OFO News

Breeding Bird Atlas Takes Flight

BY MIKE CADMAN

Ontario birders collecting data in a five-year project to help guide conservation efforts for decades to come

Common Raven often shows early Breeding Evidence in February, with Safe Dates in March in both the Mixedwood Plains and Boreal Shield ecozones. *Photo by Mark Peck*

The Standard Owl Survey for Barred Owl runs through April in the Central part of the province (map page 6). Mark Peck of the Royal Ontario Museum took this photo in an ethical manner to avoid disturbing the bird.

AND WE'RE OFF! Data collection for the third Ontario Breeding Bird Atlas launched on January 1. Although very few species breed in January and February, more birds will be back and starting their breeding cycle during March and especially April. Atlassing then really explodes across the province in May and June.

Atlas-3 comes at an important time. General bird populations in North America, including in Ontario, have declined in recent decades. Some species, especially aerial insectivores, grassland birds and shorebirds may be facing serious threats. Habitat is under pressure from urban sprawl and development, the intensification of agriculture, the spread of invasive plants such as *Phragmites*, and other factors. Climate change seems likely to be influencing species distributions, and whether they can thrive under the new conditions.

More than ever, we need to know precisely what is happening with our bird populations, and how the results will compare to those of Atlas-2. Atlas-3 will provide volunteers with the chance to have fun birding while contributing to our understanding of the changes underway, and the development of the required conservation measures.

Canada Goose shows early Breeding Evidence in southern Ontario, even with frost enveloping its marshland hummock. This widespread species nests later in the Boreal Shield and Hudson Plains ecozones. *Photo by Mark Peck*

COVID CONSIDERATIONS

However, in the immediate future and for as long as the COVID-19 health crisis remains, all atlassing must be done safely. Participants should follow provincial and regional health protocols (see COVID-19 information box on page 3).

By working safely, keen atlassers have already discovered breeding evidence. Mike Burrell found a singing Great Horned Owl near Peterborough; Amanda Guercio saw Common Ravens nest-building in Toronto; Aaron Hywarren watched Eastern Screech-Owls mating near Ottawa. Millions of records are still to come. Together they will paint a fresh, intricate and fascinating picture of the status of our birds. Won't you join us?

We have only five years to cover the province's 1,068,587 square kilometres! For information about the logistics and how you can volunteer, see the Atlas-3 website (www.birdsontario.org).

WHAT IS ATLASSING?

Atlassing is collecting data for a breeding bird atlas project. It is an enjoyable and effective way for all birders to contribute to the knowledge and conservation of the birds in their region.

Here in Ontario, Atlas-3 is a volunteer-based project that will map the current distribution and relative abundance of all species breeding within the province over a five-year data collection period from 2021 through 2025. Atlases follow a standardized methodology designed to be repeated at 20-year intervals, allowing us to track changes in bird populations over time. Atlas-1 (1981-1985) and Atlas-2 (2001-2005) were enormously successful projects. We are hoping that the third will be the best yet.

Atlas-3 will provide maps of the breeding distribution of nearly 300 species in the province, along with important data that can guide environmental policies and conservation strategies for years to come. The information will be essential for researchers, scientists, government officials and conservation professionals to improve the conservation status and appreciation for birds in Ontario.

Data collection involves going birding and looking for breeding evidence for each species encountered. Data are collected on checklists and attributed to 10-km squares across the province. Some atlassers take on the responsibility of ensuring that a 10-km square is adequately covered. Others are freelancers, adding data to any square, targeting their efforts to fill gaps in coverage.

Besides checklists, atlassers can do point counts. A point count is a unique component of the project; it involves standing at a spot and reporting all the birds you hear and see in a five-minute period.

PIONEERING POINT COUNTS

Atlas-2 was the first atlas in North America to do point counts, and Ontario atlassers did an impressive 68,000 of them during data collection for that project. For Atlas-3, we will be returning to many of the same point count stations as in Atlas-2, providing the best comparison possible with the relative abundance and distribution of birds established during Atlas-2. And we will also be adding new points to create an improved understanding of bird status during Atlas-3.

Our goal is 25 point counts per square. To do a point count, you need to be able to ID birds well by song. Some point counts will be done by experienced birders in their assigned square, and some by skilled freelancers filling in gaps in point count coverage. All will be coordinated through Regional Coordinators and the Atlas-3 website.

