

Wisconsin Wildlife *Fast Facts*

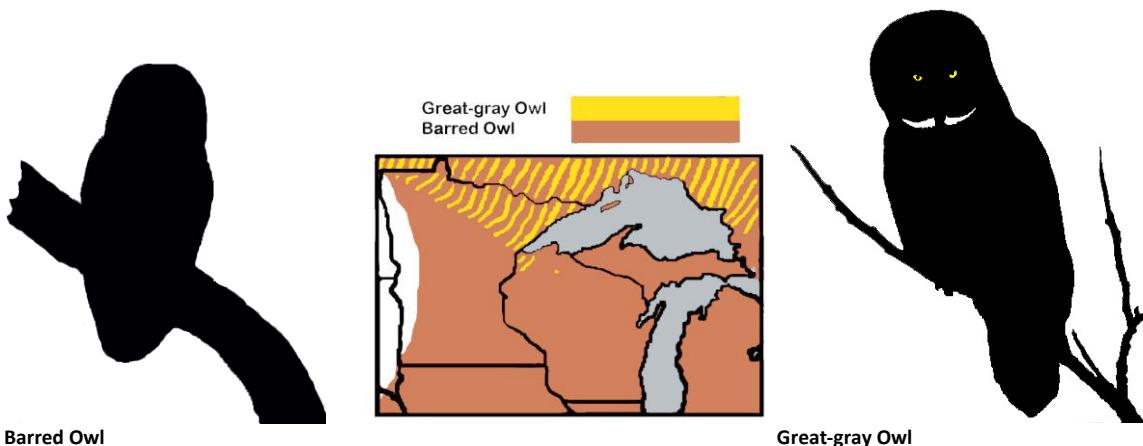
Compiled from various sources by Christian W. Cold, WDNR Ladysmith

Within the fraternity of birders there resides a peculiar class of dedicated eccentrics affectionately known as “raptor people”. Resigned to their insatiable curiosity over these charismatic birds, they pursue their passion with life-long vigor and determination. If you were to poll them to define what particular class of raptors interest them most, you might find that owls would capture the fascination of the majority. Owls are an enigma. They live obscure lives, hidden away within a forest canopy or beneath the cloak of darkness. Beyond our reach, they evoke intangible feelings of wonder within our hungry minds.

Two owls in the Great Lakes Region are referred to as “wood owls” – a term which encompasses several world-wide genera who are medium to large, similar-looking forest birds. One owl is a common and familiar neighbor to most of us. The other is a giant and casual transient - who most of us will never meet. It puzzles me how two vaguely similar - but drastically different birds may be misidentified by some who observe them.

Wood Owls

The barred owl and great gray-owl





Barred Owl *Strix varia*

(strident owl) (variegated or striped)

Synonyms:

Le chat-huant du nord (French Canadian for “the hooting cat of the north”), hoot owl, striped owl, laughing owl, crazy owl, black-eyed owl, eight-hooter, rain owl, Florida barred owl, northern barred owl, swamp owl, wood owl.

Description:

A large, grayish or gray-brown, round-headed owl with dark eyes and yellow bill.

Breast is “barred” horizontally in brown.

Belly and flanks are striped vertically with brown.

Sexes basically alike but female (as in all raptors) is larger.

A gentle-looking bird with an expressionless face.

Length: 17 – 24” Wingspread: 42” to 48”

Weight: Males average 620 g. (to 1 ½ lbs). Females average 801 g. (to 2 lbs.).

Four geographical subspecies are recognized (3 in North America).

In Flight:

Heavy, slow and direct wing beats.

Often glides - “sliding-up” in a gradual curve to alight on a perch.

Low wing load (weight supported per surface area of wing required to maintain flight).

Voice:

Loud and prolonged outbursts of rich baritone hoots, whooping, laughing and cackling.

Typical territorial “who cooks for you” is higher-pitch in female.

Often vocal on overcast days. [BARRED OWL AMAZING VOCALS!](#)

Range:

Most of temperate forested Canada (Atlantic to Pacific).

