



The Bird Atlas Gazette

*The newsletter of the
Breeding Bird Atlas of Alberta: Update Project*

*A project sponsored by the
Federation of Alberta Naturalists*

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One of the characteristics of a Bird Atlas Project is that the publicity about the project attracts a mixed-flock of volunteers; most are experienced surveyors but there are also many novice birders. These new adherents to the siren call of bird watching may not have much field experience and they may not possess a great deal of knowledge about birds, but they are certainly enthusiastic.

However, as is often the case with newcomers, their enthusiasm is tempered by information overload, from the basic information they need in order to do the surveys to the vast quantities of information about birds that is readily available to them. Sorting through this mass of facts and advice is work enough; knowing what to keep and how to put it to good use can sometimes prove a real chore.

So for the benefit of all new birders, this edition of the Bird Atlas Gazette is dedicated to you. In the following pages you will find, in addition to the usual news about the Atlas Project, a number of articles geared towards helping you to become a better, and more informed, birder. From flushing out the right

field guide in the bookstore to finding those elusive birds in the field, there's a wide assortment of information included in this newsletter. I hope you find it of good use. There are also a few nuggets of information in here that birders of all levels should find intriguing. Happy birding.

Andre Legris
Editor

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News & Notes

Access to Bird Atlas Observations

Bird observations which have been catalogued in FAN's Natural History Database for the past decade can now be accessed through an interactive map on FAN's web site. You can access the database through a link on the main FAN page (at www.fanweb.ca). Once the Alberta map has loaded, you simply choose an atlas square and all of the species for that square will be displayed.

Bird species listed for each atlas square are based on data from a variety of bird monitoring projects in Alberta, not just the Bird Atlas Project. Please let us know what you think of this feature and what modifications or additions you think would be beneficial.

Bird Atlas Photo Gallery

FAN is starting a photo gallery devoted to the Bird Atlas Project. If you have any photos you would like to share with other atlasers, or with the birding community at large, please send them to FAN and the photos will be posted in their on-line gallery. Suggestions for photos include birds seen on atlas survey trips, the landscape within your atlas squares, significant features of your survey areas or photos of yourself or your birding partners.

Please include a short description of the photo and the name of the photographer (so we can give them the appropriate credit). Pictures can be sent either directly to FAN by email (to philipp@fanweb.ca) or by snail mail to the Federation of Alberta Naturalists (the address of which is on the back page). When sending photos by snail mail, please indicate if you would like them returned to you.

Stories from the Field

Did you have an interesting experience while doing your Bird Atlas surveys? Did you see a rare bird, find a unique place, encounter some fascinating wildlife, witness a hilarious event? Or did you simply enjoy your time spent out in Alberta's wild places? If you did, and you feel like sharing your experiences with others, we have the perfect forum for you.

In addition to showing photos of your trips, we encourage you to write about your experiences and send your stories to the FAN office. We will then publish them on the FAN website. Even if you are not a literary whiz with pen and paper (or mouse and keyboard), you can still submit your article; we will be happy to help you edit your story. Please send your stories to Philip Penner (philipp@fanweb.ca). We look forward to hearing from you.

A few reminders...

Atlasser Registration

All volunteer atlasers involved with the Bird Atlas Project are being asked to officially register themselves with the Project, for several reasons:

- it will help the Project administration keep track of the many volunteers located throughout the province.
- registered atlasers will qualify for tax receipts on all expenses related to Bird Atlas activities.
- all registered atlasers will be automatically entered into a draw for prizes as part of the Atlasser Recognition Program.

Application for Atlasser Tax Receipt

FAN is both a non-profit group and is registered as a charitable organization, so it can provide tax receipts for donations. Volunteer atlasers can take advantage of FAN's status by applying for tax receipts for the expenses they incur while completing surveys for the Bird Atlas Project.

Atlasser Recognition Program

The Bird Atlas Project would like to show its appreciation to all the atlasers who devote so much of their time recording bird survey information. To show its gratitude, the Atlas will randomly select names of atlasers throughout 2003 for a draw for prizes such as binoculars, birdhouses and field guides. In order to qualify for the draw, an atlasser must submit checklists electronically or by mail.

Bird Atlas Presentations

Presentations about the Bird Atlas Project are available throughout the province to any group, club or organization which is interested in learning more about the project and how they can get involved. The presentation describes the background, goals and

methods of the project as well as how interested groups or individuals can participate. The presentation is approximately forty minutes in length, with plenty of time for questions. If your organization, or one you know of, would be interested in scheduling a presentation, you can contact the Assistant Project Coordinator, Philip Penner, who would be happy to arrange a presentation in your area. All scheduled presentations in Alberta will also be listed on the FAN website (www.fanweb.ca), so check for one in your area.

West Nile Virus: What Ornithologists and Bird Banders Should Know

Introduction

West Nile Virus (WNV) was first isolated in 1937 in Uganda. There have been outbreaks in Israel (1951-1954), France (1962, 2000), and South Africa (1974). It appeared in Western Europe in the mid-1990s and traveled to the United States in 1999, where researchers – and their universities, government research agencies, and other research organizations – became concerned about the risk to field biologists, students, and others. Perhaps out of an abundance of caution and spurred by constant media attention to WNV, one university canceled field research and field biology classes that involved bird banding. The Ornithological Council – a consortium of 11 scientific ornithological societies in the Western Hemisphere – consulted with a number of experts to compile this fact sheet about the risks of WNV to ornithologists and bird banders and to provide the most up-to-date public health recommendations for those handling live birds, carcasses, or tissue that is potentially infected with WNV.

