

BBCS Volunteer Bird Call Surveys

The Basics: What is a Bird Call Survey?

A bird call survey is a method for determining the presence of the various species of birds in an area based on the detection of their songs and calls. Bird call surveys, also known as “point counts”, are usually conducted over a fixed amount of time (usually ~15 minutes) in which a surveyor stays in a fixed location and records every species they can hear during that time period. Identifying species by their songs can be difficult and often requires a high level of experience. However, with the aid of modern technology, identifying birds by their calls can be assisted by phone applications such as Merlin, which enables us to recruit volunteers like you without needing you to memorize dozens (or even *hundreds!*) of unique bird calls.

Why Are Bird Call Surveys important?

Conducting call surveys enables us to find out which species of birds make Burns Bog their home. At the most basic level, hearing a bird call helps us determine if a species is detected or not detected, which helps us determine if there are any endangered or particularly sensitive species present within Burns Bog. Bird call surveys can also provide us with information on the relative population sizes for each species we hear using what is called a “population index”. This isn’t the same thing as knowing the size of the entire population (we would need to count every single bird in the bog to know that!) but if we collect data over several years then a population index enables us to track whether a population is shrinking or growing over time. This ultimately allows us to determine which species might be affected by things like urban development and might need to be a higher conservation and management priority.

Survey steps:

1. Conduct all surveys within the three hours following sunrise. Ensure to account for the time needed for each survey, and travel time between sites, when setting start time.
2. Upon arriving at site, record environmental data. Describe wind level, precipitation, and temperature. If conditions include: a) a moderate breeze (leaves consistently rustling), b) moderate to heavy precipitation, or c) temperatures below 7 degrees celsius, reschedule survey for another date.
3. Wait at least 3 minutes at each site, before conducting a survey. Open up the Merlin Bird ID app.
4. Set timer for 15 minutes, and press record on app/recording device.
5. Record data on calls. Include species, approximate distance (up to 50m), and time it was recorded.

IDENTIFICATION GUIDE: Birds of Burns Bog

Passeriformes

Bohemian Waxwing

Bombycilla garrulus



© Kyle Tansley (via iNaturalist)

Brown Creeper

Certhia americana



© Neil DeMaster (via iNaturalist)

Cassin's Vireo

Vireo cassinii



© Bridget Spencer (via iNaturalist)

Description: Gray body with chestnut-colored face and a yellow band on the tip of the tail

Length: 19-23 cm

Wingspan: 32-35 cm

IUCN status: Least concern

Call(s): high-pitched, rapid trill

Fun Fact: The name "waxwing" comes from the red waxy tips of their secondary feathers

Description: Dark-brown back streaked with white, underside is white with red brown. Tail feathers are long and stiff.

Length: 12 -13.5 cm

Wingspan: 17-20 cm

IUCN status: Least concern

Call(s): Males sing a short song of high thin notes lasting ~1.5 seconds. Both males and females make short calls consisting of high wavering notes

Fun Fact: their curved bill enables them to probe loose bark to find insects underneath

Description: Gray head and back with white underparts and white bars on wings. Flanks have a slight yellow coloration

Length: 11-14 cm

Wingspan: 24 cm

IUCN status: Least concern

Call(s): Males sing a song that consists of ascending and descending notes. Other calls include a raspy alarm call described as sounding like "cha-cha-cha-cha"

Cedar Waxwing
Bombycilla cedrorum



© James St. John (via iNaturalist)

Hutton's Vireo
Vireo huttoni



© John D Reynolds (via iNaturalist)

Olive-sided Flycatcher
Contopus cooperi



© Adrianh Martínez Orozco (via iNaturalist)

Description: A combination of shiny brown, gray, and yellow feathers, with a small crest on the head and a black mask around the eyes

Length: 15-18 cm

Wingspan: 22-30 cm

IUCN status: Least concern

Call(s): two common calls; a high-pitched “bzeeee” and a sighing whistle that lasts for less than a second

Fun Fact: One of the few North American birds that specializes in eating fruit

Description: Olive-gray color with faint white eye rings

Length: 12-13 cm

Wingspan: 20 cm

IUCN status: Least concern

Call(s): descending “zo-zoo” sound repeated for up to 10 minutes at a time

Fun Fact: one of the few North American songbirds that does not migrate

Description: Dark gray head and wings with a pale olive or white underside

Length: 18-20 cm

Wingspan: 31-34 cm

IUCN status: Near threatened

Call(s): Males whistle a quick song that has been described as sounding like “quick, three beers!”. Both sexes produce a sharp “pip-pip-pip” call

Fun Fact: Olive-sided flycatchers have the longest migration of any species of Flycatcher: up to 11,000km!

