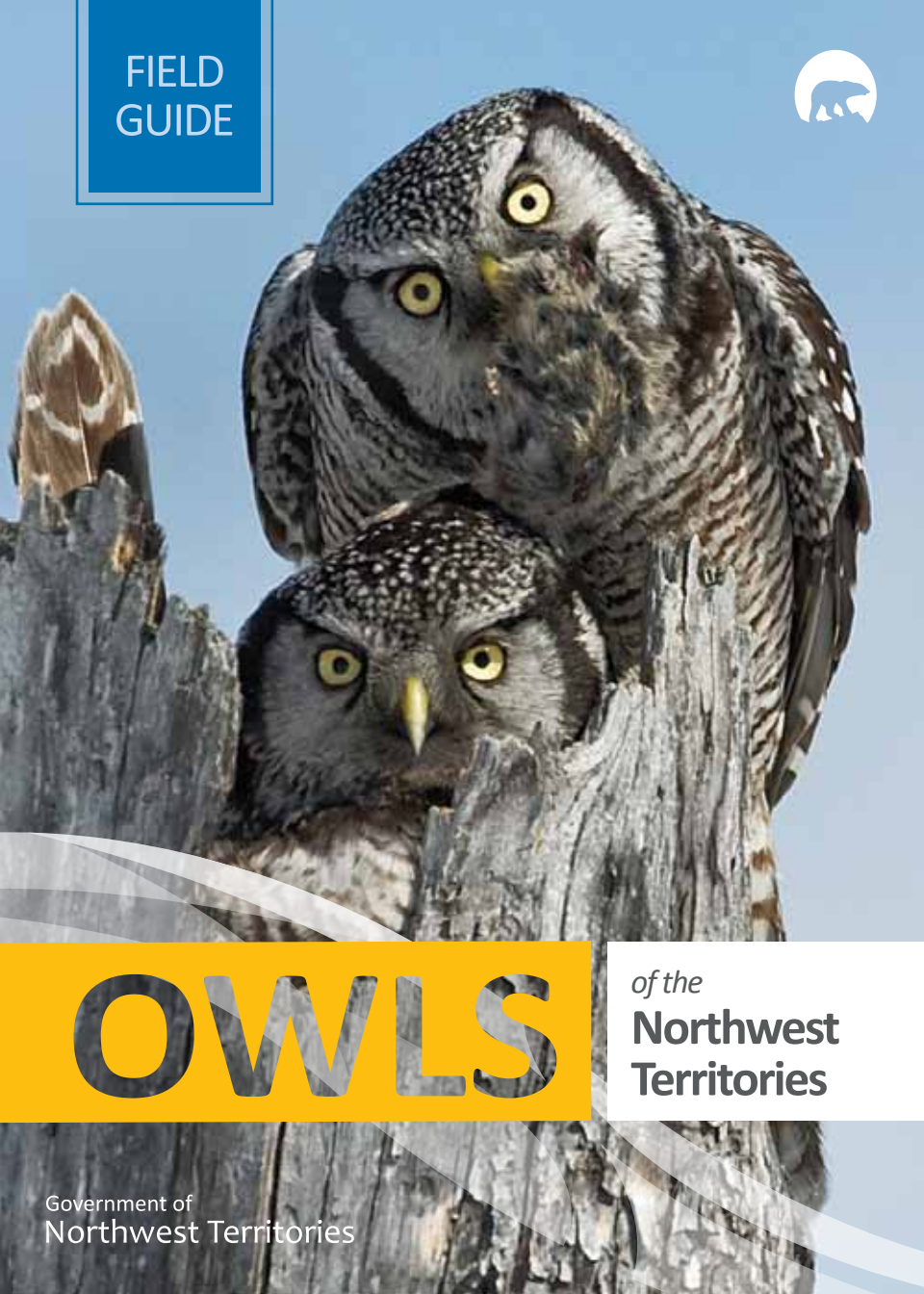


FIELD
GUIDE



OWLS

of the
**Northwest
Territories**

Government of
Northwest Territories

This identification guide includes all species of owls known to be present in the Northwest Territories.

