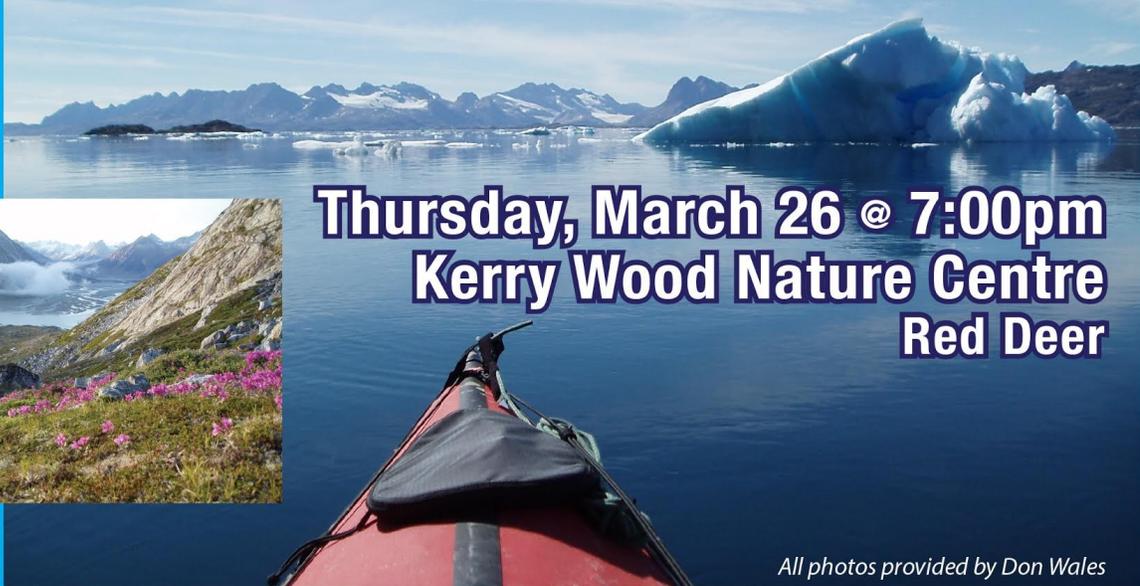


BIODIVERSITY CONTRASTS: Iceland & Greenland



Thursday, March 26 @ 7:00pm
Kerry Wood Nature Centre
Red Deer

All photos provided by Don Wales

Although the Tasiilaq area of southeastern Greenland and Hornstrandir fjords of northwestern Iceland are approximately at the same latitude, there is a significant difference in their natural and geological history. Come explore the remotest parts of these two fascinating islands by ocean kayak and on foot and find out how ocean currents have shaped their biodiversity.



Don Wales and a friend from Newmarket, Ontario have spent almost every second summer for the last twenty five years exploring destinations in the Canadian Arctic, the west coast of Labrador, Greenland and Iceland. Although now well past his prime, Don's focus is now less on adventure travel and more on the exploration of northern biodiversity and especially plant adaptations to these sometimes harsh environments. Don's last two trips to the north were to eastern Greenland and northwestern Iceland.

- Free admission
 - Open to the public

SPONSORED BY



THE SEASONAL SIGHTS AND SOUNDS OF ALBERTA: WOODPECKERS SIGNAL SPRING!

by Sally Stuart

As a new board member, instead of writing about myself I thought it would be much more informative to let you know a little about one of my interests.

Educated as a zoologist, I have for the last 16 years been engaged in a project attempting to record the wildlife found on the 11 acres on which my family and I live, close to Sylvan Lake. Initially I started out in the spring of 1999 recording the sounds of frogs; the noise was overwhelming, it was the last thing you heard as you fell asleep at night. Gradually the sounds of other species (mostly birds) were recorded, my husband added photographs and so the documentation process expanded.

So let me talk about a seasonal sound which signals the start of spring. Lying in bed at about 7:00 AM on a Saturday morning in mid-January, I am awakened by the sound of drumming. Now obviously woodpeckers do drum year round, but they do so far more in late winter and early spring than other seasons.

Woodpeckers signal the start of spring at a time that humans consider mid-winter, but the lengthening daylight already alerts birds to the start of spring. The drumming advertises territory, signals to attract mates and allows birds to communicate. Usually both males and females drum, picking trees based on quite specific resonant properties in the wood or other materials.