Continental US from eastern Great Plains to Atlantic seaboard.

Absent from central Great Plains and desert southwest.

Throughout forested Mexico to Guatemala.

Species is larger and darker in the mountains of central Mexico.

Ecological Equivalents:

Spotted Owl (North America), Fulvous Owl (Mexico), and Tawny Owl (Europe).

Movements:

Although considered permanent residents, adult males will often wander away from their nest territory during early winter.

In northern limit of range, many birds may commence south-bound exodus during severe winters.

Population Density and Home Range:

Density may reach 1 pair per square kilometer in optimum habitat. (Usually 1 per 10 sq.km.)

Average home range of 118 hectares in summer.

Averages of 231 & 282 hectares in winter.

Origin:

It is believed that owls and nightjars separated from a common stem-stock ancestor during the late Cretaceous (70-80MYS). A rapid divergence* apparently proceeded down two lineages – one emphasizing the feet as the tool of predation (owls)....the other branch focusing on the bill as the capture mechanism (nightjars). During the early Paleocene the emerging owl line produced the primitive *Ogygoptynx*. During the Eocene-Oligocene boundary (36 MYA) the order Strigidae (large assemblage of typical owls) appeared, and more recently (Miocene- 5 to 23 MYA) the Tytonidae (Barn and Bay owls) emerged.

*The reader is cautioned when making assumptions of ancestry based on superficial morphological features.....as the development of similar physical appendages and structures has repeatedly emerged independently in nature (see convergent evolution). The rising (and more precise) science of genetic analysis will ultimately shed light on animals of questionable ancestry.

Status:

Common and widespread in suitable habitat throughout the entire Great Lakes Region.

In Wisconsin, found statewide, but scarce or absent from portions of Milwaukee and Kenosha Counties (due to lack of suitable habitat).

History:

In Wisconsin and portions of Minnesota, the barred owl probably experienced a dramatic decline during the heyday of logging and fires (late 1800's-early 1900's). Subsequent forest regrowth and fire protection in the 20th century has enabled the bird to repopulate the cutover and expand its range north and west.

From the 1960's to the present, has extended its range dramatically to the West, along the Canadian border. Before 1965, was unknown in the Pacific Northwest, where it is now a local breeder.

Habitat:

A forest-dependent species.

Mature, upland hardwoods, river bottom forests and swamps with small, scattered clearings. Avoids extensive clearings (clearcuts, agriculture, prairie and marshland).

Also mature oak or maple woodlands.

Optimal habitat is large, contiguous stands of mature and old growth w/mixed conifers.

Birds select for dense canopy foliage or large conifers for roosting.

Conifers should not be considered an "essential" ingredient.

Understory is usually not dense (few saplings, shrubs or herbaceous plants).

Most trees will be ≥ 50 cm dbh and some will have cavities suitable for nesting.

In southeast, prefers deciduous or mixed forest.

In north also coniferous or mixed forest (esp. old hemlock-hardwood stands).

Behavior:

Although highly-nocturnal, some birds will hunt on overcast days.

Males often temporarily vacate territory in early winter.

Extremely vocal with a strong sense of curiosity.

Submissive and unaggressive.

A sucker for a cheap imitation of its voice and is easily summoned (see end -"try this").

Maintains an exclusive home range, expels intruders, and vocalizes to advertise territoriality.

Diet:

A generalist, opportunistic feeder - depends on what is available and small enough to subdue.

Primarily mice – esp. microtines (to > 90%), small birds (to 40%), small squirrels, young opossums, young rabbits and hares, moles, shrews, bats, frogs, salamanders, small snakes, spiders, large insects (esp. beetles, katydids and saturnid moths), fish and crayfish.

Bird prey size limit (approx.) is flicker or jay.

An adult cottontail is a bit too much to handle and attempted only by owl in a dire situation.

Smaller owls (screech, saw-whet and long-eared) are sometimes preyed on by barred owls.

Adaptations & unique abilities:

Controlled experiments have demonstrated that the barred owl can locate and capture white-footed mice in total darkness (like the barn owl).

