



ORI

FACT SHEET

# Great Gray Owl

It's dramatic facial discs, large size, and astonishing hunting techniques make this charismatic owl unique, even among owls



## *Strix nebulosa*

Rugged and remote northern forests are home to most Great Gray Owls, making research and monitoring difficult. As a result, worldwide population estimates are poorly understood.

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The Great Gray Owl has a striking appearance with a seemingly expressive face - frequently described as looking wise, surprised, or kind. While massive in stature with a wingspan of 60 inches, the Great Gray soars silently through dense forests and is expertly camouflaged when it settles in to roost. Although they are primarily nocturnal, they can sometimes be seen perched conspicuously during daylight hours and will hunt diurnally during the breeding season. It is usually during these times that you might be lucky enough to see one of these magnificent owls in person, as they are so difficult to spot in the forest.

The Great Gray is the tallest North American owl, standing up to 33 inches tall. Much of this species' perceived size is simply feathers; specially designed fluff to protect them from harsh winter conditions. Despite their appearance and height, the Great Gray's body mass is quiet small and 15% less than that of the Great Horned Owl, who can weigh up to 4 lbs, while a Great Gray averages only 2-3 lbs. This relatively slight build can make them vulnerable in territorial disputes and to predation from larger, more aggressive raptors.

But Great Gray Owls are powerful predators in their own right and expertly hunt rodents in all conditions. Perching on a branch with a cocked head, the Great Gray listens for tunneling rodents deep beneath the snow. Their incredible hearing and asymmetrical ear openings allow them to pinpoint sound, detecting prey over 300 feet away and be-

neath snow over a foot thick! When detected, the Great Gray will dive through rigid snow crusts to score an unsuspecting rodent - a hunting display akin to a superpower! Even in the summer they have been known to dive through solid earth to hunt small mammals in shallow burrows. These specialized hunting techniques allow Great Grays to survive in a northern climate year-round.

Great Grays are monogamous and maintain strict parenting roles to ensure the success of their young. Females lay 2-5 eggs asynchronously, or not at the same time, and they will hatch in the order laid. She does 100% of the incubation, brooding, and feeding in the nest, while the male is the sole hunter for his growing family. At 3-4 weeks of age, chicks jump from the nest, exploring the forest floor and pulling themselves up on branches to roost. During this time, usually about two weeks, both parents continue their roles in feeding, protection and care. The female will leave the family first while the male stays with the young and continues feeding them until they are about 3 months of age and ready for independence.

Timber harvesting is a leading threat to Great Owls; in some cases removing large areas of habitat or, in others, simply removing nesting trees and the fallen timber used by young birds for roosting and protection. Thoughtful timber harvesting strategies are critical to the future of Great Gray Owls. Interestingly, manmade platform nests are being used in some areas with promising results.

# Great Gray Owl Research

In addition to field research, our partnership with [explore.org](https://www.explore.org) bring 24/7 live nesting coverage to viewers around the world. It is an fantastic tool for research and entertainment. Check it out at: [explore.org/livecams](https://www.explore.org/livecams)



Similar to cavity nesting owls, Great Gray Owls depend on very specific site characteristics in order to nest. While obligate cavity nesters need to find the holes of woodpeckers, natural tree holes, or nest boxes; Great Grays need to find large, broken-topped trees, called snags, or the abandoned nests of other large birds. When the owls nest on the tops of broken snags, the bowls have to be large enough to accommodate their massive size.

A special focus of our Great Gray project is to record the measurements of successful nesting snags. In doing so,

we are developing a predictable model to easily identify, and manage for, these dead trees which provide potential nest sites.

Snags are a critical component of all forest ecosystems and provide homes a myriad of species. Again and again, we find snags removed from otherwise ideal Great Gray habitat. In most cases, it is from lack of awareness and implications to the wildlife are not understood. As a result, public education is a key focus of this project. We continue to grow our sample size.

## GREAT GRAY OWLS AT A GLANCE

### HEIGHT

Males: 24 - 33 in  
Females: 24 - 33 in

### WEIGHT

Males: approx 2 lbs  
Females: approx 2.8 lbs

### WINGSPAN, BOTH

54 - 60 in

### POP. ESTIMATE

95,000 US & Canada\*

**FEEDS ON** Small mammals such as voles and mice; shrews; rarely birds



### GREAT GRAY OWL DISTRIBUTION IN NORTH AMERICA

Cornell Lab of Ornithology

\*Partners in Flight

## GREAT GRAY OWL FACTS

- Closely related to the Barred Owl (*Strix varia*)
- May live in an area year-round or be migratory & nomadic
- Migration based on prey availability and snow depth
- Hunts mostly in open meadows surrounded by forest
- Ears and hearing highly advanced; whereas feet and talons are small compared to other owls
- Intolerant to summer heat because of thick plumage
- Male uses pseudo-hunting and excessive snow dives in courtship displays for female
- Usually don't breed until three years of age
- To keep the nest clean, females typically consume the feces and pellets of owlets up to a week before fledge
- Great Gray Owl's long legs have warm insulating feathers to protect from frostbite and feisty prey animals