The Red Deer River Naturalist

RDRN Established 1906

EDITORS: MYRNA PEARMAN, SUSAN VAN DER HOEK JANUARY 2021

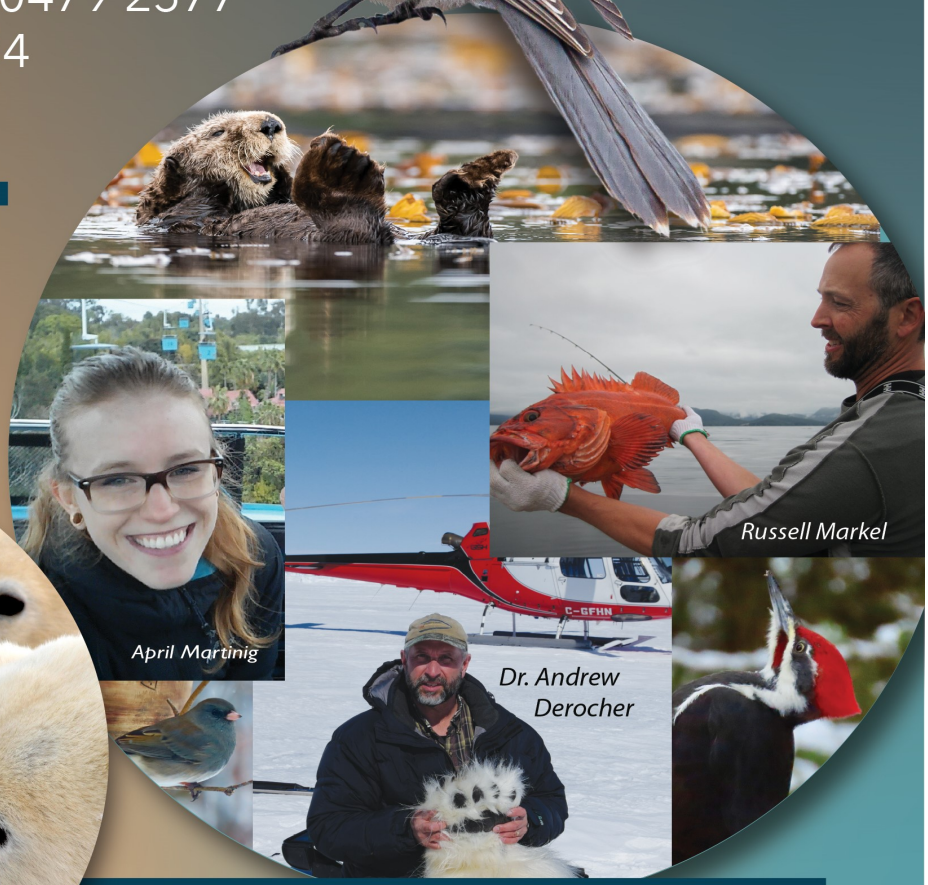
RED DEER RIVER NATURALISTS ANNUAL GENERAL MEETING

28 January 2021

7:30pm-9:00pm

RDRN Virtual Series

Create your zoom acount.
Join the meeting here:
Meeting ID: 823 0479 2577
Passcode: 350604



Reports, Achievements, Events, Speakers and Much More!