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Maps were created for this project by GNWT based on data from GBIF downloaded in December 2019 and were drafted based on Ecoregions Level IV as defined by the NWT Ecosystem Classification System (<https://www.enr.gov.nt.ca/en/services/ecosystem-classification>).

All photos provided by Gordon Court.

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Northwest Territories Owl Species Checklist

All the owl species found in NWT are in the Order Strigiformes and in the Family Strigidae and include:

- **Boreal Owl** (*Aegolius funereus*)
- **Short-eared Owl** (*Asio flammeus*) **SPECIES AT RISK**
- **Long-eared Owl** (*Asio otus*)
- **Snowy Owl** (*Bubo scandiacus*)
- **Great Horned Owl** (*Bubo virginianus*)
- **Great Gray Owl** (*Strix nebulosa*)
- **Barred Owl** (*Strix varia*)
- **Northern Hawk Owl** (*Surnia ulula*)

Owls in the NWT

Owls are quite distinct from other birds due to their large heads and forward facing eyes set in a round or oval facial disk. Some owls prefer to live within or on the edges of forests and woodlands while others occur in open habitats such as tundra, grasslands, and marshes. Habitats in the NWT support eight species of owls. They are well camouflaged and most are active at night making it both challenging but rewarding to find them. This identification guide will help you find and enjoy watching these remarkable birds of prey.

Where to Find Them

Owls are occasionally a common sight in many places around the NWT, especially in years when they have lots of available prey. Some species live in NWT year-round while others migrate south every winter and return in the spring. The number of owls that nest in an area can also change from year to year depending on cyclic changes in their prey populations. The maps in this booklet show where owl species have been recorded in the past.

How to Become a Better Owl

Viewing Tips

Learning about owls and their behaviours and habitats is a fun part of becoming a skilled owl watcher. Being patient and getting to know the area you are in will help you find them. Owls have excellent hearing and eyesight and are easily startled by sudden movements and loud noises. Once you locate an owl, avoid direct eye contact and move slowly and quietly.

Owls are best seen during dawn or dusk when they are more active and easily spotted. When you locate an owl use binoculars, a spotting scope, or camera to get a closer look without disturbing the bird.

Sometimes it is easier to first locate owls by the behaviour of other birds. Watch and listen to birds in the area you are in. Smaller birds and especially crows often flock together around and direct their loud alarm calls towards a roosting owl, a behaviour called mobbing, to drive the owl away from the area. This behaviour can direct you to where the owl is perching.

Learning to distinguish the distinct characteristic calls or songs of owls is easy by listening to recordings (see Helpful Resources). Some owl calls can be heard from up to three-five kms. Cup your hands behind your ears to help hear owl calls.

Wear quiet clothing such as cotton, wool or leather; some nylon or other clothing is noisy, especially in cold weather, when you walk or move. Use clothing that blends into your surroundings such as white camouflage in winter or dark camouflage in summer. Avoid clothing with noisy or flashy metal fasteners or reflective material.