Understand the risk

All research involves risk. Know the risks and take reasonable precautions. West Nile Virus should be no more of a deterrent to ornithological research and education than any other risk encountered in scientific research.

According to the Centers for Disease Control (CDC) as of 11 April 2003:

- Most mosquitoes bites will not lead to a WNV infection.
- Most people who are infected with WNV do not

develop any type of illness.

- It is estimated that 20% of the people who become infected will develop West Nile fever: mild symptoms, including fever, headache, and body aches, occasionally with a skin rash on the trunk of the body and swollen lymph glands.
- About 1 of each 150 infected persons becomes seriously ill with central nervous system infection (encephalitis &/or meningitis)
- About 6.6% of the 4,161 cases of the laboratory-positive 2002 WNV cases in the United States were fatal.

(For more information regarding these facts, see www.cdc.gov/ncidod/dvbid/westnile/qa/symptoms.htm).



For young/healthy researchers who are not immunocompromised, West Nile Virus is unlikely to cause much more than a mild illness – typically “flu-like symptoms.” A more serious case of West Nile Virus in humans results in fever, disorientation, muscle weakness, neck stiffness, headache, nausea. Persons over 50 years of age are at increased risk of severe disease. An analysis of attack rates per million persons during the 1999 New York City outbreak showed that compared with persons 0 to 19 years of age, the incidence of severe neurologic disease was 10 times higher in persons 50 to 59 years of age and 43 times higher in those at least 80 years of age. However, although older persons are at greater risk for West Nile Meningoencephalitis or death, persons of any age might develop severe neurologic disease. CDC recommends that persons with severe or

unusual headaches seek medical attention as soon as possible.

In the field

Although there are no documented cases of ornithologists or bird banders contracting WNV from handling living or dead birds, it is also the case that there has been no surveillance of ornithologists or bird banders to determine the presence/absence or prevalence of the disease. Even if such surveillance were to be implemented, it would be difficult to know if the disease had been contracted through contact with bird feces or saliva or if it had been contracted from an insect bite – at the research site or elsewhere.



It has been confirmed that WNV may be shed from the cloacal and oral regions. Therefore, contact with droppings, dropping-contaminated feathers, or the cloaca may result in exposure to WNV.

- Be sure to have antiseptic (not antibacterial or antimicrobial) available for handwashing and first aid for cuts or punctures sustained while handling birds.
- Reasonable precautions include the use of antiseptic wipes. This will protect both the researcher and the birds subsequently handled by the researcher.
- Avoid contact with bird feces.
- If bitten by a bird, wash hands (when possible) or use antiseptic (not antibacterial or antimicrobial) wipes or even a small amount

of fresh bleach.

- Since ornithologists often use needles to take blood samples, extra care should be taken to avoid needle sticks.
- Public health officials consider gloves to be an appropriate precaution but ornithologists rarely wear gloves when handling birds, particularly in the field. If gloves are worn, they should be changed or decontaminated with 70% ethanol or other appropriate substance after handling each bird to avoid transmission from one bird to another. Again, be familiar with proper glove removal and disposal. Other barrier protections such as goggles and masks are standard precautions against inadvertent exposure to droplets and fluids.
- Ornithologists and bird banders should take the same reasonable precautions to minimize risks – of various diseases - posed by mosquito bites. Reasonable measures include protective clothing (long sleeves, long pants, socks), and the use of DEET or other insect repellents – with repeated applications over time.

(The Ornithological Council (OC) was founded in 1992 as a non-profit organization by the American Ornithologists' Union, Association of Field Ornithologists, Cooper Ornithological Society, Pacific Seabird Group, Raptor Research Foundation, Waterbird Society, and the Wilson Ornithological Society.)

To DEET or not to DEET?

With the current fears over WNV, there has been much attention given to avoiding mosquito bites, which is the main method through which the disease is transmitted. Since the preferred method of avoiding mosquito bites is to use some type of insect repellent, there has been a great deal of attention paid to DEET, the active ingredient in many repellents. Since popular brands such as Deep Woods Off and Muskol contain DEET, and DEET has been known to melt plastics and eat away clothing, many people are talking of avoiding the use of these products. The following paragraph is an abstract from a paper recently published in the *New England Journal of Medicine* regarding the health effects of DEET.

Despite the substantial attention paid by the lay press every year to the safety of DEET, this repellent has been subjected to more scientific and toxicologic scrutiny than any other repellent substance. The extensive accumulated toxicologic data on DEET have been reviewed elsewhere. DEET has a remarkable safety profile after 40 years of use and nearly 8 billion human applications. Fewer than 50 cases of serious toxic effects have been documented in the medical literature since 1960, and three quarters of them resolved without sequelae. Many of these cases of toxic effects involved long-term, heavy, frequent, or whole-body application of DEET. No correlation has been found between the concentration of DEET used and the risk of toxic effects. As part of the Reregistration Eligibility Decision on DEET, released in 1998, the Environmental Protection Agency reviewed the accumulated data on the toxicity of DEET and concluded that "normal use of DEET does not present a health concern to the general U.S. population." When applied with common sense, DEET-based repellents can be expected to provide a safe as well as a long-lasting repellent effect. Until a better repellent becomes available, DEET-based repellents remain the gold standard of protection under circumstances in which it is crucial to be protected against arthropod bites that might transmit disease.



