterns.

Like its cousin in the Pacific northwest, the Mexican spotted owl is running into habitat conflicts with loggers — this time in Arizona and New Mexico, the heart of its range. Although the Mexican spotted owl is currently under consideration for federal listing as a "Threatened" species throughout its range, the inaccessibility of forests tucked into deep canyons offers the spotted owl habitat protection in Colorado.



To Call, Or Not To Call

By Mary Taylor Gray

Using taped bird calls to attract birds that are otherwise hard to see has long been a practice among birdwatchers. Tapes of owl calls are used not just to see reclusive owl species, like flammulated owls, but to flush songbirds. The call of a screech-owl, for example, brings many excited songbirds out to mob the unseen predator.

As the numbers of birdwatchers increase, the ethics of using calls is coming under debate. In most cases, using calls to locate owls or other secretive birds is unnecessary and not recommended. People should never use tapes to call birds in popular viewing places, and it is a violation to do so anywhere in a national park. Here are some of the arguments for and against using tapes:



screech owl

Look For Owls

Fort Collins Greenbelt

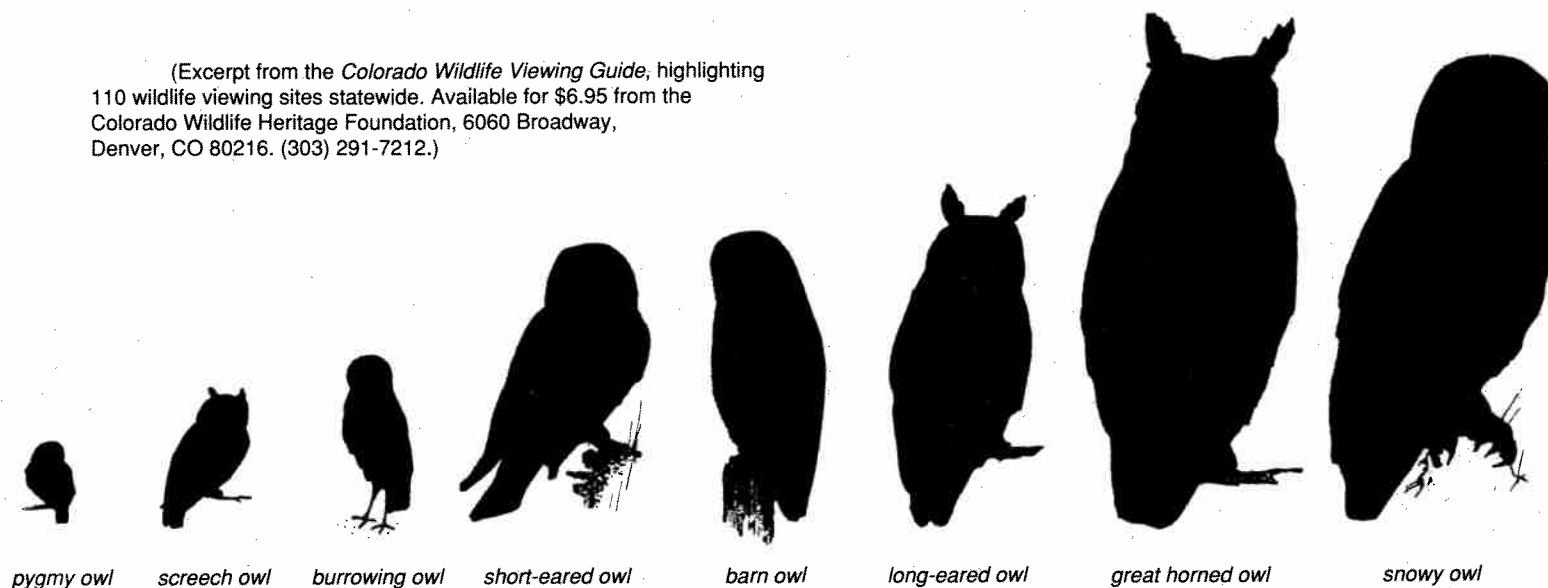
DESCRIPTION: Excellent cottonwood/willow riparian corridor through an urban area. Paved trail parallels the Poudre River through Ft. Collins, traversing residential, industrial, gravel mining areas. Numerous public access points. The Environmental Learning Center has interpretive information and displays, a raptor rehabilitation program, and is open dawn to dusk seven days a week. It encompasses 200 acres of river bottomland and wetlands, with an interpreted nature trail.



flammulated owl

VIEWING INFORMATION: Outstanding opportunity to view wildlife in an urban environment. Active red fox dens, four beaver colonies, mule and white-tailed deer, raccoons, fox squirrels, muskrats, ground squirrels. As many as 206 bird species have been recorded on-site. Excellent for riparian birds in spring and summer. Great waterfowl and waterbird viewing along the river — Canada geese, variety of ducks, great blue herons (heronry nearby), cormorants, numerous shorebirds. Bald and golden eagles visit the area; **great horned owls are commonly heard and seen.** Site of Operation Osprey release program.