My thoughts on that January morning were that I should get up and record the sound, although it is hard to leave a nice warm bed! Looking high up in the tree it was impossible to tell if it's one of the resident Hairy Woodpeckers (*Picoides villosus*) or a Downy (*Picoides pubescens*) that was drumming, but later when the sound is put into software which transforms the audio song into a visual picture called a sonogram, all is revealed.

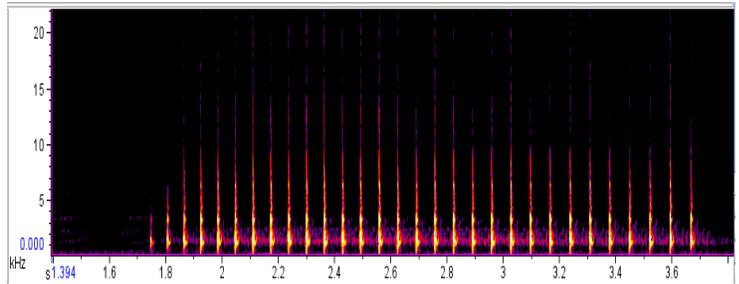
The sonogram is an amazing tool; Donald Kroodsma in his book "The Singing Life of Birds" drew me to the tool many years ago. Cornell Lab of Ornithology has a great piece of software for producing sonograms called Raven, one version "Raven Light" is available to download for free. Such software was developed for professional scientists like Kroodsma to analyse bird sounds and learn more about how animals communicate. It allows you to observe both the frequency of the sound and the speed at which it occurs.



Photo by Myrna Pearman

Although we can hear about the same range of frequencies as most birds, humans are really not able to differentiate individual sounds produced at intervals close to 0.1 seconds, hence when listening to bird songs we often miss some of their nuances. The software also has the ability to slow the sound down; the sound of the bird songs when slowed down is surreal and fascinating. As Kroodsma warns, once you have tried this, it is somewhat addictive.

The sonogram below shows a Downy drumming, recorded in 2010 in a poplar tree just outside our house.



As in a typical sonogram, the time in seconds is seen on the horizontal axis and frequency is shown on the vertical axis in kHz. The bars indicate each time the beak hits the tree. Count between any interval of 1 second and you will observe the incredibly consistent rate of about 15 drums per second.

Hairy Woodpeckers drum somewhat faster, usually around 25 per second, and other woodpeckers also have characteristic rates. When the Yellow Bellied Sapsucker (*Sphyrapicus varius*) returns in late April to early May it drums at a rate of about 13 or 14 per second, but it is interesting as it produces an initial three or four single rapid blows followed by a series of five double strikes. Due to the limitations of human hearing, we only hear the first blow of the double strike, but both are visible on a sonogram. Furthermore, when the sound is slowed down the two separate hits can be clearly heard with the first of the pair being somewhat louder than the second.

As a biologist teaching anatomy and physiology, I always try to relate structure to function. How does a woodpecker manage to hit its beak hard against a tree trunk, imagine 15 or more times each second, and not suffer concussion? Scientists have been trying to answer this question as it may have relevance to human concussion injuries, the design of sports equipment etc. So far, in my opinion, results are inconclusive.

It has been suggested that the structure of the skull may be unique and act mostly as a shock absorber (e.g., the bone has a spongy structure, there is only a narrow space between the meningeal layers around the brain in which Cerebral Spinal Fluid (CSF) circulates, and the hyoid bone is unique.) The small amount of CSF may reduce the way vibrations are

transmitted, however, only if nervous tissue and CSF have the same density. In ourselves as in the bird, the hyoid helps anchor the tongue, but in the woodpecker it wraps around the skull in an elaborate fashion. However, as none of these adaptations (with the exception of the hyoid) are so very different from humans, it may simply be that woodpeckers tend to drum with their beak perpendicular to the tree. Perhaps it is the twisting force that causes human concussion.

It never ceases to surprise me how fascinating the local wild-

life is and the diversity found even on our acreage alone.

There is still much scientists have to learn. I hope to continue writing about the “Seasonal Sights and Sounds of Alberta” in the following months, and in early summer to launch the “Seasonal Sights and Sounds of Alberta” website. It’s only another month or so before the frogs start calling!