Atlas-3 is putting an emphasis on expanding and enhancing knowledge of the breeding birds of northern Ontario by increasing the coverage of the north and improving the sampling design.

To help enhance coverage, we'll be using hundreds of Autonomous Recording Units (ARUs), especially in the remote north, to complement the data provided by atlassers. These devices can be put in place, even in winter, and programmed to record particular time intervals. For

Canada Jay is already showing Breeding Evidence in the Boreal Shield ecozone during February and by March 1 in the Hudson Plains. *Photo by Jim Richards*

example, you could designate five minutes at dawn every other day from March through July, providing information about the birds around that location. While that information can be stored and provide a permanent database for researchers to explore, we can extract the data we need. We will be asking experienced birders to do virtual point counts from the comfort of their living rooms, listening to ARU recordings and identifying species they hear. But more on that in a future newsletter.

HELP WANTED TO MEET GOALS

Although 1,288 people have already signed up for the Atlas-3 project, we will be stretched to meet our coverage goals. Even south of the Canadian Shield, some areas away from large towns will need focused effort. Particularly challenging are the regions in central Ontario. The area from Parry Sound through Algonquin Provincial Park to Pembroke and north to Temagami and Sault Ste. Marie is always tough to get done. With a very different bird fauna from the populations south of the Shield (think warblers, thrushes, loons, etc.), this area has its charm, and data here are especially valuable. For more information on how you can help, contact the Regional Coordinators in this area.

For now, we are rallying the troops, encouraging all OFO members to join the fun, take part in Atlas-3, and help our birds while doing what you enjoy most. But, we must again emphasize, as long as COVID-19 remains a concern, it is essential that we comply with provincial and regional guidelines.

As mentioned, there have not been many options for atlassing in January and February. Overall atlassing opportunities will start to pick up in March as the birds begin to return, expand further in April, and get into top gear in May and June.

In March, formal owl surveys kick in, and there are quite a few birds from other families starting to demonstrate breeding evidence. We are hopeful that restrictions will ease as the core breeding season approaches. Pay close attention to see if there are changes in the pandemic protocols.

IMPORTANT COVID INFORMATION

COVID-19 remains a major public health concern and the Atlas-3 project and its volunteers must remain vigilant and compliant with all public health guidance.

Atlas participants should adhere to all COVID-19 safety guidelines and restrictions mandated by the provincial and local authorities, including Indigenous communities, in their Atlas region. If there is a discrepancy between local and provincial guidelines, atlassers should follow the more stringent guidance.

The Atlas-3 Team is asking its volunteer atlassers to read its online factsheet about following COVID-19 pandemic protocols before participating in atlas activities. Go to the website (**www.birdsontario.org**) to determine how to protect yourself and other people in the communities where you collect Atlas data.

While some American Woodcock start singing on territory in late February, the Safe Date for recording breeding in the Mixedwood Plains ecozone is April 10. With its cryptic plumage, this bird blends into its habitat in early spring.
Photo by Mark Peck

SAFE DATE CHARTS

We have devised charts of Safe Dates to help guide when it is acceptable to report breeding evidence for each species in each provincial ecozone — the Hudson Plains, Boreal Shield and Mixedwood Plains. The full charts are available on the Atlas-3 website under Tools and Resources. The version of the Mixedwood Plains chart here shows the early nesters.

Our charts are a guide to help in your early atlassing efforts. These are only guidelines, though. If you find strong breeding evidence before these dates, please record it. For example, Bald Eagles will add nesting materials to their nests at almost any time of year. If you observe this on January 1, you can report "NB" (for Nest Building) for this species although it is outside of the safe date.

On the chart shown here, Start of BE shows the date on which the first breeding evidence is expected. There are likely to be migrants of the same species in the area at this time, so use caution when recording Possible Breeding. The Safe Date reference on the charts shows the date on which migrants are expected to have left, and only breeding birds remain. Almost every bird observed after the Safe Date is likely to be showing breeding evidence, if only because it is in suitable breeding habitat during its nesting season (recorded as "H").