Courtship and Reproduction:

Pair bond is permanent until death of one (like most raptors).

Frequent mutual feeding and preening during courtship.

Eggs go down (WI) in early to mid-March.

Two to three eggs (rarely 4) are incubated at staggered states of development for 28-32 days.

Female assumes all incubation and early brooding (3 weeks) duties - like most raptors.

Hatching is not synchronized – one chick may be a week older (& much larger) than another.

When times are tough (few mice)...the big one may show special interest in the little one.

Surviving owlets will branch out at 4-5 weeks (sometimes “prematurely-fledge”).

Short (sustained) flight is possible at 6 weeks.

Adults continue to feed young for the duration of summer and into the early fall.

Young will continue to food-beg well into November.

Nest sites:

Needs large, standing deadwood (snags) with suitable cavities.

Deep cavities (16”-30”) are preferred. Opening diameter is > 4.5”.

Occupancy of prime sites has been documented for up to 33 years.

Most sites are less than ½ mile from a water source (lake, river or open swamp).

Sign:

Look for 2 to 3 inch castings (regurgitated pellets) of fur, feathers and small bones beneath large conifers. If no bones are present, these are probably hawk pellets.

There will be associated splashes of whitewash (mutes) directly below a suitable perch.

If mutes aren’t directly below a perch site (or there is any directional splatter) this was probably produced by a hawk.

A word of caution: If there is any reasonable doubt as to the origin of the pellet (raptor casting –vs- mammal scat) do not let children handle or dissect it. The scat of several mammals (esp. carnivores) may contain parasites and pathogens which can be dangerous to humans. Play it safe....even raptor castings should be dried and sterilized (sufficiently heated or microwaved) before use in a classroom setting.

Life Span:

Captive bird at 23 years.

Mortality & disease:

Aspergillosis (fungal pneumonia of respiratory system).

Gapeworm (respiratory tract nematodes Syngamus sp. and Cynthostoma sp.).

Hippoboscid fly* - Cyathostoma Americana

Predators of adults include great-horned owls, fishers and raccoons.

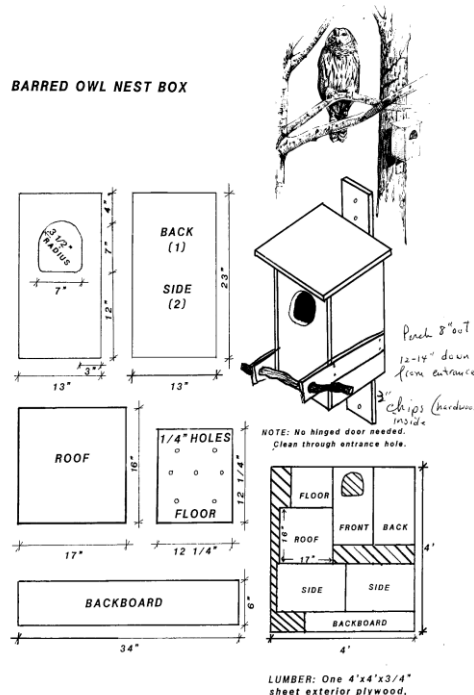
Predators of eggs and young include the above mammals, opossums and crows.

Large hawks, coyotes, foxes, bobcats & domestic cats have a brief window of opportunity to take pre-flight fledglings.

* Hippoboscids are “flattish” non-pathogenic commensal flies who feed at the base of blood quills. While not dangerous, heavy infestations may (rarely) cause anemia.

Conservation status:

Barred owls appear to be experiencing a decline in the Deep South, due to loss of swamp habitat. Elsewhere, populations seem to be stable or increasing (and expanding in Pacific Northwest). Traditionally, forest managers have culled dead and dying trees out of mature stands because snags have minimal commercial value and tend to harbor tree parasites and pathogens. This philosophy must be abandoned where forests are managed as ecological communities with multiple values or benefits. Where “clean”, intensively managed stands have a shortage of standing deadwood, managers may choose to temporarily augment a shortage of nest sites by erecting nest boxes of the proper design. In doing so, the barred owl may be solicited, habituated to, and maintained (even) in heavily developed settings. Indeed, this bird could be “urbanized” in this manner!