Photo by Bonnie Mullin

NORTHERN PYGMY OWL

by *Bonnie Mullin*

Thanks to Judy and Bill, we had the opportunity to see this beautiful little bird. On Sunday, January 11 we headed to Calgary for a birding outing. Bill had heard that this little critter had been sighted at Bebo Grove in Fish Creek Park in Calgary. And as we pulled in to the parking lot there were the camera, binocular bedecked birders all lined up with cameras on tripods and binoculars all pointed up to a tall tree. I should have taken a picture of the throngs!! Soon we joined to snap our pictures too! The Northern Pygmy-Owl is a small little guy; length of 17cm (6.75in), wing span of 30cm (12in), wt of 70grams (2.5oz). It is not commonly seen in our area so many got to add it to their life list. It is active in the daylight, perching within trees on horizontal branches to hunt for small birds. We wondered about the chickadees flirting around it. Sibley’s describes it as “a very small owl, with relatively long tail that is often jerked sideways when perched. Note bold dark streaks on underparts, false eye-spots on nape, and dark head with short white eyebrow.” A few days later I heard it spoken about on CBC radio as an exciting sighting. They said birders were coming from quite a distance to see it.

TOWNSEND’S SOLITAIRE IN ERSKINE

by *Charley Bird*

We have many mature trees and various shrubs around our house in Erskine. On the deck to the north of our kitchen window we have a heated bird waterer and, to the east, we have two bird feeders and a hanging onion bag filled with beef suet. We love watching the birds in our yard.

Several winters ago, we had a Townsend's Solitaire show up and stay for about a month. This winter, another one showed up on December 27 and we have seen it regularly ever since.

Townsend’s Solitaires are seldom seen in Central Alberta as they are birds of the coniferous forests in the Rocky Mountains and foothills. They usually winter in the United States and Mexico.

Townsend's Solitaires are members of the Thrush Family. They are slim, gray birds with short beaks, a noticeable white eye ring, buffy wing patches and white sides on the tail. They are a little larger than a Bluebird and are smaller and thinner than a Robin.

We have never seen one at our feeders or on the suet bag. All

of our sightings have been at our heated bird waterer. Apparently, the birds we have seen feed primarily on berries. In our yard, we have Nanking cherries, highbush cranberries, apple trees and thorny buffaloberries while a neighbour has junipers. We also saw a bird on a rose bush where it may have been feeding on rose hips.

The image below was taken on a cold morning. As you can see, the bird is all fluffed up sitting on the edge of our heated bird waterer.



Photo by Charley Bird

BIRD FOCUS

Saturday, March 21: Meet at KWNC at noon. This will be a driving trip, looking for Great Horned Owl nests south of Red Deer. Come prepared to car-pool, bring snacks and drink.

Sunday, March 29:
1:00 PM at KWNC:
Instead of a Bird Walk, come in for a slide show presentation of Judy and Larry Boyd's trip to Florida



Call Judy at 403-342-4150 to confirm attendance at both of these events.

OTHER UNUSUAL WINTER BIRDS

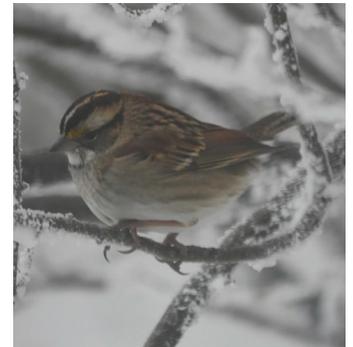
Some other unusual winter visitors have shown up in Central Alberta (clockwise from top left):

A lone **Gray Crowned Rosy-Finch** showed up in mid January at a backyard feeding station southeast of Blackfalds. *Photo by John Caddy*

A **Chukar** spent part of December at a feeder in Lousana. *Photo by Phil and Bev French*

Several **White-throated Sparrows** have been reported over the winter. *Photo by Phil French*

A **Harris's Sparrow** has been seen all winter at a feeder east of Penhold *Photo by Myrna Pearman*



Owls at EBF! The owls have been checking the nest out on the EBF site. Watch them live!
www.ellisbirdfarm.ca

The Red Deer River Naturalists, the first natural history organization to be established in Alberta, was incorporated as a society in 1906. The objectives of the society are to foster an increased knowledge, understanding and appreciation of natural history, and to support conservation measures dealing with our environment, wildlife and natural resources.

Annual membership is \$15.00 for individuals and \$20.00 for families.

Regular meetings are held at 7:00 p.m. on the fourth Thursday of most months at the Kerry Wood Nature Centre, 6300-45 Ave., Red Deer, AB. Non-members are welcome.

Members are encouraged to contribute to this newsletter. Deadline is the last Friday of the month.

FLOWER FOCUS

March 18th

Apiaceae

10:00 AM KWNC
March 18
Call Don Wales for details
403-343-2937



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