Oregon Vesper Sparrow (unconfirmed)

Poocetes gramineus affinis



© Stephanie Stragier (via iNaturalist)

Pacific Wren

Troglodytes pacificus



© Donna Pomeroy (via iNaturalist)

Purple Martin

Progne subis



© Bill Carrell (via iNaturalist)

Description: Brown birds with cream-colored abdomens, white tail feathers, white eye rings, and pink feet

Length: 13-16 cm

Wingspan: 25.4 cm

Call(s): song consists of 1-4 whistles followed by a trill. Most often sing in the morning, but will sometimes sing after sunset as well

COSEWIC status: Endangered

Fun Fact: This subspecies is smaller and shorter than most other Vesper Sparrows

Description: Body is small, round, and has a short thin tail. Brown coloration with black barring on wings and a pale line above eyes

Length: 8-12 cm

Wingspan: 12-16 cm

IUCN status: Least concern

Call(s): Series of trilling, staccato notes lasting for 5-10 seconds

Fun Fact: Males will build multiple nests within their territory, and females will choose which one she prefers during courtship

Description: Males are a shiny, deep purple on their body and black on their wings. Females are gray or gray-blue with dark colored wings

Length: 19-20 cm

Wingspan: 39-41 cm

IUCN status: Least concern

COSEWIC status: Special concern

Call(s): boisterous, throaty chirps. Males sing the loudest before dawn

Song Sparrow

Melospiza melodia



© Cephas (via iNaturalist)

Streaked Horned Lark

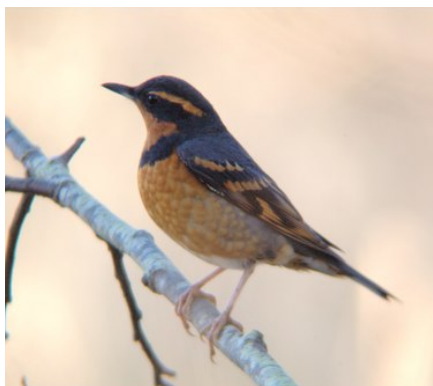
Eremophila alpestris strigata



© Patricia Teague (via iNaturalist)

Varied Thrush

Ixoreus naevius



© Pete (iNaturalist)

Description: Brown and white body with streaks on breast and face.

Length: 12-17 cm

Wingspan: 7.1-9.4 cm

IUCN status: Least concern

Call(s): a loud song consisting of 4-6 phrases and ending in a trill. Other calls include simple, short chirps.

Fun Fact: Song sparrows lay 2+ clutches of eggs within a single breeding season

Description: Pair of thin black feather tufts on the top of the head. Face is usually yellow with a black stripe covering the eyes, while the body is brown and the tail is black

Length: 18-20 cm

Wingspan: 31-35 cm

COSEWIC status: Endangered

Call(s): produces a delicate musical song consisting of high-pitched "tinkling" notes

Not-fun fact: this endangered subspecies likely no longer has any populations within B.C. due to habitat degradation

Description: Dark blue-gray with burnt-orange underside and orange line above the eye.

Length: 19-26 cm

Wingspan: 34-38 cm

IUCN status: Least concern

Call(s): Males sing a single whistled note that lasts for ~2 seconds, followed by 3-20 seconds of silence, then repeated. This song may last for up to 15 minutes.

Wilson's Warbler

Cardellina pusilla



© Adrianh Martínez Orozco (via iNaturalist)

Subcategory: Family Corvidae

American Crow

Corvus brachyrhynchos



© Gordon Leggett (via iNaturalist)

Common Raven

Corvus corax



© arbyreed (via iNaturalist)

Description: Small-bodied, bright yellow with a black cap on the top of the head.

Length: 10-12 cm

Wingspan: 14-17 cm

IUCN status: Least concern

Call(s): String of fast notes that drop in pitch at the end. Songs last for ~5 minutes with 2 seconds in between each string of notes.