Human Dimensions:

Where humans and barred owls coexist, this bird will not go unnoticed for long. It commands attention with its frequent proclamations of tenure. Although often identified as a “sensitive species” which avoids settled areas, the compiler can reference several situations where barred owls have successfully nested near occupied dwellings, including one case within a residential neighborhood of a major metropolitan community. If a metropolitan or residential setting has sufficient large shade trees, an adequate prey base (rats, mice, starlings, pigeons and English sparrows) and suitable nesting sites (usually the “weak-link”)

there is no reason to assume that the owls could not prosper in such places. Although it usually does not allow close approach, in remote areas where foot traffic is frequent (boardwalks through hardwood swamps) some birds may develop a tolerance for (or habituate to) people and allow good viewing at close range.

Try this:

On a calm and overcast day position yourself in a small clearing within a “good-sized” stand (at least 30 acres) of large shade trees. Stare into the distance with “lazy eyes”, allowing your peripheral vision to “engage and scan” for of any movements.

Fill your lungs and bellow your best rendition of the classic, hailing “who cooks for you.....who cooks for you-all?”. Wait 15 seconds. Do it again.

Momentarily, you may hear the distant call of a small bird (usually a woodpecker or blue jay). This might indicate that an owl is on-the-move. Remain still, listen and watch the canopy. If nothing happens after 5 minutes, repeat the process. If - after 15 minutes (and 3 attempts) nothing happens.....go somewhere else and start over.

Sooner or later you will be pleasantly surprised. Just keep in mind that (while) this may be an enjoyable experience...it is a waste of time and energy for the owl. If you provoke a dialogue with a bird please be considerate and shut him down (approach and spook it) before you leave. Doing so may dampen its aroused state and sufficiently quiet it down....just in case there is a hungry horned owl listening nearby (see mortality and disease above).



Great Gray Owl

Strix nebulosa

(owl) (misty or foggy)

(size may be an illusion)

Vernaculars:

Gray owl, sooty owl, dark wood owl, striped owl, cinerous owl, spruce owl, spectral owl, bearded owl, Lapland owl

Description:

A large to massive, sooty, grayish-brown owl with a large head and yellow eyes.

Dense, fluffy plumage creates an illusion of great bulk – remove its feathers and this bird is actually not much larger than a (featherless) barred owl!

Face is grayish-white with distinct concentric rings of dusky-brown.
The rim of the face is dark brown passing into a white mustache on the foreneck.
A black bowtie is (below the white mustache) on the throat.
Length: 24-33 inches Wingspread: 54-60 inches Weight: 1 ½ to 3 lbs.
Plumage tends to become browner with age.

In flight:

Heron-like with slow, deep wing beats. Usually flies low and seldom glides.

Voice:

Male: a series of 5 to 10 deep, resonant, muffled (unpunctuated) 'WHOO'(s).

Notes gradually drop in frequency and decelerate towards end of series.

Female may answer with a soft, mellow "WHOO".

Calls do not carry a great distance.

[Great Gray Owl call](#)  (mp3, 381 Kb)

Range:

A Holarctic species – northern boreal forests of both hemispheres.

One North American race. Widespread N. Eurasian race.

Status:

Researchers have estimated a North American population of 20,000 to 100,000 birds with similar numbers in Europe and Asia. (Nero estimated 50,000).

Wisconsin: Peripheral. Rare, irruptive winter resident in northwest. A nest platform at Clam Lake (Ashland Co.) fledged 4 young on May 14, 1988.

Minnesota: Peripheral. Uncommon to local breeder in extreme north central and northeast.

Density and Home range:

More southerly populations are more sedentary (more diverse diet) and occupy smaller home ranges (< 5 mi across).

In good habitat breeding density may reach 5 pairs/square mile.

Ecological equivalent:

Ural owl (Europe and N. Asia)

Habitat:

Muskeg - a mix of dense coniferous forest, adjacent meadows and bogs.