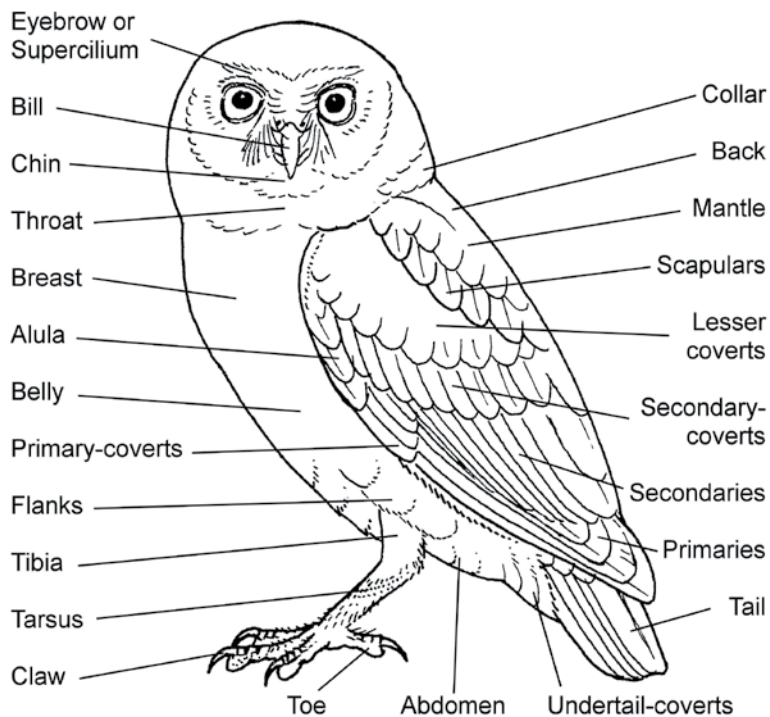
Owling Etiquette

When out owling, be courteous to other people who are looking at wildlife. If an owl is on a nest give them plenty of space and avoid exposing the nest to predators by sight if the owls flush or by leaving your scent for mammalian predators to follow to the nest. If you are watching or taking photos during the day, remember that this is when some owl species are resting. If you are watching or taking photos at night keep in mind that this is when many owls are hunting. Please be mindful of your actions. Remember that the *NWT Wildlife Act* protects all owls from significant or unnecessary disturbance, and you are not allowed to feed or bait owls.

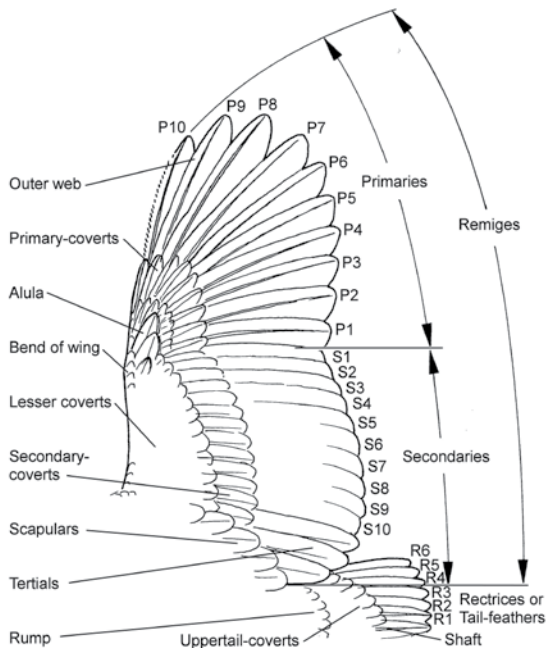
Owling Equipment

- Using the right equipment can help you see and identify owls.
- Choose binoculars with large diameter objective lenses that allow more light in. This will allow the owl's details to be seen more clearly at dusk or dawn.
- A digital camera with a zoom lens can record owl images and reveal details right after you take the picture and you can later share them with others, including owl experts, to help identify what you saw. Such cameras allow the owl to be observed from a respectful distance without disturbing the bird.
- Choose a field guide that contains both perched and flight photos or illustrations of owls for comparison. Owls have unique postures and body shapes and a good field guides will note these helpful characteristics used to identify owls.

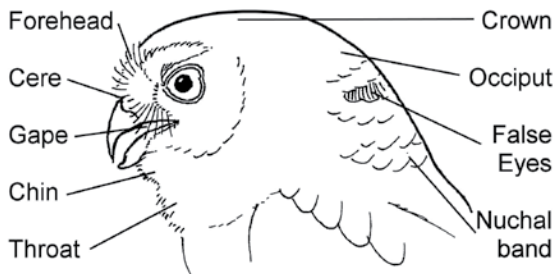
Owl Anatomy



Parts of a typical owl - in this case from the genus *Athene*



Wing and tail shown from the upperside



Side view - not all species have false eyes

How to Identify Owls

Most owl species are typically nocturnal. Activity patterns change with the seasons and vary from one owl species to another (see Species Information).

Most owls vocalize at low frequencies so their territorial songs and calls can be heard at long distances. Becoming familiar with these songs will help in identification of the owl.