(Source: Comparative Efficacy of Insect Repellents Against Mosquito Bites. By Fradin, M.D., Mark S. and John F. Day, Ph.D. 2002. *New England Journal of Medicine* 347: 13-18; available online at <http://content.nejm.org/cgi/content/full/347/1/13>)

Burkett's Laws of Birding

(Courtesy of Cody Burkett, Phoenix, AZ)

The First Law of Birding

The greater the time spent searching for a rarity, the greater the chances it will be sitting on your car when you return to the parking lot.

The Second Law of Birding

There are two sides of a tree; the side facing you and the side where the bird is.

The Third Law of Birding

When you see the bird that you have always wanted to see, it will be in the last spot you thought of looking for it.

The Fourth Law of Birding

The best bird seen during a trip is usually seen in bad light, isn't calling or singing, is seen for less than a second, and is the last bird of the trip.

Barb and Jim's Thoughts on Field Guides

What is the best field guide? For us the answer is a no-brainer. Either the big *Sibley Guide to Birds* or the *Sibley Field Guide to Birds of Western North America*. We have used *the Sibley Guide to Birds* for two years in a wildlife identification course at the University of Alberta, as well as in the field. We have found it to be far superior to previous guides and by far the best field guides available to birdwatchers in this area. For years we used, and taught from, *the National Geographic Guide* and also used the *Peterson Western Guide* and they are old friends, but the Sibley books are superior.

The original big book, *The Sibley Guide to Birds*, by David Allen Sibley, contained both eastern and western birds, and is an excellent book. It is being replaced by *the Sibley Field Guide to the Birds of Eastern North America* and *the Sibley Field Guide to the Birds of Western North America*. Alberta is well covered in the Western guide. The original big book has 6,600 illustrations showing many different plumages for the birds. For example, there are 46 pictures of the Red-tailed Hawk. It also shows the birds flying in more than one plumage and there are side as well as frontal views of some birds, which is especially useful with the sparrows. There are illustrations showing the regional variation one might expect across the area covered in the guide. For most species there is an excellent description of its vocalizations.

A major weak point of the original big book is the distribution maps, which are very bad for the Alberta region, so much so that we told our students to ignore them if they were looking to find out if the birds were in a particular Alberta location.

To reduce the size of the original big book to field guide format, it was split to create an eastern and western version. For Alberta, the western version has much better maps than the original book and more habitat information, which is very useful when doing atlas surveys. Some of the pictures, however, were dropped for some species and often, the flying bird is now shown only in one plumage. The pictures that remain still illustrate the birds quite well and are far superior to those used in other field guides.

Descriptions of a few species are, in our opinion, hurt by the omissions. For example, only the immature and adult male Rough-legged Hawk are shown with no comment on the striking sexual dimorphism that exists in this species.

Which one is best? The choice is yours. The original book is large and a little difficult to take into the field (unless your partner carries it). But we are very happy to have it because of all of the illustrations of the birds. The maps are good in the Western Guide but of limited use in the big book. There is more habitat information in the Western Guide but a fewer pictures illustrating the bird. Either choice is excellent.

In our opinion, the Sibley books do a much better job of illustrating the variants we have in this province, outlining the field marks, giving identity clues for the bird and describing its vocalizations. This makes the birds easier to identify correctly. By all means do not throw out your old guides they also contain useful information and both the Peterson and National Geographic Guide should be adequate for bird atlas work which is only dealing with the identification of breeding adults although not showing all of the variation that the Sibley books show you should still be able to identify what you see with those books although there are a few cases of misleading illustrations like that of the female cowbird in the National Geographic. The Golden Guide is a good little compact book for beginners. It will be a little more difficult to properly identify all you see with it

because of the lack of range of variation which is shown and the field marks and quality of the pictures is not up with the Sibley book. One thing I like about that book, however, is the fact that the sonograms of the sounds are included. Once you learn to read them they are a great help in identifying unknown bird sounds.

While doing atlas surveys we have used other books in addition to a general field guide. One guide you may want to consider is the *Guide to Nests, Eggs and Nestlings of North American Birds* (second edition by Paul Baicich and Colin Harrison). It has detailed information on breeding habitats and nests for each species. We do not recommend the *Peterson Guide to Nests* because the western guide does not have all of the birds in our area and you are forever being referred to the eastern guide for some of our species – which is impossible when you only have the western guide and annoying as heck even if you have both.

Because you are identifying breeding birds during atlas work, your task is a little simpler than if you had fall season birds to contend with. A general field guide cannot cover in great detail some of the more difficult groups of birds, specifically the sparrows, warblers and hawks. Extra information and pictures on sparrows can be found in *Sparrows of the United States and Canada – The Photographic Guide* (by David Beadle and James Rising). It is a great book for practicing your id skills by looking through the photographs.

Two excellent books on hawk identification are *A Photographic Guide to North American Raptors* (by Brian Wheeler and William Clark), which was recently reprinted, and their excellent second edition *Peterson Field Guide, Hawks of North America*. These books can help you with this difficult group of birds by showing more morphs and plumages than is possible in a general field guide. They also give more, and clearer, field marks than do the general guides. The *Peterson Field Guide to Warblers* (by Jon Dunn and Kimball Garrett) is a wonderful book, particularly with the fall season birds.

An oldie, but goodie, is *The Birds of Alberta* (by Ray Salt and Jim Salt). This is not a field guide but a source of excellent habitat information about our

birds. This book has long been out of print but it sometimes shows up in used bookstores or on grandmothers' bookshelves; sweet-talk her and maybe she will loan it, or even give it, to you.

Barb and Jim Beck

(Barb is an Adjunct Professor in the Department of Renewable Resources at the University of Alberta and teaches a course in advanced wildlife identification. Jim is a Professor of Forest Management in the same department at the University of Alberta and the Head Porter for their many boxes of field guides.)