In far north, selects for bogs, clearings and recent burns in coniferous stands.

Breeding habitat included tamarack forests (Manitoba), tamarack/black spruce stands (Saskatchewan), black ash/basswood (Minnesota) and balsam poplar/white spruce stands in Alaska.

Behavior:

Hunts by listening and watching patiently from an elevated perch (hunting post).

Hunts day and night but is especially crepuscular (twilight-active).
Not particularly timid towards humans (aloof) and often allows close approach.
Sometimes courses low over open areas (like a harrier or short-eared owl).
Does not often move more than short distances between perches.

Diet:

Primarily forest microtine voles (90%) and pocket gophers (esp. in the West).
Also red squirrels, flying squirrels, young rabbits and hares, small birds, weasels and (rarely) frogs.
Sometimes a duck or grouse.
May consume 1/3 its weight per day during winter.

Adaptations and unique abilities:

Especially-large facial disk* enables hunting by sound alone.
Detects mice beneath snow pack and “snow-plunges” to access them.

* Functions as an oversized, directional, acoustical parabola (microphone dish).

Nest site:

Often an old goshawk, raven or osprey nest.
Sometimes the broken top of a large snag or stump.
Rarely on the ground (Europe).
Same site may be used for several consecutive years.
Classic location is often on a small, forested upland (knoll) within a large spruce or tamarack bog.

Courtship and reproduction:

May not breed during years when prey is scarce.
Sexual maturity at 3 years.
Male feeds female during courtship. Frequent mutual preening.
Two to five eggs (rarely 9) are incubated by female for 28 to 36 days.
Young are brooded by female for 2-3 weeks.
Male does all of the hunting during incubation and brood period.
When food deliveries are few, female may “starve herself” in order to feed chicks.
She may lose 30% of her weight in a single month during such times.
Result is high success rate (70-80%) for fledging young (per occupied site).
Young become “branchers” at 3-4 weeks, fledge (leave nest) at 5 -6 weeks & fly at 7-8 weeks.
Although off the nest and flightless for a good week, they are excellent climbers.
Young are tended by female until 4-5 months old, but.....sometimes she “takes some time off” after the young fledge - leaving the male to provide for them for up to 3 months.

Movements:

Normally considered a sedentary species with only minor movements between seasons.
Periodically (3-5 year intervals) populations may erupt with large movements south to U.S.
Major Irruption movement (Great Lakes Region) during winter of 1968-1969.

Last major eruption was winter of 2004-2005 (1700 birds recorded in MN).
Northern populations appear to be highly (or semi) nomadic.
Irruptions are synchronized with low prey availability (4-yr vole cycle).
Exodus follows vole population crash and is not related to snow cover.
Adult females typically disperse farther south than males.

Life span:

Band recovery of 13 year old bird.
Record of 27 years and report of 40 years in captivity.

Mortality and disease:

Approx. 30% of fledglings are killed by horned owls, raccoons, fishers, foxes, or starve.
Parasitic* Hippoboscids fly- usually non-pathogenic commensal but may cause anemia.
Gapeworms (2 sp.)- Parasitic nematodes that infect the respiratory tract.
Aspergillosis – a lethal fungal pneumonia which infects the lungs and air sacs.

*Some parasites normally occur in all raptors (without killing them), however even subclinical infections may affect raptor population dynamics by impairing behavior, hunting performance and reproductive success.

Conservation status:

Although a low density bird, not presently (2010) considered threatened or at risk.
Population appears to be stable but fluctuates with prey abundance cycles.
Risks include deforestation, development, automobiles, shooting, electrocution, and pocket gopher poisoning.

Best sites to observe this bird:

Sax-Zim Bog area – Aitkin Co., MN (south of Eveleth) December through February.
No consistent sites have been reported for Wisconsin.

Human dimensions:

Given the remoteness of this bird's domain, it is probable that most owls rarely (if ever) encounter humans. As a result, they probably do not perceive us as a threat. This situational behavioral "flaw" may ultimately become a factor to consider as human populations expand into undeveloped areas.

For now the outlook is good.