To help identify different owl species in the field, note the following:

- Does the owl have feathered ear-like tufts or not?
- What is its eye and bill colour?
- Does it have any distinctive markings such as spots, streaks or barring on its head and body?
- What colours are the feathers on its facial disk, wings and body?
- Is the owl small, medium or large? What is its size compared to other more common birds that you are familiar with?
- How large and wide is the owl's facial disk, especially relative to its body?
- How long is the owl's tail, especially relative to the tips of the folded wings?
- What is the habitat where you saw or heard the owl?

Identifying owls takes both patience and practice. With the right equipment and knowledge, owling can be rewarding. Contributing your sightings and records can help us better understand owls and their status in the NWT.

Owls are masters at avoiding detection. They often roost or perch in trees among dense branches or leaves, or in vegetation on the ground, depending on the species, to hide from predators. Their camouflaged feathers help them blend into their surroundings. Finding them is both a challenging and rewarding activity for bird watchers and biologists alike.

Report your Sightings

Please report your owl and other bird species sightings to e-bird (<https://ebird.org/canada/home>).

You can also load your owl or any wildlife photographs on iNaturalist.ca, where other enthusiasts will be able to assist you in confirming the species you have observed.

Report any new species, or new range extensions by sending a photograph to wildlifeobs@gov.nt.ca or even share it on the Facebook group "NWT Species".

Detailed instructions on how to photograph and record sightings of owls are available by also contacting us at wildlifeobs@gov.nt.ca.

How to Use This Guide

Species Accounts

Each of the following eight owl species accounts includes information on:

- Common name, species scientific name
- **Species at Risk** status (if applicable)
- Range map in the NWT
- Body size – on average, female owls are larger than males for a given species; the lower value of the given measurement ranges are for males and the larger values for females
- Traits
- Behaviour
- Diet
- Habitat
- Breeding periods in the NWT
- Similar species

Threats to Owls

Owls face a wide range of threats as they go about their daily activities, including the following.

- Many owls fly low over roadways while hunting or they may catch their prey at the side of the roads which makes them vulnerable to being hit by passing vehicles. Because many owls hunt at night, a driver may not see the bird in time to safely avoid a collision.
- Some owls hunt while flying over open fields and can become entangled in fence wire or netting causing damage to feathers, strangulation, broken bones or other injuries resulting in starvation.
- Poisons eaten by small mammals can remain in their bodies and also poison owls that eat them. Herbicides that contaminate mice can also hurt the owls that eat them if the toxins accumulate in the owls' bodies to lethal levels, resulting in debilitation and death.
- In some areas, human activities that damage or destroy the nesting and hunting habitat that owls and their prey depend on can significantly impact owl populations.
- Well-meaning birders may inadvertently impact owls if they disturb roosting or resting owls by day. Being too close to owls or their nests can stress them or disrupt their activities, including preening or caring for chicks. This can be avoided by using binoculars or cameras with a zoom lens to observe owls from a respectful distance. **For advice on how to tell if an owl is stressed by your presence see link to Respectful Observation in Helpful Resources.**

Conservation of Owls

In the NWT, the *Wildlife Act* protects owl habitat, nesting sites, eggs and individual birds. Owls are particularly vulnerable to disturbance while hunting and nesting. Remember, owl nesting sites are protected by law, even in winter.

Owls as predators play an important role in the ecosystem, recycling nutrients and altering the local impacts of birds and cyclic populations of small mammal such as lemmings, squirrels and hares.

Across Canada, there are programs to maintain healthy owl populations and to recover those that are declining. In extreme cases, captive breeding programs have aided in recovery of some endangered owl populations such as the spotted owl in BC and the burrowing owl in the prairies. Critical to the conservation of owls are national and international efforts to monitor populations through citizen science, such as the Christmas Bird Count and Nocturnal Owl Surveys

It is important to note that owls do not make their own nests. Rather they use existing structures they find, such as stick nests made by other birds such as magpies, crows, ravens, hawks and herons. Some smaller and medium sized owls use woodpecker or natural cavities in trees. Some owls nest on cliffs or on the ground. Artificial nests structures such as platforms or nest boxes can be constructed and placed for owls to use and can be an interesting way to observe them.