The Basics of Bird Identification

Is bird identification a skill, an art or just good science? Well, in fact, it's all three. It takes some skill to tell one species of warbler from another, whereas distinguishing between juvenile Empidonax flycatchers is an art form, and both talents combined result in good field science.

But no matter your level of diagnostic expertise, all birders look for the same basic field marks and information to put a name to their quarry.

Get to know your field guide.

The first way to become familiar with the many species you will encounter is to find a comfortable chair. From this vantage point, you can learn a great deal just by leafing through the field guide - what kinds of birds to expect in your area and what they look like. Pay special attention to how the birds are organized in the guide; birds in the same groups will be found together. Knowing where these groups are located in the book will eliminate a lot of time otherwise spent in frenzied spasms of page flipping.

Get to know 'the bird'.

In the front of your field guide will be a diagram illustrating the 'topography' of a bird, its various named body parts. Get to know these parts so that when you see an unknown bird you will be able to describe it using the same vocabulary as the field

guides and your fellow birders.

Study the bird carefully.

Once you are in the field and you encounter an unknown species, avoid the tendency to immediately pull out your field guide. Just look at the bird, gathering as much information about it as you can. Start at the tip of the bill and work your way down along its body, looking at its markings, colours and body shape.

How does the bird move?

The way in which a bird moves provides important clues as to its identity. Does it walk up tree trunks or flit from branch to branch? Can it sit motionless, or does it slowly pump its tail, or even bob up and down continuously? Watching a bird fly is not only an inspiring experience but also a useful trait. Is the flight pattern straight and level or highly undulating. Is the wingbeat slow and steady or blurringly fast? Some birds, as a form of territory advertisement, will sing as they fly, fluttering down slowly or swooping down at high speeds.

Don't open the field guide just yet.

Instead, pull out a notebook and record your observations, in as much detail as possible. Get the bird's image fixed, in your mind and on paper, as much as you can. You want to avoid the problem of having your mental image of the bird corrupted by the pictures in the field guide.



Open your field guide, and open your mind.

Don't commit yourself to the first bird picture you see which looks 'close enough'. Look for all the possibilities. For some groups, like the ducks, similar species will be easy to distinguish based on just one obvious trait (eg., Common vs. Barrow's Goldeneye). For others, like the sparrows or gulls, several traits will often be necessary to definitely distinguish one species from another. And don't forget to carefully consider all related species, because they will sometimes look the same in the field, especially under adverse conditions. For example, if it's windy, raining,

your feet are wet, binoculars even wetter and your lunch is missing, was that really a Mountain Chickadee or a Black-capped Chickadee?

Avoid the 'pretty picture' syndrome.

Don't commit yourself just based on the picture alone. Does your bird match both the text and the picture in the field guide?

Beware the identification based on plumage alone.

Plumage is a highly variable feature of a bird and it changes on a regular (usually annual) basis, especially during the latter stages of the breeding season when most birds undergo feather moult. If you're not paying attention to other things, such as the bill shape, vocalizations, behaviour, leg colour, etc., you may well make a mistake. Plumage can also change colour according to the angle at which it is viewed. Does that Scaup duck have a greenish sheen on its head, or is it closer to purple...?

Is your bird within the range specified in the field guide?

A local field guide will usually provide a range map for each species, often colour-coded for different seasons. So, if everything tells you that your bird is Species X, but the range map indicates that a more suitable location would be say, Mexico, then you had better take another, more detailed look at the bird. But remember, birds can be found outside their normal range. Just imagine the shock felt by the person who discovered a Marbled Murrelet, which is normally found only along the Pacific Coast, in a field near Edmonton.

Pay close attention to the plumages of immatures and females.

Different plumages within the same species can lead to considerable confusion, especially once the breeding season has ended and the newly fledged young are flying about.

Don't use body size as the sole criteria.

This can be a useful field mark, when used for comparative purposes. For instance, *the bird was bigger than a robin but smaller than a crow*. But at a distance, and in the absence of other birds for comparison, size can

be a risky field-mark to rely on. One notable example is the Yellowlegs. The Greater Yellowlegs is certainly larger than the Lesser Yellowlegs, but unless you see them side by side, or are very experienced, it's quite difficult to tell them apart based solely on their size.

Where does this bird live?

Some birds, like Magpies and Robins, are found almost everywhere. Others are specific to certain habitats. Longspurs are generally restricted to prairie grasslands while Dippers are found only along fast-moving streams in the mountains and foothills. Habitat can be a good accessory fact when determining an identity.



Tips for Novice Birders

The number of things to consider for a birding trip may seem daunting, even without the added pressure of trying to identify what seems like a million birds flying by. But like any new endeavor, it's not nearly as complex as it seems at first glance. Here's a quick list of the main things to consider when heading out your front door.

Choose the right binoculars.

Binoculars are common in bird watching as they are the tool we use to get close to the birds. So choosing the right kind of binoculars means the difference between an enjoyable outing or blurry images, strained eyes and big frustrations.

Pack a field guide .

In addition to a car full of muddy, scratched and sometimes broken binoculars, birders also have a tendency to amass large collections of bird guides. And it's no wonder; a trip to a good bookstore will

reveal dozens, if not hundreds, of different bird guides. There are some standard ones, as well as some pretty esoteric volumes. For basic bird watching, you can get by with a single book. For a review of the main field guides which are of use in Alberta, check out the article on page 5.

Plan your trip.

