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THE GREAT GRAY OWL

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A great gray owl is shown in flight, wings spread wide, against a blurred background of a snowy forest. The owl's face is centered, with its large, yellow eyes looking directly at the viewer. The feathers on its wings are detailed with brown and white patterns.

A great gray owl flies low across a Manitoba forest clearing—wingbeats utterly quiet, ultrasensitive ears tuned to the faintest sounds of prey concealed beneath the winter snow. For these woodland predators, survival depends on focus.

Winged Silence

Great Gray Owls

By LYNNE WARREN NATIONAL GEOGRAPHIC WRITER
Photographs by DANIEL J. COX



With the remains of a spring snowstorm whitening the Montana woods—and making chipmunk an easy-to-spot entrée—a great gray male (left) delivers food to the broken-off tree where his mate and chicks wait. After shredding the flesh, the female drops a morsel into an owlet's gaping mouth (right). Great grays in the lower 48 eat a variety of small rodents, including voles and gophers, but populations in Canada and Alaska prey almost exclusively on voles.



T

hese owls don't just pounce, they plunge. With ice-pick talons tucked under their chins, great grays hurtle headfirst into deep snow to snatch voles—diving with such power that they can shatter snow crust thick enough to hold a 180-pound person. They locate hidden prey with the help of large facial disks that funnel sound to their ears. When the plunge succeeds, as it did for this Manitoba owl, the hunter wriggles out of the snow (below) then carries the prey (right) to a safe spot for eating. This hunting technique gives great grays an advantage over other predatory birds, many of which must migrate to areas where lighter snows leave prey more accessible.



In winter adult great grays consume up to a third of their weight in rodents daily. Females in particular pack on reserves to sustain them through more competitive summer months. "It's as if there's a big winter sale on voles, and great gray owls are the only customers in the store," says Canadian conservation biologist Jim Duncan.

Researchers estimate that 20,000 to 100,000 great grays live in Canada and the U.S., with similar numbers in Europe and Asia. In North America, Duncan and his colleagues have found that northern populations of great grays are highly nomadic, flying hundreds of miles as vole numbers boom and crash in different areas.

By contrast, studies in Oregon and California have shown that more southerly populations, which have more diverse diets, tend to stay put, often occupying home ranges smaller than five miles across.



A Great Gray Owl is perched in a snowy landscape during a winter storm. The owl's plumage is thick and dark, with some lighter feathers visible on its wings. Its eyes are yellow and focused forward. Snow is falling around it, creating a soft, white atmosphere. The owl is sitting on a patch of snow, with its legs tucked under its body.

*A*pril in Montana: Snow is piling up, and the afternoon temperature won't make it above 25°F. With three owlets tucked snugly under her dense plumage—and a nearby mate that can continue to hunt by sound, however poor visibility becomes—this nesting female seems calmly prepared to ride out the storm. Great grays make devoted parents. Duncan has discovered that when prey is scarce, females will starve themselves—losing nearly a third of their body weight in a single month—so the maximum possible amount of food can go to their chicks. The return on this investment? Across North America 70 to 80 percent of great gray breeding pairs successfully fledge young.



Just big enough for mother and chicks, this 18-foot-tall Montana snag offers a commanding view of prime great gray habitat: mature forest with lots of flying room. Though adult great grays weigh only two to three pounds, they have wingspans 60 inches across and can be up to 33 inches high—by tape measure the tallest owls in North America. Their size makes it difficult for them to maneuver well in dense stands of trees. To hunt efficiently, they need meadows and other open spaces, often created by fire, wind, disease, or careful timber harvests.