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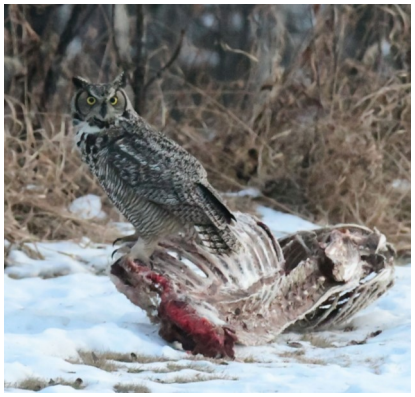
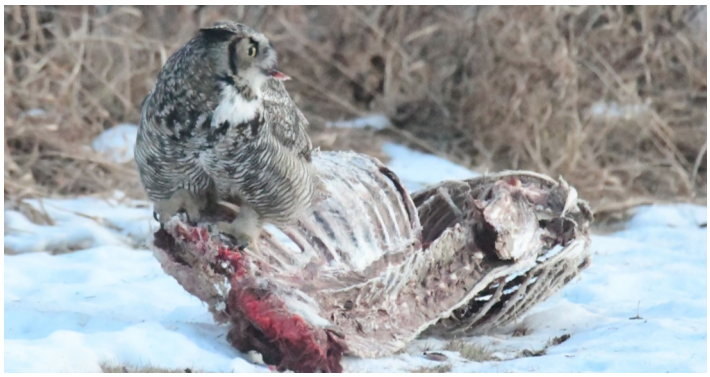
Jumping Mouse: Don Auten kindly shared these images of a Jumping Mouse. The photos were captured by his trail cam about 16 km east of Ponoka. Don had set the trail cam on a beaver lodge, on the lake-side edge of a cattail bed, about 12 m from shore. The images were sent to mammal expert, Tim Showalter. Tim concluded that it is likely a Western Jumping Mouse (*Zapus pinceps*) and not its cousin, the Meadow Jumping Mouse (*Zapus husonius).* He explained that positive identification could be confirmed only by an examination of the details of the teeth. Tim—who studies small mammal distribution in Alberta by examining owl pellets—also pointed out that his research indicates that Great Horned Owls occasional take Jumping Mice, usually *Zapus pinceps*, while Northern Saw-whet Owls and Boreal Owls often take *Zapus husonius*. Thanks to Don and Tim for helping us learn about these rarely seen little mammals!

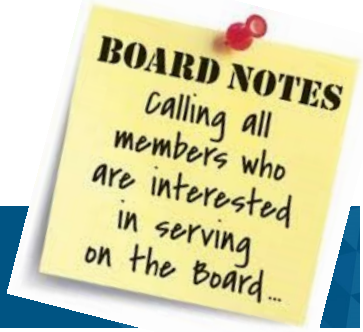
Great horned owl on Carcass

Jim Potter of Delburne reports that a Great Horned Owl has been coming each night for the past several weeks to peck away at a deer carcass in his yard. It is unusual for Great Horned Owls to scavenge, as they prefer to take live prey.





We are actively recruiting for the position of President and for additional board members. Contact rdrn.nature@gmail.com



Board Notes

Greetings from Tony, Don, Rod, Bob, Keith, Daryl, Rick, Anto, Sarah, Cliff and Susan

We all wish you a Happy New Year!

- Our website www.rdrn.ca, Facebook, Twitter #RDriverNats and Instagram @RDriverNats accounts are active. We now have 455 Facebook members, 259 Twitter members and 128 Instagram followers.
- We are organizing for 2021, including welcoming new board members at the January 28th AGM. There are nine board meetings a year. Please give this some consideration.
- Dr. Sally Stuart, our Speaker Coordinator, has organized more virtual series speakers starting in February 2021.

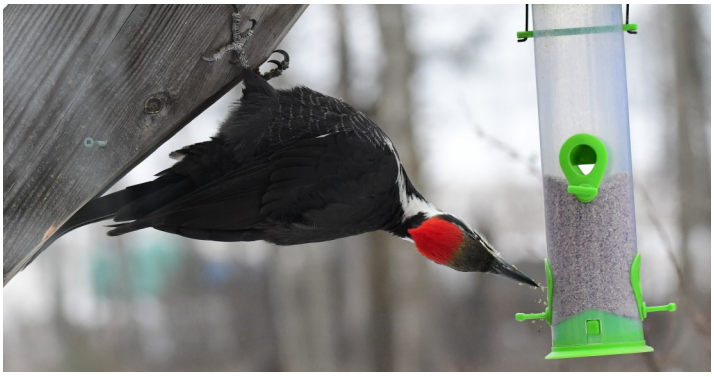
Reminder: have you sent in your membership dues for 2021?