Birding is something you can do anywhere, even from the comfort of your living room. But the best experiences happen when you are 'out there', away from the crowds, cars and strip malls. To maximize the number of birds you will see, try to include a wide variety of habitats in your trip, Habitat edges, where two very different environments meet each other (like lakeshores or forest-field boundaries) are excellent places for wildlife. Time of day is also an important factor, with more birds visible, and heard, during the early morning hours.

And bear in mind the words of Robert Frost:

Two roads diverged in a wood, and I-
I took the one less traveled by,
And that has made all the difference.

Dress wisely.

Snow in July in Alberta may seem too weird to be true, but it has happened. At the very least, early mornings in summer can be quite chilly, as can a rain shower at any time of day. And wind on the prairies is not always a gentle, refreshing breeze.

Bring a notebook.

This is handy for writing descriptive notes or making sketches of birds you don't recognize. They are also good for making lists of equipment you should have brought with you or slipping notes under windshield wipers to tell your birding buddies what direction you went to look for that rare bird.

Set your alarm early.

Birders don't get up at 5:00 am just for the pleasure of sleep deprivation but because the birding really is better in the early morning, besides, coffee seems to taste better at that hour, despite being poured luke-warm from a battered old thermos.

Join a bird club.

Hanging out with experienced birders is perhaps the fastest way to learn about the world of birds. And

birders love to share their knowledge and experiences.

Ask questions.

You would be amazed how a single question to a person you just met along the trail will turn into a day-long excursion with someone who has the answers to all of your birding questions.

Watch birds with your ears.

Tune into bird songs. It's the easiest way to find birds when they are hidden by vegetation or sneaking up behind you.

Silence will often reveal all.

Some songs and calls are very subdued so it takes a keen ear to detect them. And small birds who are quietly moving through the underbrush will also be easier to find.

Move slowly.

It may seem as if you're not being very productive but you can see more birds than is possible when you are moving fast. This is especially true with the more secretive and furtive species.

Sit down on the job.

Find a comfortable spot and let the birds come to you. Birds are always moving around and many of them will eventually pass your way.

Become bird-aware.

Once you start looking for birds, you will be amazed at how often you actually see them. Birds can be found in every environment, even downtown urban areas. And once your eyes and mind are attuned to the presence of birds, finding them becomes second nature.

Watch a local area.

Find a natural area near your house and visit it regularly throughout the year and at different times of day. After a while, you will not only become intimately familiar with the resident birds but also with the ebb and flow of migrants and breeding species which move through your area.

Expand your birding horizons.

There are literally an infinite number of sources for bird information. Explore a bookstore, bury yourself in the local library, disappear down the virtual rabbit-

hole of on-line birding resources. The sheer number of books, magazines, CD's, maps, checklists, equipment, etc., devoted to birds and bird watching is staggering.

Keep a life-list.

Almost every birder has a life-list, in which they keep track of all the species they have ever seen. It's a good way to map your progress as a birder, especially during the first few years. And with so many regions producing their own bird checklists, it's easy to start a life-list. But beware, the use of checklists can be very addictive. Many birders start with a single life-list but eventually end up keeping a province list, county list, town list, yard list, trip list, seen-from-the-office-window list, heard-in-movies list, decorating-the-walls-of-the-maternity-ward list...

And the most important tip for novice birders:

Get out there.

The more you do it, the more you learn. Learning about birds never stops, no matter how many years you've been doing it.

Up from the Egg: the Confessions of a Nuthatch Avoider.

Bird watchers top my honors list.
I aimed to be one, but I missed.
Since I'm both myopic and astigmatic,
My aim turned out to be erratic,
And I, bespectacled and binocular,
Exposed myself to comment jocular.
We don't need too much birdlore, do we,
To tell a flamingo from a towhee;
Yet I cannot, and never will,
Unless the silly birds stand still.
And there's no enlightenment so obscure
As ornithological literature.
Is yon strange creature a common chickadee,
Or a migrant *aloutte* from Picardy?
You rush to consult your Nature guide
And inspect the gallery inside,
But a bird in the open never looks
Like its picture in the birdie books -
Or if it once did, it has changed its plumage,
And plunges you back into ignorant gloomage.
That is why I sit here growing old by inches,

Watching the clock instead of finches,
But I sometimes visualize in my gin
The Audubon that I audubin.

Ogden Nash

Why Birds Sing

Bird singing varies throughout the day and generally follows a circadian (daily) rhythm, usually a bimodal pattern of two main periods of singing activity: large morning and smaller evening peaks. The majority of passerines sing only during the daylight hours, although some sing in the dark, pre-dawn period and a very few are nocturnal singers. Bird species in temperate regions, such as Alberta, where the photoperiod is a well-defined light-dark cycle, possess singing patterns that parallel the daylight portion of the cycle. In other words, they restrict their singing to the daylight hours.



This circadian singing pattern is dominated by the dawn chorus, the time of greatest singing activity, which occurs during sunrise and continues for a short time thereafter. There are several possible reasons why this is a preferred time of day for singing: highly favourable acoustical conditions in the environment for song propagation, a more efficient use of energy in the "dusky" dawn light than is foraging (which is the major competing activity), attraction of potential female mates or territorial advertisement to counter the high risk of intrusion by other males.

The high frequency of singing during the dawn chorus results in the presence of high levels of interference from the songs of other birds. To

counter this 'masking' effect, some species have evolved the use of certain strategies to maximize the propagation of their songs: they have adjusted their singing rhythms just enough to ensure asynchronous (i.e., offset) singing with nearby competitors. Some birds also use asynchronous singing during other times of the day or they possess very different circadian patterns, some to the extent that they have become late evening or nocturnal singers.

