

## Great Grey Owl

*Strix nebulosa*



By Shalene Takara

The great grey owl, is from the family *strigidae*. It is a majestic and uncommon member of the owl family. It is also the largest of its species, although its fluffy feathers often mask its actual body size. A stealthy hunter, this owl's wing-beats are barely audible, with ears are so finely-tuned that it can detect prey that is buried deep within a snowdrift.

### CHARACTERISTICS

The great grey owl is the largest owl in North America, though it is outweighed by the snowy owl. The great grey weighs around 1.8 kg (4 lbs), its feathers alone weigh more than its entire skeleton! The length of this owl is 61-84 cm (24 - 33.1 inches) and it has a wingspan of 137-152 cm (53.9 - 59.8 inches).

This owl is characterized by its lack of ear tufts, a white moustache, a black triangular beard, and yellow piercing eyes. This bird also has large facial discs, encircled with dark gray concentric circles that make the eyes appear small. It has a distinctly long tail and a relatively large head. Its under-parts are heavily streaked with brown and white, and its toes are densely-feathered. The plumage of both sexes is similar, with the female being larger in size than the male. When in flight, the owl displays barred feathers that vary from shades of gray to ones that are greyish brown.

### LIFE CYCLE

The great grey owl averages a life span of 7 years in the wild, but has been known to live up to 27 years in captivity.

The female lays 1 brood per year, made up of 2-5. The more abundant food is at the time, the more eggs are laid. The female lays eggs at 2-day intervals. They are pure white in colour and are about 54.2 mm x 43 mm (2.13 x 1.69 inches) in size in North America. In Europe, the eggs are slightly smaller, measuring in at 53.2 mm x 42 mm (2.1 x 1.65 inches). Incubation lasts about 28-36 days and is performed by the female. The eggs hatch at the same interval as the laying.

The young remain in the nest from 21-28 days. During this time, the nest begins to acquire the smell of the fledgling's waste which attracts predators, so the female normally encourages them to leave the nest for their own safety. At this time, they are still not yet able to fly, so they usually climb out and perch in their nesting tree or in nearby trees. After the fledglings leave the nest, the female may depart indefinitely, while the male stays with the young, feeding them and caring for them for up to 3 months. By the age of about 5-6 weeks, the fledglings are able to fly. They reach sexual maturity at the age of 1 year.

## **HABITAT**

The range of the great grey owl ranges from Siberia to Alaska across the Bering Sea. It then spans across northern Canada to Hudson Bay and dips down the Rocky Mountains to northern California, Wyoming, and Idaho.

Their preferred habitat is deep boreal forests and open swamps and clearings. They like to nest and roost in densely-forested areas, and hunt in nearby open spaces such as bogs and meadows. Their preferred roosting trees are spruce and pine, and mixed birch, larch and poplar, though sometimes they will use the top of a tree stump or (more rarely) an indentation in the ground to nest. Often, they take over the abandoned nests of other larger birds, such as osprey, to raise their young. The great grey owl has been known to take aggressive action to scare other birds away from their nests.

Great grey owls of the north and south differ in migratory patterns due to their diet. In the north they feed almost exclusively on voles, so when the vole population booms or busts, the owl migrates accordingly, seeking the greatest food source. If a place where it has previously resided no longer has a food source, it may not return there until the food supply increases again. In the southern parts of their range, these owls have more of a varied diet. The diet comprises various small rodents and are not restricted to just one species. This ensures that there is almost always a food source available, leading to a more stable, settled lifestyle.

## **BEHAVIOUR**

The vocalization of the great grey owl is a mellow, full sounding, "hoo-hoo-hooo." It also utters single-note hoots. Its call is not remarkably loud but it can be heard for long distances on quiet nights. The female is also known to emit a hoarser, higher-pitched song, particularly during courtship or when seeking food from its mate for its young. Its breeding call is often heard in March and May, but may also be heard in autumn. Both adults have also been known to make

guttural sounds.

When flying, its wing-beats are soft and slow. While they are primarily a nocturnal animal, it is also often active in daylight, particularly during breeding season. When hunting, it first listens and watches from a perch. Then when it locates its prey, it swoops down and catches it in its talons. This owl is often seen flying low over open areas and locates its prey primarily by sound.

When hunting, the great grey owl's large facial discs give it a distinct advantage over other predatory animals as the discs funnel the sound of hidden animals towards its ears. This owl is also known to dive into thick snow to catch animals that are burrowed deeply within. In fact, it has been seen to penetrate snow crust thick enough to support a 81 kg (180 lb) person.

These owls are a monogamous species, and are spotted either singly or in pairs. These birds often spend time preening each other's feathers, and rearing their young is a joint effort. When the female is nursing, it stays at the nest while the male goes hunting for food. When the male returns with food, it feeds it directly to the bill of the female who, in turn, feeds it to the young. When food is scarce, the female owl is primarily concerned with feeding her young the maximum food available. Thus, she will often sacrifice her own food for her fledglings, starving herself and losing up to half her bodyweight. When nesting, the great grey owls also become aggressively protective of their young and have been known to attack anything from humans to lynx to bears if they dare to get too close.

## **THREATS**

Widespread food shortages during winter are disruptive to the migratory patterns of this species. This can force them to migrate further south than their normal wintering range, into habitat they are unaccustomed to, and sometimes into urban areas.

The range of its habitat has also been impacted and decreased by human activity, and some population decline is due to this habitat loss. Their current population is considered stable. However, humans must be careful that their activities do not disrupt the balance of this uncommon species. The greatest threats that humans pose to the species are habitat loss and disturbance. Hunting and wild-bird trading also threaten the species, but they are protected by law through-out their habitat range.

## **WHAT WE CAN DO TO HELP**

We need to maintain a sustained effort to conserve the habitat of the great grey owl, this in turn protects a myriad of other species that share the owl's habitat.

The provision of artificial nesting platforms and roosts mounted in trees has been noted to be successful in Sweden and Canada and may help in safer breeding. In Sweden, nest boxes have also been successfully used.

When the range of the owl's habitat expands beyond its established range, the laws protecting this species should be modified to cover the new range, ensuring continued protection against hunting and wild-bird trading.

### **OTHER INTERESTING FACTS**

The Germans refer to the great grey owl as *Bart kauz*, or 'bearded owl' due to the black patch beneath its chin which resembles a beard.

The great grey owl was named the official bird of Manitoba in 1987.

The great grey owl's hearing is so acute that they can detect the heartbeat of a mouse hidden under the snow.

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