Atlassing Safe Dates are determined within Canada's Terrestrial Ecozones, overlaid here on Atlas-3 regions. These regions can extend beyond Ontario's boundaries. For example, Nunavut's Akimiski Island is included in an atlas region because of on-going fieldwork there by the Ontario Ministry of Natural Resources and Forestry.
Map Courtesy of Birds Canada

MIXEDWOOD PLAINS

Species	Start of BE	Safe Date
JANUARY		
White-winged Crossbill	01-Jan	
Red Crossbill	01-Jan	
Rock Pigeon (Feral Pigeon)	01-Jan	
Eastern Screech-Owl	01-Jan	
Great Horned Owl	01-Jan	
Bald Eagle	30-Jan	10-May
FEBRUARY		
Horned Lark	06-Feb	05-May
Common Raven	12-Feb	15-Mar
Barred Owl	15-Feb	31-Mar
American Woodcock	26-Feb	10-Apr
Red-tailed Hawk	27-Feb	15-Apr
Red-shouldered Hawk	28-Feb	25-Apr
Northern Saw-whet Owl	28-Feb	15-Apr
MARCH		
Barn Owl	01-Mar	15-May
Mourning Dove	05-Mar	15-Mar
American Crow	06-Mar	15-Apr
Long-eared Owl	08-Mar	15-Apr
Merlin	10-Mar	30-Apr
Northern Goshawk	12-Mar	20-Apr
Great Blue Heron	14-Mar	20-Apr
Short-eared Owl	14-Mar	15-Apr
Peregrine Falcon	14-Mar	09-May
Black Vulture	16-Mar	10-May
Turkey Vulture	16-Mar	10-May
Cooper's Hawk	20-Mar	30-Apr
Mallard	23-Mar	30-Apr
Northern Pintail	24-Mar	09-May
Sandhill Crane	24-Mar	20-Apr
Mute Swan	25-Mar	31-Mar
Western Meadowlark	25-Mar	20-May

Species	Start of BE	Safe Date
Trumpeter Swan	26-Mar	31-Mar
Wood Duck	26-Mar	30-Apr
American Black Duck	26-Mar	30-Apr
Great Egret	26-Mar	15-May
American Kestrel	27-Mar	20-Apr
Pine Siskin	27-Mar	24-May
Killdeer	27-Mar	15-Apr
Wild Turkey	28-Mar	15-Apr
Hooded Merganser	28-Mar	15-May
Hairy Woodpecker	28-Mar	30-Apr
Common Grackle	29-Mar	10-May
Eastern Bluebird	29-Mar	15-May
Herring Gull	30-Mar	05-Apr
Pileated Woodpecker	30-Mar	30-Apr
Osprey	31-Mar	30-Apr
Canada Goose	31-Mar	10-Jun

LARGE EARLY NESTERS

Among the early nesters are many larger birds, including some waterfowl, gamebirds, herons, owls and raptors. Early in the breeding season can be the easiest time to find them. Canada Goose is an example among waterfowl, at least in the southern region.

Despite keeping a low profile when actually nesting, Northern Goshawk and Cooper's Hawk are most readily observed in March and April during their conspicuous "butterfly" display flights over nesting territories — often with their white undertail coverts flared. Watch for them on sunny days, especially over mature conifer plantations.

You will need to be wary of migrants, especially for the waterfowl. Many species, such as Common Goldeneye, will perform elaborate mating displays even on their wintering grounds. To see the list of species expected to breed in your local region, you can view the Square Summary Sheet for a square or the checklist data form for the region, both of which list all of the species reported in Atlas-2 in that Atlas region.

Northern Goshawk may keep a low profile during nesting season, but it can be conspicuous during courtship with its "butterfly" display flights. In the Boreal Shield ecozone, Breeding Evidence begins March 21, with a Safe Date of April 30; in the Hudson Plains, "BE" begins March 26, with a Safe Date of May 25. *Photo by Jim Richards*