Species Information



Boreal Owl

(Aegolius funereus)

BODY SIZE

(Males-females range):

Weight: 93-215 grams

Body length: 21-28 cm

Wing span: 55-62 cm

TRAITS

Small body with a large square head and yellow eyes.

BEHAVIOUR

The male courtship song is said to be ventriloquistic, making it hard to locate. Its song sounds like a monotone version of the aerial courtship display of the male Wilson's snipe; a "winnowing" noise made by the passing of air over its vibrating tail feathers. During cold winter weather boreal owls sometimes show up at bird feeders searching for bird and mammal prey attracted to the bird seed.

DIET

Insects, birds and small mammals. Usually hunts at night; sit-and-wait predator that hunts from exposed perches such as tree limbs.

HABITAT

Boreal owls can be found in stands of spruce, tamarack, aspen, poplar and birch.

NEST

Uses cavities created by woodpeckers or natural holes in trees. Boreal owls will also use nesting boxes for roosting and breeding.

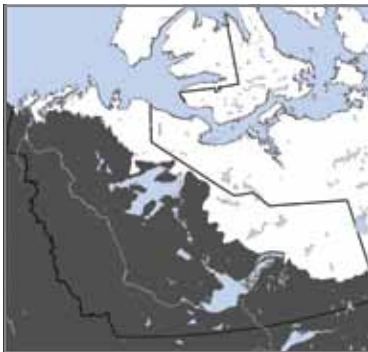
BREEDING PERIOD IN THE NWT

Needs more research. Elsewhere breeds from late March to June, possibly into July.

SIMILAR SPECIES

Much smaller than the more diurnal or daytime hunting northern hawk owl. The boreal owl is usually nocturnal and roosts by day hidden in dense leaves and branches. Also distinguished by the boreal owl's streaky underparts and very short tail.

HABITAT (DARK GREY AREA)





Short-eared Owl

(Asio flammeus)

BODY SIZE

(Males-females range):

Weight: 206-475 grams

Body length: 34-43 cm

Wing span: 33-41 cm

TRAITS

Medium-sized owl with very small feathered ear-like tufts; round beige facial disk. Its folded wings extend beyond the tail. In flight the underside of the wings have crescent-shaped dark markings on the wrists and wing tips. Adults have a brown back and creamy-buff chest with brown to rufous streaks.

BEHAVIOUR

Males conduct dramatic, undulating spring courtship flights high above a female perched on the ground or on a low bush in open habitat. When diving down toward the female, the male rapidly strikes its wings under its body producing a staccato clapping noise.

DIET

Small mammals and occasionally small birds.

HABITAT

Prefers open habitats such as marshes, grasslands and tundra throughout the NWT.

NEST

Trampled grass forms a cup-shaped nest on the ground, lined with a few downy breast feathers shed by the female just prior to egg laying when the brood patch is formed.

BREEDING PERIOD IN THE NWT

March until early-June.

SIMILAR SPECIES

Similar to the slightly smaller long-eared owl; has tiny feathered ear tufts that are often difficult to see and is heavily streaked overall with dark eye patches.

HABITAT (DARK GREY AREA)





Long-eared Owl

(Asio otus)

BODY SIZE

(Males-females range):

Weight: 220-435 grams

Body length: 35-40 cm

Wing span: 90-100 cm

TRAITS

Medium-sized owl with long feathered ear-like tufts that are relatively close together and that typically point straight up when the bird is relaxed. It has a rusty orange facial disk.

BEHAVIOUR

Often hunts while flying low over open habitat like the short-eared owl but also hunts from perches in patchy forests. Male performs a slow burst of one or more wing claps during courtship while flying near a perched female. Migrates south in winter as it cannot tolerate temperatures below -15 Celsius for long periods of time.

DIET

Birds and small mammals.

HABITAT

Open spruce, pine, tamarack, and aspen forests interspersed with dense vegetation and clearings.

NEST

Uses abandoned stick nests made by magpies, crows or other birds. Rarely nests in a tree cavity or on the ground.

BREEDING PERIOD IN THE NWT

Late March until July, earlier further south in its range.