Fun Fact: Western populations tend to be brighter yellow than Eastern populations

Description: Large all-black bird with a heavy straight bill. They have a short tail that is rounded or square at the end.

Length: 40-53 cm

Wingspan: 85-100 cm

IUCN status: Least concern

Call(s): A series of loud caws, sometimes with coos, rattles, and/or clicks mixed in.

Fun Fact: Crows have over 20 different calls

Description: Large all-black bird with a thick, slightly curved bill, shaggy feathers around the throat, and a spade-shaped tail.

Length: 56- 69 cm

Wingspan: 116-118 cm

IUCN status: Least concern

Call(s): Many different calls, ranging from croaks, shrill calls, and deep rasping sounds.

Fun Fact: Ravens can mimic the calls of other bird species

Piciformes

Downy Woodpecker

Picoides pubescens



© Bill Keim (via iNaturalist)

Northern Flicker

Colaptes auratus



© Kala Murphy King (via iNaturalist)

Pileated Woodpecker

Dryocopus pileatus



© Denis Doucet (via iNaturalist)

Description: White underparts, with black wings and head that feature white spots, white stripes, and a red nape.

Length: 14-17 cm

Wingspan: 9.8-11.8 cm

IUCN status: Least concern

Call(s): Males and females both produced a call consisting of hoarse, high-pitched notes. They also give a sharp “*pik*” note that is repeated several times.

Fun Fact: During the winter they will form flocks with other species

Description: Brownish overall with black spots and bars throughout. The underside of the tail and wings may be red or yellow. Western populations do not feature a red nape.

Length: 28-31 cm

Wingspan: 42-51 cm

IUCN status: Least concern

Call(s): A loud rolling rattle that varies in volume over 7-8 seconds. Also make a loud, single-note call often described as a “*kyeer*” sound

Description: Large-bodied woodpecker with a long neck. Mostly black with white stripes on the face and neck and a bright red crest. Males also have a red stripe on their cheek.

Length: 40-49 cm

Wingspan: 66-75 cm

IUCN status: Least concern

Call(s): High, clear series of piping calls that lasts for several seconds. Also give a shorter call with a “*wuk-wuk*” sound

Fun Fact: Pairs will stay within their territory year-round.

Red-breasted Sapsucker

Sphyrapicus ruber



© Doug Greenberg (iNaturalist)

Charadriiformes

Caspian Tern

Sterna caspia/Hydroprogne caspia



© Frans Vandewalle (via iNaturalist)

Solitary Sandpiper

Tringa solitaria



© Robin Gwen Agarwal (via iNaturalist)

Description: Red head and breast, with a mottled black and white back. Underside is white with dark streaks and pale yellow on the belly.

Length: 20-22 cm

Wingspan: 37-40 cm

IUCN status: Least concern

Call(s): Raspy chatter and a harsh squealing “weep”

Fun Fact: The sapwells that are drilled by this species are also used opportunistically by Rufous Hummingbirds

Description: Bright, coral-red bill, full black cap on head, and white-gray body

Length: 47-54 cm

Wingspan: 126-128 cm

IUCN status: Least concern

Call(s): Several distinct calls, but most frequently produces a loud, gravelly, rolling “rrrrraeu”

Fun Fact: This is largest species of tern

Description: Brown body with small lighter brown dots, a gray-brown head, white belly, and long thin straight bill

Length: 19-23 cm

Wingspan: 55-57 cm

IUCN status: Least concern

Call(s): Short, high-pitched whistles or a sharp “wheet-wheet”

Least Sandpiper

Calidris minutilla



© Jen Megyesi (via iNaturalist)

Killdeer

Charadrius vociferus



© USFWS midwest (via iNaturalist)

Wilson's Snipe

Gallinago delicata



© Gergory Smith (via iNaturalist)

Description: Light brown/tan body with dark streaks on top and white belly

Length: 13-15 cm

Wingspan: 27-28 cm

IUCN status: Least concern

Call(s): high-pitched “creep” calls and loud trills

Fun Fact: The least sandpiper is the smallest shorebird in the world

Description: Brown/tan top with white underside. Black and white bands run across the face and neck. A Bright orange rump is visible when in flight

Length: 20-28 cm

Wingspan: 46-48 cm

IUCN status: Least concern

Call(s): High-pitched sound lasting for less than a second. This distinct call gives this species its name, as it is often described as sounding like “kill-deer”

Description: Pattern of brown and tan stripes and bars. Face has stripes that may be either tan or white.