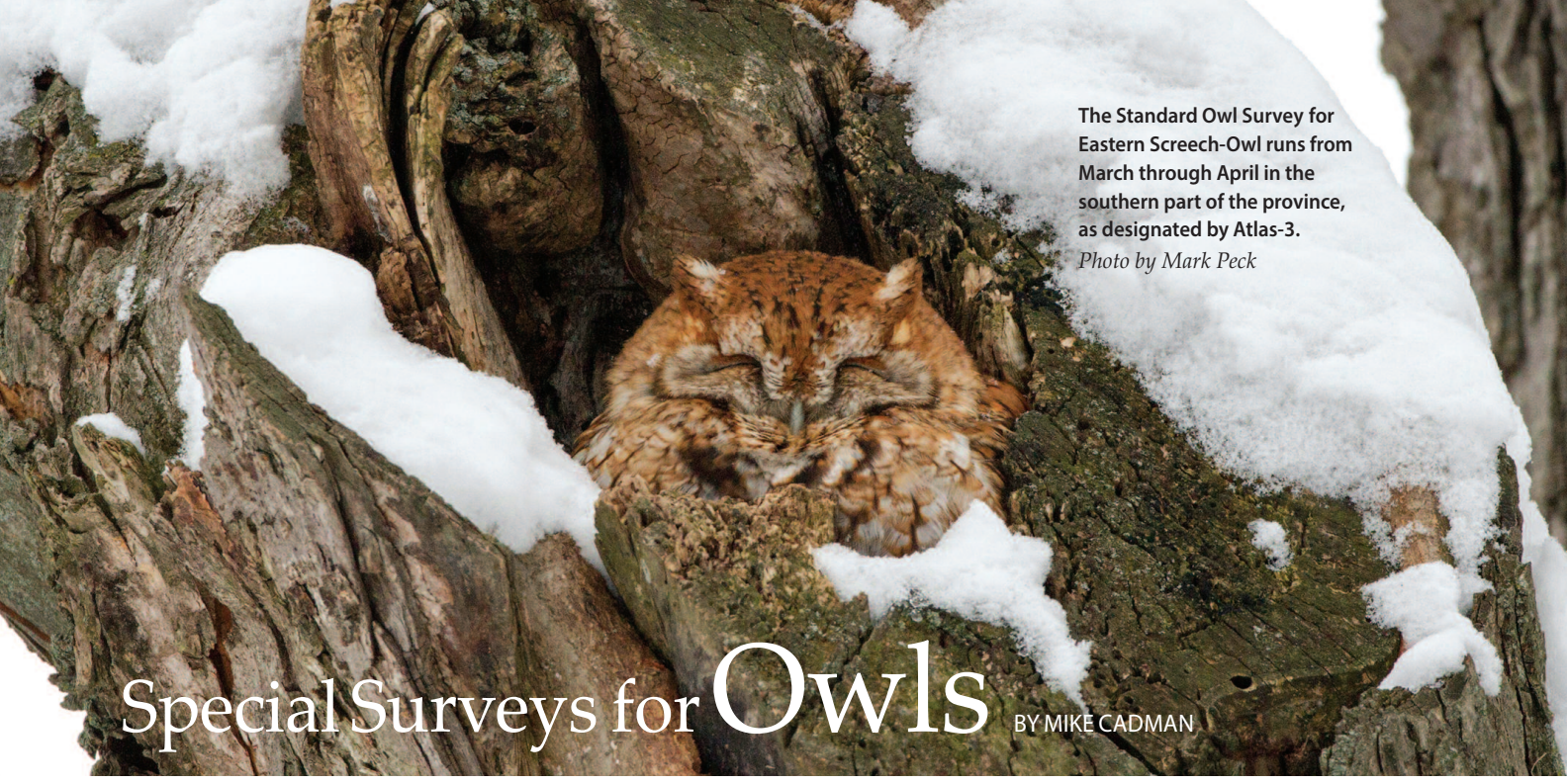
Speaking of atlas forms, we hope that most atlassers will use the NatureCounts app to collect data. It is modelled on eBird, but with special built-in features for atlassing. A video on our website (under Instruction and Forms) shows how to download and use it. Although we strongly encourage the use of NatureCounts, you can also employ eBird to collect data and then download your eBird list to NatureCounts. Because eBird lacks some key features for atlassing, you will be prompted to add the missing information before your checklist is accepted. You also need to ensure that each eBird checklist is entirely within one Atlas square; otherwise, it will not be accepted by NatureCounts.

If you prefer more traditional data collection methods, you can print data forms from the Atlas website, or jot down your information in a notebook, and then input your data via the website.