DID YOU KNOW? *By Susan van der Hoek*

A family of **squirrels** is called **a dray**, while a group of unrelated **squirrels** is known as a **scurry**. The Red Squirrel, *Tamiasciurus hudsonicus*, is the most commonly seen member of the squirrel family in Alberta. Red squirrels don't hibernate during the winter – in fact, they stay active throughout the season.

Seasonal Sights and Sounds of Alberta: Feeding Specializations of Woodpeckers

By Dr. Sally Stuart



On December 27th, outside our bedroom window, we heard a woodpecker drumming. Birds are already sensing the lengthening of the daylight hours and soon the "woodpecker wars" will begin, as they battle for territory and breeding rights. Our small acreage is partly covered in poplar trees, many of which are at the end of their lives. Dead and unsightly in appearance, these snags represent an abundant source of food for woodpeckers, teeming with an invisible world. Some of our trees are so decrepit, they are really just a mass of holes and cavities. It defies the imagination as to how they are still standing.

The older poplar trees provide perfect habitat for our three common year-round woodpecker species, the Downy, Hairy and Pileated. This past summer we were lucky to have a family of Pileated Woodpeckers spend several weeks foraging on our land. At one point, we observed the mother feeding one of her fledglings while the other youngster hopped along the fence probing for edibles. While watching the video of this activity, I was delighted and fascinated to see their incredible pink, thin, rapidly moving tongues.

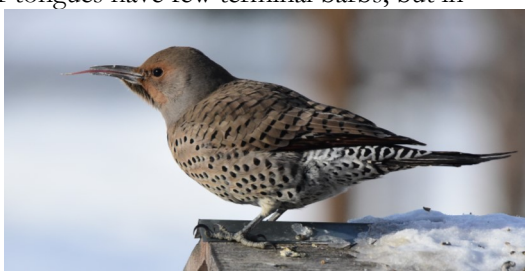
While bird tongues differ from human tongues (woodpecker tongues are rigid with poorly developed muscles), both are supported by the hyoid bone. This bone evolved from one of the gill supports (pharyngeal arches) in fish. When vertebrates moved onto land, in the Devonian period approximately 400 MYA, the pharyngeal arches were no longer required. Thus, they assumed new roles, with one arch becoming the hyoid bone, anchoring the muscles of the tongue. This evolutionary novelty enabled the development of mobile, often fleshy tongues and opened up a new world of feeding possibilities. It is speculated that an ancient gene mutation led to the elaborate and elongated hyoids found in some woodpecker species and thus enabled a variety of unique feeding mechanisms.

The hyoid is a complicated Y-shaped structure, made of bone and cartilage which extends to the tip of the tongue. When the tongue is not extended, the hyoids—surrounded by a sheath of muscles—wrap bizarrely around the skull and come to rest within the nasal cavity. Contraction of these muscles pushes the hyoids forward, which allows the long tongue to project well beyond the beak.

Not all woodpecker tongues are the same. It is the tongue of the crevice feeders (the species that drill into the wood) which I find most fascinating and describe below.

It was once thought that woodpeckers spear their prey items, usually the larvae and grubs of wood boring beetles, with the point of their tongue. However, a 2004 study (Villard and Cuisin) examined the tongue of the Guadeloupe Woodpecker, found in the French West Indies, and determined that the system is more complex. When this woodpecker's beak is inserted into a cavity, powerful muscles enable its tongue (which measures 55 mm) to rapidly extend up to 40 mm beyond the tip of the bill. The tip of the tongue is covered in sensory pressure receptors called Herbst corpuscles (which are common in animals) and an abundance of salivary glands in the mouth coat the tongue in sticky mucous. This combination of powerful, rapid extrusion of the tongue and very sticky saliva enable the birds to capture ants and other small insects. The 12-mm end of the tongue possesses backward-facing barbs, which are common in some woodpecker species. Barbs resemble stiff hairs, presumably made from the epidermis. These barbs are used to hook the grubs so the tongue can pull the prey out of the hole. To help it reach into all the tiny tunnels, the birds quickly move their heads from side to side so they can reposition the very maneuverable tongue tip. As a defence mechanism, larvae will retreat deeper into tunnels and use their hooked legs to grasp the wood. Some grubs can also be ferocious, using powerful muscular mouthparts to try to bite the woodpecker's rapidly moving tongue. Barbs get worn and broken due to constant friction but they continually regrow. Young woodpeckers, whose tongues have not reached their maximum length, are barbless to protect their parents' tongues. They thus rely more on saliva for obtaining insects.