Singing patterns are not static phenomena. Changes in singing activity in relation to stages of the breeding season have been recorded by many researchers. These stages include the mate attraction, pair formation, incubation and nestling periods. Changes in singing activity due to breeding chronology have been found in many species, especially in regard to pair formation and the feeding of nestlings. This change is usually a steady decrease in, or complete cessation of, song output soon after pair formation, but some periods of subsequent increase have also been noted.

The effects of meteorological (i.e., weather) variables on the frequency and timing of bird singing have also been the subject of many research projects. These variables include air temperature, humidity, wind and general weather conditions. The most important factor, though, may be photoperiod, which is characterized by light intensity and the time of sunrise, both of which affect microclimatic conditions. Thus, these weather conditions have been found to have a direct influence on the frequency and timing of singing activity.

The main conclusions you should draw from this very short discussion of bird song is that the best time to survey birds by ear is during the early part of the breeding season and in the early morning hours, when winds are light and temperatures cool. This certainly does not mean you should never listen for birds at other times of the day or during different periods of the breeding season. In fact some birds never seem to stop singing (and yes, I am referring especially to that champion singer, the Red-eyed Vireo). But it does mean that bird communities change, and what you found one day may be different a couple of weeks later. This is one reason why atlasers are encouraged to visit their survey square at different times of the season; to maximize their chances of recording

breeding data for all species, not just the obvious (i.e., loud) species.

Bird Song Mnemonics

You can hear far more birds than you can see, a fact which becomes very apparent while standing in a dense patch of forest. So it's natural that birders would want to learn as many of the different bird songs as possible. The ability to identify birds by song (or call) alone is not only very rewarding in itself, but is also a valuable asset when doing field research, such as for the Bird Atlas Project or Breeding Bird Survey.

But learning to bird by ear requires a different set of skills than those used to identify birds visually. Bird songs can be fast, fleeting and somewhat confusing, even without considering that many species exhibit considerable variation in their songs.

There is only one way to learn the songs of each species and that is by hearing them, usually many, many times. Sure, you can listen to tapes and CD's of bird songs but they just aren't the same as getting out into the field and chasing down a song you hear in the distance. Putting a visual identification to a specific sound will help ingrain the song into your memory. Besides which, the song you hear on a tape may not be exactly as you hear it in the field. I used to have Song Sparrows nesting in my backyard in Quebec and became quite accustomed to their songs. When I moved back to Alberta, I had no idea what bird was singing away so lustily in the bush in front of me, until it popped into the open and I realized that it too, was a Song Sparrow. Variations in song types can be even more striking than variations in plumages.

One trick many birders use to recall a song for a species is to use mnemonics, those word tricks of assigning phrases to a particular song. For instance, almost everyone is familiar with the stereotypical mnemonic for the Hollywood Owl: *Hoo hoo hooooo*. The same thing can be applied to every species. A few of the more commonly used mnemonics are listed below.

Alder Flycatcher *fee-bee-o*

American Goldfinch *po-ta-to-chip*

Blue Jay *queedle-queedle-queedle...*

American Robin *cheer-up, cheer-a-lee, cheer-ee-o*

Baltimore Oriole *here, here, come right here, dear*

Barred Owl *who-cooks-for-you, who-cooks-for-you-all*
 Black-capped Chickadee *chik-a-dee-dee-dee*
 Common Nighthawk *beeer*
 Common Yellowthroat *witchety-witchety-witchety*
 Dark-eyed Junco – *riiiiing riiiiing* (like a rotary phone)
 Eastern Phoebe *fee-beee*
 Gray Catbird *meeeeee-ew*
 Great Horned Owl *who's awake? me too*
 Greater Yellowlegs *dear, dear, dear*
 Killdeer *kill-deeeeer*
 Long-billed Curlew *ker-leww*
 Magnolia Warbler *I'm-I'm-I'm-so-sweet*
 Mourning Dove *hooo-ah hoo-hoo-hoo*
 Mourning Warbler *turdle, turdle, turdle, two-to-you*
 Olive-sided Flycatcher *quick, three-beers*
 Ovenbird *tea-cher, tea-cher, tea-cher...*
 Red-eyed Vireo *where are you? and here I am*
 Red-winged Blackbird *konk-a-reeeeeeeee*
 Rose-breasted
 Grosbeak *cheer-up, cheer-a-lee, cheer-ee-o*
 Song Sparrow *Maids-maids-maids-put-on-your-tea-kettle-ettle-ettle*
 Song Sparrow *Hip, hip, hip hurrah boys, spring is here!*
 Song Sparrow *Madge, Madge, Madge pick beetles off, the water's hot*
 Tennessee Warbler *tika-tika-tika, swee-swee-swee, chay-chay-chay*
 Vesper Sparrow *listen to my evening sing-ing-ing-ing*
 White-breasted
 Nuthatch *tooy-tooy-tooy-tooy*
 White-crowned Sparrow *more, more, more cheezies, please*
 White-crowned Sparrow *oh dear Canada Canada Canada*
 White-crowned Sparrow *dear Sam Peabody Peabody Peabody*
 Willow Flycatcher *fitz-bew*
 Yellow Warbler *sweet sweet I'm so sweet*
 And of course, the species with the most complicated of bird vocalizations: Mallard *quack*



Atlas Breeding Codes

One aspect of a Breeding Bird Atlas that new surveyors have some difficulty with is determining which breeding code is the appropriate one to use in a given situation. Some of the codes are pretty straightforward while others are more troublesome. Some basic definitions for each breeding code are as follows.