(Excerpt from the *Colorado Wildlife Viewing Guide*, highlighting 110 wildlife viewing sites statewide. Available for \$6.95 from the Colorado Wildlife Heritage Foundation, 6060 Broadway, Denver, CO 80216. (303) 291-7212.)



pygmy owl screech owl burrowing owl short-eared owl barn owl long-eared owl great horned owl snowy owl

Tapes OKAY

Tapes are the only way to see some species.

Attracting birds using tapes distracts them for only a few minutes and is less detrimental than pursuing them on the ground, trampling through habitat to get a look.

Tapes don't unduly stress or impact birds because territorial defense (the bird's response to the taped call) is a part of the bird's behavior and already "budgeted for" in its time/energy allocation.

If calls are played repeatedly to a certain population, the birds learn to ignore these "phantom" calls, with no long-term detrimental effect.

Tapes NO WAY

Tapes are unnecessary. The same success in seeing birds can be achieved through patience and persistence.

Dozens of people in the field playing taped calls exhausts and confuses the birds.

Playing tapes agitates and stresses birds, distracting them from other activities like feeding, courting, nest building, and care of young.

If calls are played repeatedly to a certain population, they learn to ignore these "phantom" calls, so taped calls become useless anyway.

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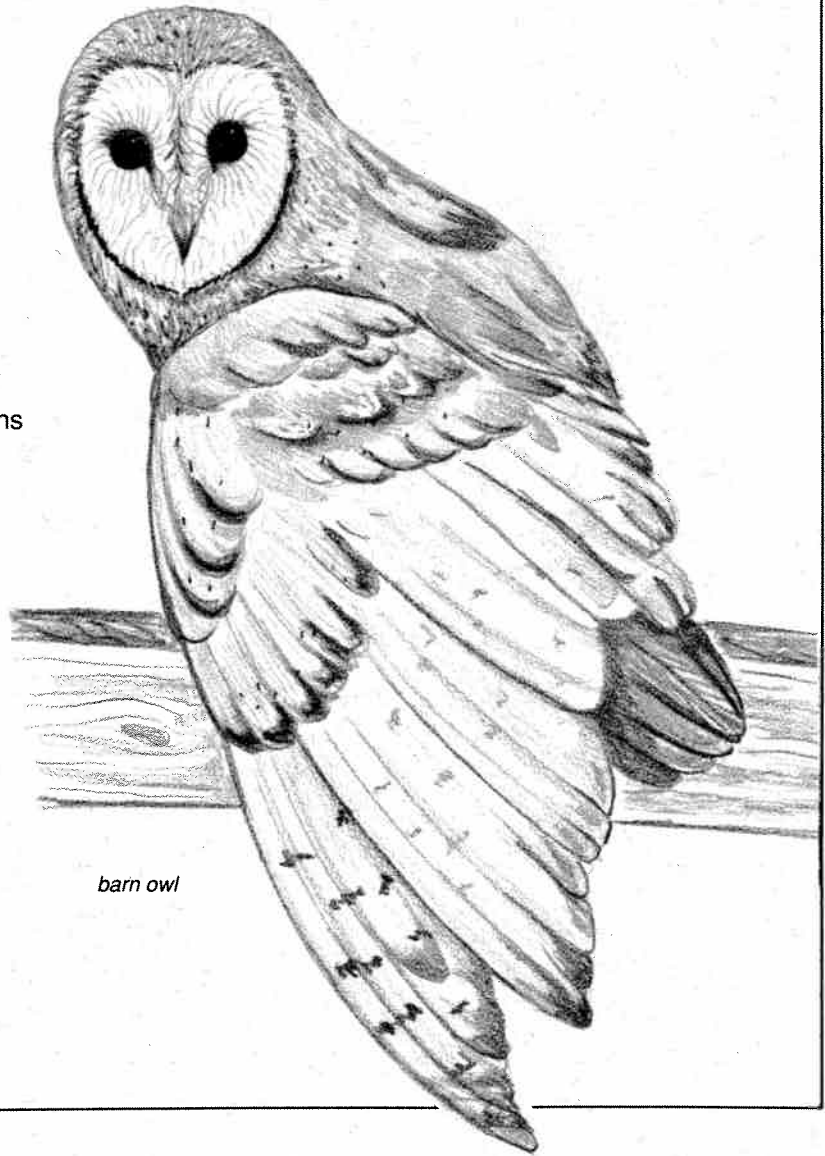
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Opinions Needed

You can help shape the future for Colorado's nongame and endangered wildlife. The Colorado Division of Wildlife (DOW) wants your help in developing regulations and plans related to state-listed nongame and endangered wildlife species. Biologists are collecting public comments and opinions from now until the end of May. For more information, call Judy Sheppard (291-7272) or Tom Nesler (484-2836 ext. 357), or write to them in care of Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216.



barn owl

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