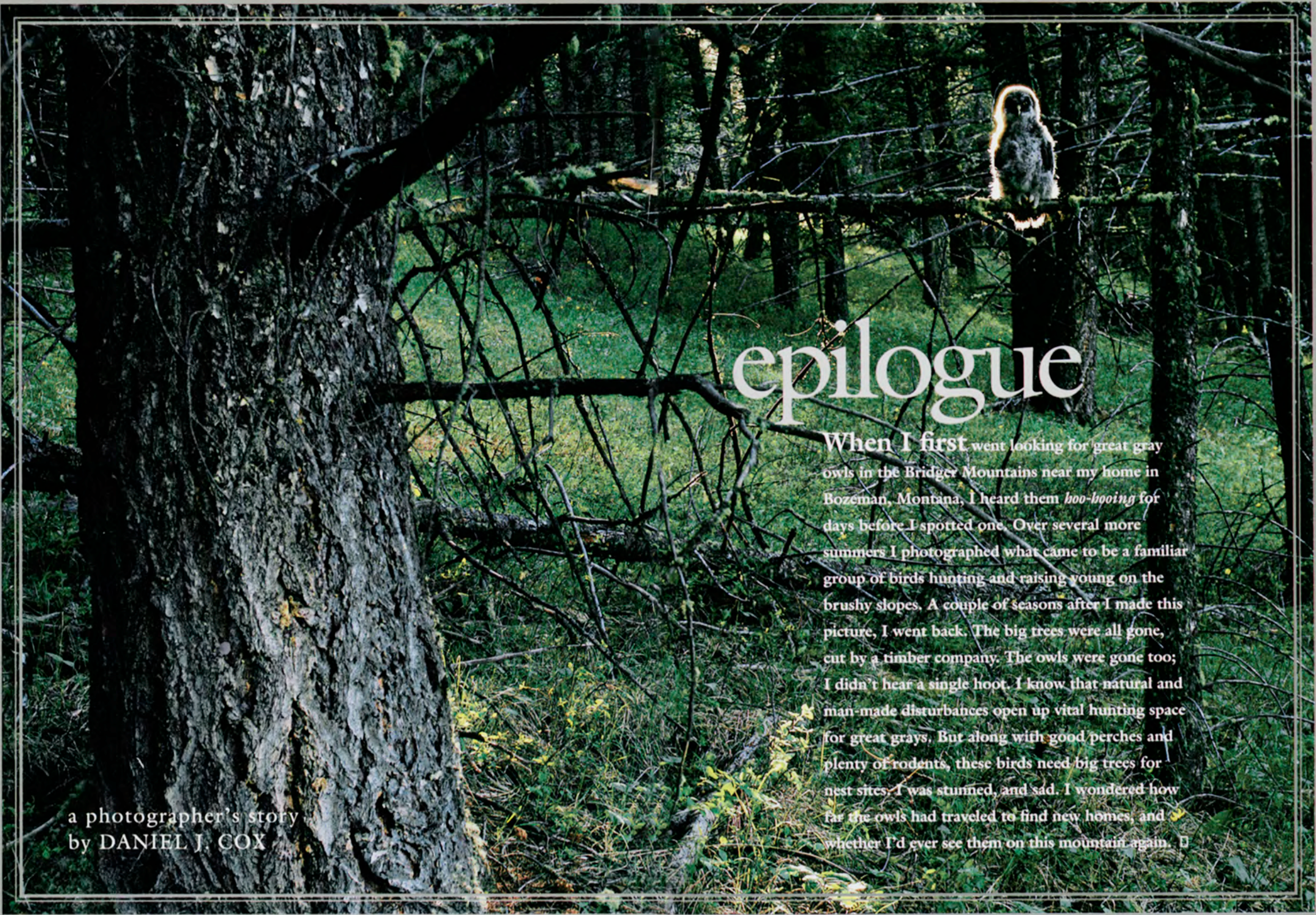
Fluffy and feisty less than a month out of their shells (below), chicks don't stay nestbound long. As wastes accumulate, the area around the nest develops a smell that makes its location dangerously obvious to predators. So for safety's sake, chicks need to disperse even before they can fly; most owlets climb or tumble to the ground (right) when they're just three to four weeks old. Parents continue to feed and defend their brood through the summer. One in three great gray chicks is killed—by ravens, great horned owls, weasels, or other predators—or starves to death when its parents can't find enough prey to keep the family alive. Two-thirds survive until they're able to fly at seven to eight weeks old.





“You’re looking at a very aggressive bird,” says Jim Duncan. When a great gray flares its facial feathers to expose the full length of its dagger-sharp beak, “it’s like a snarling dog showing his fangs.” From 30 feet away photographer Dan Cox used a remotely operated camera to record this adult patrolling the Montana clearing where its chicks were hiding. Parents attack anything—bear, lynx, unwary hiker—that gets too close to their young. What does a wallop from a great gray feel like? “Like being whacked by a two-by-four with nails sticking out of it,” Duncan says.

CAMERA SHY Great grays are hard to spot in the wild, but you can download great-gray wallpaper at nationalgeographic.com/magazine/0502.



epilogue

When I first went looking for great gray owls in the Bridger Mountains near my home in Bozeman, Montana, I heard them *hoo-hooing* for days before I spotted one. Over several more summers I photographed what came to be a familiar group of birds hunting and raising young on the brushy slopes. A couple of seasons after I made this picture, I went back. The big trees were all gone, cut by a timber company. The owls were gone too; I didn't hear a single hoot. I know that natural and man-made disturbances open up vital hunting space for great grays. But along with good perches and plenty of rodents, these birds need big trees for nest sites. I was stunned, and sad. I wondered how far the owls had traveled to find new homes, and whether I'd ever see them on this mountain again. □

a photographer's story
by DANIEL J. COX