Observed

X - *Species identified but no indication of breeding.* The bird is simply in the area and may or may not be breeding. It's the default code when you can't really assign any other codes.

Possible Breeding

H - *Species observed, or breeding calls heard in suitable nesting HABITAT.* A singing male is present in suitable

nesting habitat during the breeding season but there is no other evidence of breeding.

Probable Breeding

P - *PAIR observed in suitable nesting habitat.* Similar conditions as for code H but now there is a male and female together in the right kind of habitat.

T - *TERRITORY presumed through territorial nesting behaviour, or the presence of a singing male in the same area over a four-day time interval.* A male singing in a specific area (eg.,

one perch or a cluster of adjacent perches) is indicative of a nesting territory. So is agitated behaviour exhibited by either gender once you get close to a nest site (eg., from nervous flitting about and constant chirping to being dive-bombed). In the initial Bird Atlas Project, the surveyor had to observe these behaviours on two separate occasions at least one week apart. This time frame made it difficult to use this code in remote areas where access was of short duration so the code was amended to allow its use over a shorter time period.

C - *COURTSHIP behaviour between a male and a female.*

Some species exhibit definite courtship rituals, eg., Sharp-tailed Grouse dancing grounds, Common Goldeneyes with their head bobbing and grunts. For other species, courtship is more subtle, such as passing a stick back and forth. If you're not familiar with courtship rituals for a species, make sure you take careful notes and then consult a bird book once you return home.

V - *VISITING* probable nest site, but no further evidence obtained. This usually involves the male or female (or both) checking out an existing nest or cavity hole. Example: chickadees flying in and out of a tree cavity.

N - *NEST BUILDING* or excavation of a nest hole by wrens and woodpeckers. These species will either excavate holes for use as dummy nests, in which the female ultimately chooses the one she desires, or for feeding. For other species, use the code NB.

Confirmed Breeding

NB - *NEST BUILDING* or adult carrying nest material; used for all species except wrens and woodpeckers. A bird flying by carrying a stick in its beak would certainly fit into this category. However, since wrens and woodpeckers will excavate cavities which are not necessarily used for nesting, they are pigeon-holed [sorry, couldn't resist] into the Probable Breeding category of N.

DD - *DISTRACTION DISPLAY* or injury feigning. Some species will try to lure potential predators (i.e., you) away from their young by feigning an injury. Example: a Killdeer peeping loudly and dragging a 'broken' wing along the ground is trying to entice you away from its hidden young.

UN - *USED NEST* or eggshells found. This is a good code to use only if you are sure which species was using the nest. Trying to identify a species just through egg markings can be very tricky and should only be used by experienced birders.

FL - *recently FLEDGED* young or downy young. Young birds are a good confirmation of breeding success in your square but only if the time of observation is still within the breeding season. The young must be incapable of sustained flight and restricted to their natal area by dependence on adults or limited mobility. Once late summer arrives (late July and

beyond), the young of many species are more experienced fliers and can move considerable distances, so while you may see them in your atlas square, they may have nested elsewhere.

ON - *OCCUPIED NEST* indicated by adult entering or leaving nest-site or adult seen incubating. This one is self-explanatory.

CF - *CARRYING FOOD*; adult seen carrying food or faecal sac for young. This is the most efficient of the breeding codes to use, since the only reason a bird would be carrying food is to feed its young. So, if you can glance up from your morning coffee and newspaper, and see a bird flash by the window with a beak full of bugs, you've got confirmation of their breeding status.

NE - *nest with EGGS*. This one is self-explanatory.

NY - *nest with YOUNG*. Ditto as for NE. However, if you find a nest in which one of the young is considerably larger than the others, and doesn't look quite the same, chances are you are looking at a Brown-headed Cowbird nestling. They are a parasitic species in that they do not make their own nests but will lay an egg into the nests of other species.

Project Supporters

A project of this magnitude would not be possible without the financial and in-kind support of a variety of companies and organizations. The Federation of Alberta Naturalists would like to thank the following organizations for supporting the Alberta Bird Atlas project: Ainsworth Lumber Co Ltd., Alberta Conservation Association, Alberta Pacific Forest Industries Ltd., Alberta Sustainable Resource Development, Mountain Equipment Co-op, Nexen Inc., North American Waterfowl Management Plan, Slave Lake Pulp, Sundance Forest Industries Ltd., Weldwood of Canada Ltd. and Weyerhaeuser Company Ltd.

Bird Conservation Quiz

(adapted from The Nature Conservancy bird quiz.
The answers can be found on the following page.)

1. There are more than 9,000 bird species in the world. About how many of these occur in the western hemisphere (i.e., North & South America)?

- a) One quarter
- b) One half
- c) Three quarters
- d) All of them

2. In Latin America, how many bird species are considered to be of conservation concern?

- a) 700
- b) 1,000
- c) 1,200
- d) 1,800

3. What is the fastest growing outdoor recreational activity in the United States (and probably Canada as well), having increased by 235% since 1982?

- a) Hiking
- b) Swimming
- c) Bird Watching
- d) Skiing

4. What bird is the fastest animal on earth, clocked at speeds of over 200 miles per hour when pursuing its prey through the air?

- a) Chimney Swift
- b) Tree Swallow
- c) Peregrine Falcon
- d) Golden Eagle

5. What is the smallest bird in the world, averaging a weight of less than 0.07 ounces and a length of 2.2 inches long?

- a) Bee Hummingbird
- b) Black-capped Chickadee
- c) Jamaican pewee
- d) Ruby-crowned Kinglet

6. What percentage of all shorebird species that breed in the North America have suffered significant population declines?