Length: 27-32 cm

Wingspan: 79-146 cm

IUCN status: Least concern

Call(s): Make a “scaipe” call, a sharp “jick”, and a harsher “chip-per” call.

Fun Fact: When in flight, their tail feathers create a sound that is similar to call of the Eastern Screech-Owl, sounding similar to “hu-hu-hu”

Falconiformes

Merlin

Falco columbarius



© Susan Elliott (via iNaturalist)

Northern Harrier

Circus hudsonius



© Christopher Brown (via iNaturalist)

Osprey

Pandion haliaetus



© utta gael (via iNaturalist)

Description: Dark umber-brown back and crown (sometimes slate-blue) that is streaked with black on the shoulders and back. Tail is black and brown with a white tip in males, while females have a tail banded with yellow and white tip.

Length: 24-33 cm

Wingspan: 50-73 cm

IUCN status: Least concern

Call(s): both males and females produce a shrill, chattering call that lasts for ~4 seconds

Description: Grayish-brown body with broad wings and long tail that features a characteristic white rump patch

Length: 41-52 cm

Wingspan: 97-122 cm

IUCN status: Least concern

Call(s): males produce a rapid series of “kek” sounds, while females produce a piercing scream during the breeding season

Description: Dark brown back, bright white breast, and mottled neck. A dark stripe surrounds each eye. Feet are pale blue-gray and the beak is black

Length: 55-58 cm

Wingspan: 145-170 cm

IUCN status: Least concern

Call(s): high-pitched, whistling call that consists of a series of chirps

Peale's Peregrine Falcon

Falco peregrinus pealei



© w_fran (via iNaturalist)

Red-tailed Hawk

Buteo jamaicensis



© tony_tumminello (via iNaturalist)

Description: Subspecies of peregrine falcon that can be distinguished by brown horizontal bars on its abdomen and tear-shaped markings on the breast

Length: 41-47 cm

Wingspan: 92-111 cm

Provincial status: Vulnerable (blue listed)

Call(s): series of loud, harsh "kak-kak-kak" sounds

Description: Color ranges from light auburn to a deep brown, white breast, and a brownish-red tail

Length: 48-65 cm

Wingspan: 122 cm

IUCN status: Least concern

Call(s): Males and females both produce a hoarse screech

Fun Fact: The most common species of hawk in North America

Sharp-shinned Hawk

Accipiter striatus



© Todd Boland (via iNaturalist)

Cooper's Hawk

Accipiter cooperii



© Jim Johnson (via iNaturalist)

Description: Blueish-gray to slate coloration, white breast with horizontal light brown stripes, a sharp, hooked beak, and square-tipped tail

Length: 24-34 cm

Wingspan: 53-65 cm

IUCN status: Least concern

Call(s): males and females produce a series of high-pitched, frantic “kik-kik-kik” sounds

Description: Dark, blackish crown, blue-gray back, and tail with dark bands and a distinct white band at the tip of the tail. Can be distinguished from the Sharp-shinned Hawk by the more rounded tips of the Cooper's Hawk's tail feathers

Length: 35-46 cm

Wingspan: 75-94 cm

IUCN status: Least concern

Call(s): during the breeding season only, adults produce a loud, grating “cak-cak-cak” calls that lasts for 2-5 seconds

American Kestrel

Falco sparverius



© Judy Gallagher (via iNaturalist)

Strigiformes

Barn Owl

Tyto alba



© Caroline Legg (via iNaturalist)

Description: Males are blue-gray on their wings and crowns, while females are reddish-brown on their wings and crowns. Both sexes have a black and white pattern on their faces.