SIMILAR SPECIES

Looks similar to the slightly larger short-eared owl but is distinguished by its long-feathered ear-like tufts and occupies more forested habitats. Its feathered ear-like tufts are relatively closer together than those of the much larger great horned owl.

HABITAT (DARK GREY AREA):





Snowy Owl

(Bubo scandiacus)

BODY SIZE

(Males-females range):

Weight: 1,600-2,950 grams

Body length: 52-71 cm

Wing span: 126-145 cm

TRAITS

Relatively small head and facial disk with yellow eyes. Feathers on its head and body vary from almost pure white (mature males) to white with light to heavy dark brown flecking (juveniles and adult females). Heavily white feathered legs and feet with long strong black talons.

BEHAVIOUR

Some snowy owls are long-distant migrants, venturing 100's to 1,000's of km south in winter while others remain in the Arctic year-round. Young flightless snowy owls sometimes swim, using their wings to row across creeks and ponds to avoid predators.

DIET

A variety of small to large birds and mammals including ptarmigan, ducks and herons to voles, lemmings and hares.

HABITAT

Tundra and other treeless, wide-open habitats.

NEST

Windswept rises on the tundra that are dry and blown free of snow.

BREEDING PERIOD IN THE NWT

Mid-May to September.

SIMILAR SPECIES

White-phase gyrfalcons may appear like snowy owls at a distance but are slimmer with dramatically smaller heads. Gyrfalcons often nest on cliffs whereas snowy owls nest on raised mounds on the ground.

HABITAT (DARK GREY AREA)





Great Horned Owl

(Bubo virginianus)

BODY SIZE

(Males-females range):

Weight: 910-2,500 grams

Body length: 46-63 cm

Wing span: 101-145 cm

TRAITS

Long, widespread feathered ear-like tufts and large yellow eyes set in a relatively small facial disk; wide and somewhat pointed wings. There is considerable variation in head and body feather colour, from whiteish to patterned dark brown or grey-brown.

BEHAVIOUR

The smaller male great horned owl has a lower pitched series of hoots distinguishable from that uttered by the larger female. A pair will often hoot back and forth on their year-round territory and can be heard from three to five km away.

DIET

Insects, fish, amphibians, reptiles, birds and small mammals, especially grouse and hares.

HABITAT

Forests and semi-open wooded habitats interspersed with grasslands and marshes.

NEST

Uses stick nests built by other large birds, large tree cavities, on cliffs and in river cut banks, and rarely on the ground.

BREEDING PERIOD IN THE NWT

Late February to late April.

SIMILAR SPECIES

Its feathered ear-like tufts, while not always visible, and relatively small facial disk and head distinguish it from the larger great gray owl and smaller barred owl; the latter has dark brown eyes.

HABITAT (DARK GREY AREA)





Great Gray Owl

(*Strix nebulosa*)

BODY SIZE

(Males-females range):

Weight: 800-1,700 grams

Body length: 61-84 cm

Wing span: 140-150 cm

TRAITS

Large, rounded and broad wings, long tail and a large facial disc with grey or brown concentric rings on a white background. Its head and body feathers are dark grey which fade to brown due to exposure to the sun. Great greys are the tallest owls found in NWT. Two pale arcs form an “x” between the eyes.

BEHAVIOUR

Using its enormous facial disk and asymmetrical ears, the great gray owl can locate unseen small mammal prey by sound under earth, grass, or snow cover up to 45 cm thick. It is so efficient at locating hidden prey that it is one of the few animals that gets fatter over harsh winter months.

DIET

Almost exclusively eats small rodents such as voles, less frequently shrews, mice and rarely small birds or frogs.

HABITAT

Mature forests interspersed and adjacent to small meadows, fens and other openings.

NEST

Uses stick nests built by ravens and hawks, broken-topped tree snags, and rarely on the ground on sphagnum moss in stunted treed muskeg.

BREEDING PERIOD IN THE NWT

Needs further study in NWT but elsewhere is Mid-May to July.