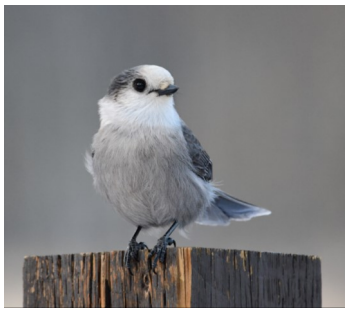
Scientist have long known about the basic structure of woodpecker tongues. A classic paper by Lucas (1895) showed that ant-loving flicker tongues have few terminal barbs, but instead rely on massive salivary glands to trap ants. Sapsuckers drill into the bark of trees to feed on the sap and entangle insects. Their tongues are not very extendable, but the edges have fringes of small, stiff bristles to which sap can adhere. Their tongues also encourage the sap to flow using capillary action.



We value our unsightly old trees; their importance to the environment is often underrated. Next time you have the opportunity, and encounter a rotten tree, pry off a piece of bark and examine it carefully. You may be surprised at what you find.

NOTICE: All RDRN Bird/Insect walks have been postponed until further notice

A Letter from Dr. David Bird, Champion of the Canada Jay



Hi everyone. You are receiving this letter because I know you are someone who cares about wildlife in Canada. For the last five years, I have been heading a national team of folks who wish to see the Canada Jay anointed officially by our federal government as our country's national bird. While the bird was proclaimed the winner of the 'contest' run by the Royal Canadian Geographical Society four years ago and despite the fact that many Canadians now consider it to be our national bird, we have thus far not been able to convince the federal government to take that final step and ratify it in parliament.

Why do we need a national bird? Well, I will not bore you with a list of all the good things that birds do for humans but allow me to say this. According to Wikipedia, 106 of the world's 195 countries have official birds. But Canada is not listed—we do not have one! Yet our country does have national symbols—the beaver, the maple tree, and two sports. We've even got a national horse! But alas, no official bird.

It is the team's firm belief that one could not find a more Canadian bird than the aptly named Canada Jay! This smart corvid breeds in every province and territory and its range almost mirrors our country's borders. It is extremely friendly, often landing on an outstretched palm even without food, and is among the hardiest of all of our birds, staying year-round in our country and sometimes incubating eggs at -30 C! It is not hunted or killed for any reason and its popular name, *Whiskyjack*, originates from our First Nations people. Best of all, it has not yet been chosen to represent any geographical entity, unlike the Common Loon (Ontario) and the Snowy Owl (Quebec)! As for wildlife conservation, the Canada Jay presents itself as an excellent 'poster child' for our boreal forests, for our national and provincial parks, and for climate change. It not only depends on our boreal forests but also on our cold winters to keep its stored food from rotting. A small promotional book entitled "*The Canada Jay as Canada's National Bird?*" authored by eight of us will be mailed to federal politicians this coming March. Robert Bateman has written the foreword. We are also launching a web site to accompany the book's release. Most importantly, Senator Diane Griffin is going to put forth a 'motion' on this matter to the Senate after the book's release and with much media attention. The *Society of Canadian Ornithologists* has unanimously endorsed the Canada Jay and the Board of Directors of *Birds Canada* also unofficially supports the bird.

What can you do, at this moment in time, for the cause? Well, something very simple…..just sign the petition at the following link: https://www.change.org/Repatriate_the_Canada_Jay (yes, I know that it is worded weirdly but it was originally used in a petition to get the old name back). If you want to do more than that, you can donate anywhere from $2 to $50 to *Change.org* to broadcast the petition to even more Canadians.

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 7:30 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. The deadline is the last Friday of the month.

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