Length: 22-31 cm

Wingspan: 51-61 cm

IUCN status: Least concern

Call(s): Loud, excited series of “klee” sounds that last for 1-2 seconds

Fun Fact: The American Kestrel is the smallest species of falcon in North America

Description: Large, rounded head with white heart-shaped face and black eyes. Back and head are light brown with variable black, white, and gray spots

Length: 33-39 cm

Wingspan: 80-95 cm

IUCN status: Least concern

Call(s): Males produce a loud, harsh shriek that lasts for 2 seconds

Fun Fact: Barn owls' ability to locate prey by sound alone is among the best of any animal tested by scientists. In laboratory settings, they were able to catch mice in complete darkness

Barred Owl

Strix varia



© Kyle Tansley (via iNaturalist)

Great Horned Owl

Bubo virginianus



© Paul G. Johnson (via iNaturalist)

Northern Saw-whet Owl

Aegolius acadicus



© Nick Tepper

Description: Mottled brown and white body with dark brown eyes. The back, neck, and tail are crossed with horizontal brown bars, while the belly is crossed with vertical bars.

Length: 43-50 cm

Wingspan: 99-110 cm

IUCN status: Least concern

Call(s): Makes a distinct hooting call that is often described as sounding like “who cooks for you?”

Fun Fact: Barred owls do not migrate. Banding studies have shown that many individuals remained within 10km of the area they were initially encountered

Description: Round face with distinctive horn-like tufts of feathers on the top of the head. Dark colored back mottled with black and brown, and a white breast with brown and black bars. There is also a distinct white patch on the throat

Length: 45.7-63.5 cm

Wingspan: 127-152.4 cm

IUCN status: Least concern

Call(s): deep, soft “hoots” with a stuttering rhythm

Description: Large round head with a grayish facial disk streaked with white. Body is reddish-brown with white streaks on the abdomen

Length: 18-21.5 cm

Wingspan: 45-60 cm

IUCN status: Least concern

Call(s): Produces a distinct whistled “too-too-too” song

Short-eared Owl

Asio flammeus



© Hugo (via iNaturalist)

Galliformes

Ruffed Grouse

Bonasa umbellus



© Wayne Fidler (via iNaturalist)

Gruiformes

American Bittern

Botaurus lentiginosus



© Mike Mosser (via iNaturalist)

Description: Individuals vary in color, but are often a combination of yellow-white and dark brown and with patches of white on the face and legs. Small, ear-like tufts are present on the head, but these are not always visible

COSEWIC status: Special concern

Length: 34-41.5 cm

Wingspan: 85-110 cm

Call(s): Produce a raspy, bark-like call during the breeding season

Description: Reddish-brown body with dark brown bars and spots. The tail has a dark black band at its tip. Males have a pronounced black ruff of feathers around their neck.

Length: 40-50 cm

Wingspan: 50-64 cm

IUCN status: Least concern

Call: Typically very quiet. Females make a “pete-pete-peta-peta” call and a hiss as an alarm call. Males make “queet” call

Description: Brown back and wings speckled with black, white throat with vertical light brown streaks. A long patch of black extends from below the eye and down the sides of the neck

Length: 58-85 cm

Wingspan: 92-115 cm

Provincial status: Vulnerable

Call: Produce low-frequency calls that carry farther than high-pitched calls of over species. Males produce a distinct “ker-plunk” sound during the breeding season that has a watery-sounding quality

Greater Sandhill Crane

Antigone canadensis tabida



© Jerry Oldenettel (via iNaturalist)

Ciconiiformes

Great Blue Heron

Ardea herodias



© Dan Roach (via iNaturalist)

Trochiliformes

Anna's Hummingbird

Calypte anna



© Greg Lasley (via iNaturalist)

Description: Red forehead, white cheeks, and long pointed bills. Body is gray.

Length: 80-136 cm

Wingspan: 78.7 cm

Provincial status: Apparently secure

Call: A loud, trumpeting call that can be heard over long distances. Mated pairs call in unison, and females make twice as many calls as males

Fun Fact: Fossils of this species have been found as far back as 2.5 million years ago

Description: Blue-gray body with a white head that has short black plumes and a large yellow-orange bill

Length: 60 cm

Wingspan: 115-150 cm

Provincial status: Vulnerable (blue-listed)

Call: Generally quiet, but will produce a rhythmic “kraak” sound for short periods

Fun Fact: Despite their large body size, the average adult weighs only 2.1-2.5 kg

Description: Green and gray body. Males have iridescent red or pink feathers on their head and neck

Length: 10 cm

Wingspan: 12 cm

IUCN status: Least concern

Call: Song consists of a series of buzzes followed by a whistle and ending with several chip notes. Other calls include short chip notes produced one at a time or in sequence.