- a) 25%
- b) 50%
- c) 65%
- d) 80%

7. In North America, which group of birds have shown the most consistent declines of any group of birds monitored by the North American Breeding Bird Survey?

- a) Grassland birds
- b) Forest birds
- c) Shorebirds
- d) Wading birds

8. Which of these is considered a threat to birds of the Americas?

- a) Loss and/or destruction of habitat
- b) Fragmentation of habitat
- c) Illegal pet trade
- d) All of the above

9. In some forests of North America, what percentage of the birds migrate and spend the winter farther south?

- a) 20%
- b) 50%
- c) 70%
- d) 90%

10. Approximately how many birds fly south from the temperate zone each winter?

- a) 50 to 100 million
- b) 200 to 500 million
- c) 500 million to 1 billion
- d) 2 to 5 billion

Bird Atlas Gazette Submissions

If there is anything you would like to see included in upcoming issues of this newsletter, such as articles, news, planned events or other items of interest, please contact the newsletter editor.

Submissions about your bird atlas experiences, tips on how to become a better birder or stories about birds and birders in Alberta are always welcome.

Bird Atlas Regions

To facilitate administration of the Project, the province has been divided into ten separate Atlas Zones. The locations of each zone are illustrated below, along with the list of the Coordinators for each region and their contact information.

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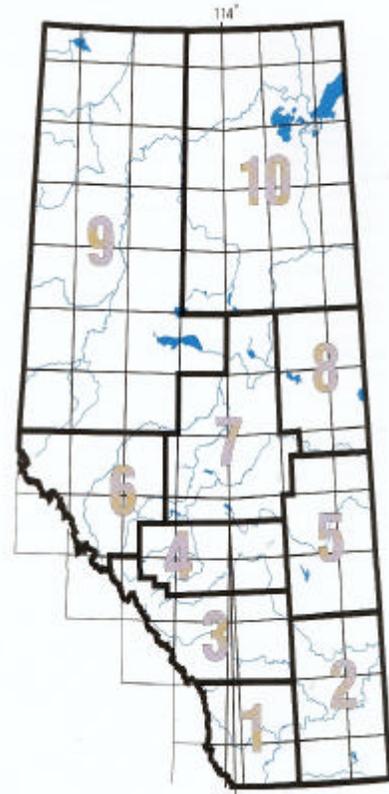
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Answers to the Bird Conservation Quiz

1 b. Approximately 4,500 bird species — almost one half of the world's bird species — are found in the western hemisphere.

2 c. Over 1,200 bird species in Latin America are either decreasing in population or face serious threats.

3 c. Bird watching is the fastest growing outdoor recreational activity in the United States, according to the National Survey on Recreation and the Environment.

4 c. The Peregrine Falcon is the fastest bird on earth.

5 a. The Bee Hummingbird of Cuba is the smallest bird in the world.

6 b. 50% of all shorebird species that breed in the United States have suffered significant population declines.

7 a. Grassland birds have shown the most consistent declines of any group of birds monitored.

8 d. The destruction, fragmentation and complete loss of habitat, as well as the illegal pet trade, are considered threats to birds of the Americas.

9 d. 90% of the birds in some North American forests migrate south for the winter.

10 d. An estimated 2 to 5 billion birds escape the North American winter each year by migrating south.

Recent Findings in Bird Biology

A paper published this past January in the prestigious scientific journal *Nature* contained one of the first comprehensive reviews of research studies which indicates the presence of the widespread effects of global climate change. The abstract from that paper is reproduced below.

Over the past 100 years, the global average temperature has increased by approximately 0.6°C, and is projected to continue to rise at a rapid rate. Although species have responded to climatic changes throughout their evolutionary history, a primary concern for wild species and their ecosystems is this rapid rate of change. We gathered information on species and global warming from 143 studies for our meta-analyses. These analyses reveal a consistent temperature-related shift, or 'fingerprint', in species ranging from molluscs to mammals and from grasses to trees. Indeed, more than 80% of the species that show changes are shifting in the direction expected on the basis of known physiological constraints of species. Consequently, the balance of evidence from these studies strongly suggests that a significant impact of global warming is already discernible in animal and plant populations. The synergism of rapid temperature rise and other stresses, in particular habitat destruction, could easily disrupt the connectedness among species and lead to a reformulation of species communities, reflecting differential changes in species, and to numerous extirpations and possibly extinctions.

This study reviewed projects completed all over the world and some of those studies found that four bird species in Alberta are among the organisms affected, at least potentially, by climate change. These species, and their response to global warming, are:

- Snow Goose - over a 10 year period, their egg laying dates have advanced by 14 days. Although Snow Geese do not breed in Alberta, this result would indicate that their migration through the

province is occurring slightly earlier each year.

- American Robin - there are indicators that their date of arrival in the spring may be occurring earlier, by as much as 8 days over the past two decades.
- Tree Swallow - their breeding period has clearly started, on average, three days earlier than it did a decade ago.
- Blue-headed Vireo - their spring arrival time may be occurring sooner although this conclusion is not yet certain.

(Source: Fingerprints of global warming on wild animals and plants. By Terry.L. Root, Jeff T. Price, Kimberly R. Hall, Stephen H. Schneider, Cynthia Rosenzweig and J. Alan Pounds. 2003. *Nature* 412: 57-60).

Contact Information

There are a variety of people you can contact to either volunteer for the Bird Atlas Update Project or to simply obtain more information. We suggest that you start with the Regional Coordinator for your area.

Other organizations or people you can contact include the following:

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**The Federation
of Alberta Naturalists**