So get involved — when you can do so safely. It is challenging, fun and satisfying to apply your skills, energy and time to a worthwhile endeavour. We're hoping you will join us in making this the biggest and best Ontario Breeding Bird Atlas ever. Be part of the Atlas-3 team, creating a vital tool for bird conservation for decades to come.

Mike Cadman is Coordinator, Ontario Breeding Bird Atlas. He co-edited the 1987 and 2007 publications, Atlas of the Breeding Birds of Ontario, *which resulted from the Atlas-1 and Atlas-2 projects.*

Atlas-3 is a partnership between the same five organizations involved with Atlas-2: Birds Canada, the Canadian Wildlife Service (Environment and Climate Change Canada), the Ontario Ministry of Natural Resources and Forestry, Ontario Field Ornithologists (OFO) and Ontario Nature.



The Standard Owl Survey for Eastern Screech-Owl runs from March through April in the southern part of the province, as designated by Atlas-3.
Photo by Mark Peck

Special Surveys for Owls

BY MIKE CADMAN

THERE ARE SEVERAL WAYS of atlassing for owls. They all involve following COVID-19 guidelines as long as the pandemic continues.

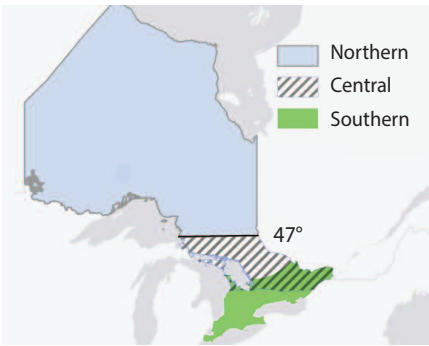
The best is lying in bed listening to an owl calling outside of your window. But not many of us get to enjoy that very often!

The second-best choice is cruising the backroads before the leaves are out, looking for stick nests. Then scope them to see if there's a Great Horned Owl on top.

Next in line is going out at night and atlassing for your target owl species. You can just listen, but if you want to increase your chances, it is best to go to the suitable nesting habitat for each and broadcast owl calls. You can download these calls from our Atlas-3 website (www.birdsontario.org).

However, while broadcasting recordings can elicit responses and generate critical information quickly, use recordings judiciously.

- Know the local rules: Use of playback is not allowed in some national and provincial parks, and other properties may have their own rules.
- Avoid using playback for a species at risk when its presence at a location is already known.
- Use a playback volume that is lower than or equivalent to the bird's normal vocalizations.
- When the target species is detected, cease playback for that species. (unless you are running a standard survey, which has a set protocol).
- Avoid using playback repeatedly on the same individuals in their breeding territories. Do not use playback when a bird is known to occur at a location, and has already been recorded for the Atlas.
- Keep your call-broadcast events brief; which generally means under five minutes long, consisting of short broadcast sequences of less than 30 seconds separated by long periods of silence.
- Avoid the use of playback in heavily birded areas.



Three general areas for Atlas-3 owl surveys
Map Courtesy of Birds Canada

Atlassers will generate the most valuable data on owls through our standardized Atlas Owl Survey protocols. The Atlas-3 team has devised four of these, for use in different parts of the province. Most surveys are scheduled for March or April or both, while Northern Hawk Owl surveying extends into May.

The Great Gray Owl/Boreal Owl and the Northern Hawk Owl surveys should be run in the Northern section; the Barred Owl/Northern Saw-whet Owl survey should be run in the Central section; and the Eastern Screech-Owl survey should be run in the Southern section.

The protocols take two to four hours. Each consists of 10 stops in a 10-kilometre square. At each stop, you first listen silently for two minutes, and then play the standard broadcast calls for the target species. You record your results at each stop, whether or not you found any owls.

The owl surveys are an excellent way for new birders to contribute to the atlas. The results, when combined with Birds Canada's on-going Ontario Owl Survey, will provide our best ever understanding of owl distribution and abundance in the province.

Details of Standard Owl Surveys for the Atlas

Protocol	Time of year	Where (map above)	Time of day
Eastern Screech-Owl	March-April	Southern	Night
Barred/Northern Saw-whet Owl	April	Central	Night
Great Gray/Boreal Owl	April	Northern	Night
Northern Hawk Owl	March-May	Northern	Day