SIMILAR SPECIES

Similar silhouette to the smaller, brown eyed barred owl but has a larger head and facial disk, a relatively longer tail and yellow eyes. It lacks the feathered ear-like tufts of the great horned owl. Unlike these two owl species, the great gray owl regularly hunts in daylight.

HABITAT (DARK GREY AREA)





Barred Owl

(*Strix varia*)

BODY SIZE

(Males-females range):

Weight: 470-1,050 grams

Body length: 43-50 cm

Wing span: 99-110 cm

TRAITS

A round head without feathered ear-like tufts, brown eyes, horizontal dark brown and white barring on the throat with vertically striped feathers on the breast.

BEHAVIOUR

Its courtship vocalizations include caterwauling exchanges between a pair that sound like maniacal laughter, whistle-like screams by territorial females, and an eight-note territorial song sounding like "Who cooks for you? Who cooks for you all?". No wonder this owl is sometimes called the monkey owl.

DIET

Insects, fish, amphibians, reptiles, birds and mammals.

HABITAT

Mixed forests with at least some large diameter trees, often near water.

NEST

Most commonly uses large tree cavities, the tops of rotted out tree snags, and rarely stick nests built by other birds.

BREEDING PERIOD IN THE NWT

Needs research but likely from late March to early July in NWT.

SIMILAR SPECIES

The barred owl is similar to the much larger great grey owl but has dark brown eyes and a smaller facial disk and a shorter tail.

HABITAT (DARK GREY AREA)





Northern Hawk Owl

(Surnia ulula)

BODY SIZE

(Males-females range):

Weight: 240-454 grams

Body length: 36-45 cm

Wing span: 71 cm

TRAITS

Medium-sized owl with yellow eyes set in a small facial disk with a black border on either side. It has a round head with long pointed wings and a long tail. Upper feathers are brown with white spots and it has brown to reddish horizontal barring across its underparts.

BEHAVIOUR

If prey is plentiful, and if it catches more than it can eat at the time, it will cache or hide surplus prey in trees or on the ground, sometimes pushing snow over its prey with its bill to bury it. Other birds, like the northern shrike or the gray jay, will watch where the northern hawk owl hides its prey and then try to steal it.

DIET

Mainly small mammals, juvenile hares and rarely birds as large as grouse and ducks.

HABITAT

Open forests interspersed with open habitats such as recent burns, cut over areas or fens.

NEST

Uses rotted out broken treetops or large tree cavities such as those made by pileated woodpeckers. Will also use artificial nest boxes.

BREEDING PERIOD IN THE NWT

Late March through July or August.

SIMILAR SPECIES

Somewhat similar to the more nocturnal and cryptic boreal owl but is much larger, is diurnal, and has a whitish face and a long tapered tail.

HABITAT (DARK GREY AREA)



Information Sheet

For more information please contact:

Government of the Northwest Territories

Environment and Natural Resources

Wildlife Division

Web: www.enr.gov.nt.ca

E-mail: wildlifeobs@gov.nt.ca

Species at Risk

Government of the Northwest Territories

Environment and Natural Resources

Species at Risk

www.nwt-speciesatrisk.ca

Phone: (855) 783-4301

E-mail: sara@gov.nt.ca

Owl Resources:

- www.enr.gov.nt.ca/en/services/birds-prey
- www.nwt-speciesatrisk.ca
- www.allaboutbirds.org
- <https://birdsna.org>

Helpful Resources:

- www.ebird.org
- www.iNaturalist.ca
- www.ornithologi.com/2016/02/24/the-new-raptor-id-app
- <https://www.owlpages.com/owls>
- A link to information on determining if an owl is stressed or not by your presence: https://www.internationalowlcenter.org/respectful_observation.html
- Britton, D, E. Cameron, D. Tate, R. Pankratz and S. Carriere. 2019. Annotated Checklist of the Birds of the Northwest Territories. Draft report available from wildlifeobs@gov.nt.ca.
- Body sizes are from: www.allaboutbirds.org.
- Christmas Bird Count: <https://www.audubon.org/conservation/science/christmas-bird-count>
- Nocturnal Owl Survey: <https://www.birdscanada.org/volunteer/natowls>



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