Fun Fact: Hummingbird's short legs make it difficult for them to hop or walk. When perched, they can only scoot sideways

Rufous Hummingbird

Selasphorus rufus



© Ad Konings (via iNaturalist)

Anseriformes

Canada goose

Branta canadensis



© Thomas J. Bright (via iNaturalist)

Green-winged Teal

Anas crecca



© Oleg (via iNaturalist)

Description: Males are bright orange on their back and belly and have an iridescent red throat. Females have a green back and rust colored flanks and sometimes have a small orange patch on their throat

Length: 7-9 cm

Wingspan: 11 cm

IUCN status: Near threatened

Call: Both males and females make a series of chip notes as a warning call. Males will also make a “chu-chu-chu” sound when performing dive displays

Description: Black head and neck with white cheeks and chin. Brown-gray body with white or cream belly

Length: 176-110 cm

Wingspan: 130-170 cm

IUCN status: Least concern

Call: Loud honking noise usually produced by males

Description: Males have a brown head with a green crescent that extends from the eyes to the back of the head. Females are brown, and both sexes have a iridescent green speculum on their wings

Length: 34-43 cm

Wingspan: 53-59 cm

IUCN status: Least concern

Call: Males produce a whistle as part of their courtship displays. Females make repeated “quack” calls at varying volume

Fun Fact: Green-winged Teals are the smallest species of dabbling duck in North America

Mallards

Anas platyrhynchos



(source: Wikimedia Commons)

Northern Pintail

Anas acuta



© Joanne Redwood (via iNaturalist)

Northern Shoveler

Spatula clypeata



© Annika Lindqvist (via iNaturalist)

Description: Males have a distinctive green iridescent plumage on head with brown, gray, and black body. Females are brown and have a blue iridescent “speculum” on their wings.

Length: 50-65 cm

Wingspan: 81-98 cm

IUCN status: Least concern

Call(s): Females produce the characteristic “quack” which is repeated 2-10 times. Males do not quack, and instead produce a quiet rasping call consisting of 1-2 notes.

Description: Males have a dark brown head and white neck/breast, and gray and black body. Males also have a long, thin tail and a green speculum on their wings. Females are mottled brown and white, with a bronze speculum.

Length: 58.5-76 cm

Wingspan: 86.4 cm

IUCN status: Least concern

Call(s): Males give a short “wheezy” sounding quack. Female calls are similar to the call of Mallards but with a rougher, stuttering quality.

Description: Males are white, blue, and rust-brown on their body and green on their head. Females are a mottled brown with light blue on their wings. Both sexes have a large, shovel-shaped bill.

Length: 44-51 cm

Wingspan: 69-84 cm

IUCN status: Least concern

Call: Males make a wheezy “took-took” call. Females make a “quack” with a nasal quality

Trumpeter Swan

Cygnus buccinator



© belyykit (via iNaturalist)

Ring-necked Duck

Aythya collaris



© Bill Blauvelt (via iNaturalist)

Coraciiformes

Belted Kingfisher

Ceryle alcyon/*Megaceryle alcyon*



© Erica Fleniken (via iNaturalist)

Description: Large, white bird with a black bill and black markings that extend towards the eyes

Length: 138-160 cm

Wingspan: 203 cm

IUCN status: Least concern

Call: A deep trumpeting “oh-OH” call produced by both males and females

Fun Fact: largest living species of waterfowl and the heaviest species of flying bird in North America

Description: Males are glossy black, gray, and white. Females are a rich brown with a gray/white speckled face

Length: 39-46 cm

Wingspan: 62-63 cm

IUCN status: Least concern

Call(s): Short, high “barks” or “grunts”. Females also make a high, peeping call.

Description: Slate-blue head with a tall prominent crest, long bill, and white stripes on the neck and belly. A dark reddish-brown band runs across the breast on adult females

Length: 28-35 cm

Wingspan: 48-58 cm

IUCN status: Least concern

Call: Both males and females make a “mechanical sounding” rattle.

Fun Fact: Unlike most species of birds, female Belted Kingfishers are brighter and more colorful than their male counterparts

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