

# The Warbler



Summer 2014



*The LSLBO was the place to be for a Canada Warbler this summer.*

## Executive Director Update By Patti Campsall

Although this is officially the “Summer” warbler, it is definitely fall up here. The poplar leaves are turning golden yellow, there is a chill in the morning air, and the forest is suddenly very quiet. The beautiful songbirds are quickly departing and we are savouring each one because it could be the last one of its kind that we see for a very long time! The good news is that the late spring migration has translated into a delay in the departures of many of these neo-tropical migrants, and there are still some great birds being spotted and banded at the LSLBO on the way to their southern wintering grounds. I always marvel at the incredible journey that these tiny birds undertake each summer to breed in the Boreal Forest.

The Boreal Centre for Bird Conservation (BCBC) has also grown deceptively quiet after the hustle and bustle of the summer tourist season as the children have all returned to school, even our summer students! But it is a bit of an illusion as behind the scenes, our educators are busy getting ready for the start of another busy fieldtrip season this fall for local students. And of course, there are some special events for families in the works as well.

As always, we have great people delivering great programs. So fall is also the time to reflect on our many accomplishments this summer!

The Lesser Slave Lake Bird Observatory programs were in great hands with the return of Bander in Charge, Richard Krikun and Assistant Bander, Nicole Linfoot for another season. It would not be the same without them! Their incredible dedication and expertise enabled the LSLBO to successfully complete all of our core avian monitoring programs as well as provide field support for two Canada Warbler Collaborative Research Projects. The LSLBO continued work with Dr. Erin Bayne at the University of Alberta on our joint research project on the breeding and territory habitat requirements of the Canada Warbler. This year, work moved beyond Lesser Slave Lake Provincial Park to compare breeding behavior in new research locations. This long term research work will provide important information for the upcoming Federal Canada Warbler Recovery Strategy. We also assisted with an exciting new project as LSLBO staff assisted Dr. Kevin Fraser with the University of Manitoba on a new Canada Warbler Geolocator Project (See page 5). It is exciting for the LSLBO to be playing an instrumental part in such important research on this threatened species!

With the arrival of Ceiridwen Robbins, the new Alberta Parks Visitor Service Coordinator (see page 4) plus our two skilled educators Cori Klassen and Susie vanderVaart here for another summer, we were able

*(Continued on page 2)*

### NESTED IN THIS ISSUE:

Executive Director Update	1
2014 Banding Lab update	3
AB Parks Visitor Services	4
Canada Warbler Geolocator project	5
Enviro-Quest Camp	6
Volunteer Journal	7
Invasion of Forest Tent Caterpillars	8
Songbird Festival	10
Speciation: Name that Bird!	11
Canine Encounters	13
Past, Present and Future (?) staff	15
Thank you's!	16

*(Continued from page 1)*

to deliver some amazing and creative programs to an incredible number of participants. School fieldtrips, summer campground programs, tourists at the Boreal Centre, and LSLBO Banding lab tours all kept us hoping this summer. They had over 3250 participants enjoy great education and interpretive programs this season including our Enviro-Quest Science Camp for teens that got rave reviews from the campers (see page 6).

Unfortunately, spring was also a very difficult time at the LSLBO as we lost a very promising young field assistant, Ryan Cathers, in a tragic accident on his days off (see below). We would like to thank our friends at the Beaverhill Bird Observatory for sending up some of their staff to help us get our programs completed during a difficult time for our banding staff.

We always credit the great staff for our program success, but it is thanks to the support of many organizations behind the scenes. So I would like to acknowledge some of our key supporters who really made this summer happen.

The **Alberta Conservation Association (ACA)** has been an avid long term supporter of the LSLBO monitoring programs. Each year, the ACA Conserva-

tion, Community and Education Grant program supports projects that benefit Alberta Wildlife populations and habitat. This year, the LSLBO received over \$25,000 from this grant program for wages and support costs for our monitoring and research programs.

Local forest industry stakeholders continue to be long term supporters of the LSLBO. **Vanderwell Contractors** provided core funding for our monitoring programs plus supports two long term biodiversity monitoring projects. **West Fraser and Tolko Industries** are sponsors of two very successful education projects in partnership with the **Lesser Slave Forest Education Society (LSFES)** funded by the **Forest Resource Improvement Association of Alberta (FRIAA)**. Our educational partnerships with the LSFES and **Alberta Parks** were instrumental on another successful summer of fun and education at the Boreal Centre for Bird Conservation. And last but not least, The **Slave Lake Region Tri-Council** funded our FireSmart educator who helped with a busy spring and summer season.

We have wonderful supporters both big and small, but some of our most dedicated supporters are our LSLBO members. Thank you for renewing your memberships each year and for all the cards and notes telling us how much you enjoy our work. We love them. Thank you!!

### ***In Memory of Ryan***

Ryan Cathers was a very talented young birder who was hired as our new field assistant at the Lesser Slave Lake Bird Observatory this spring. He came to us from Nanaimo with lots of great experience in the Vancouver Island Bird Banding community and we were so excited to have him work with our banders, Richard and Nicole. He had only been with us a few weeks with us, when he was lost in a tragic motor vehicle accident near Westlock. But in that short time, it was obvious that he was going to be an amazing bird bander. He was knowledgeable, skilled, excited to learn, and so passionate about the world of birding and conservation. Each day was a wonderful birding adventure for Ryan and he couldn't wait to share his birding highlights with everyone at the BCBC. As spring finally arrived at the LSLBO, he was thrilled to see what new boreal species awaited him in the nets each morning.

Our thoughts go out to Ryan's family and many friends in Vancouver island's birding community. It was an honour to have met such an amazing young man.



# 2014 Banding Lab Update

**By Richard Krikun  
Bander In Charge**

This summer marks the 21st year that the Lesser Slave Lake Bird Observatory has been conducting bird monitoring and research activities. As usual, the LSLBO is having a super packed summer with our core monitoring programs and assisting with a few extra collaborative projects.

Our summer began on April 23 when we opened the banding station for spring migration monitoring. The weather for the first few weeks was poor with lots of cold weather and excessive amounts of wind. We were not able to set our mistnets for a full days' worth of banding until mid-May. The late spring weather seemed to have affected the migration timing for many species. Several species were noticeably late to arrive while the peak migration for other species was delayed by a week to ten days. The general consensus among banding stations across Canada was that migration was later than usual. Eventually the birds did arrive and we had some great days of spring migration banding and



observations. The banders had some personal highlights. Nicole was able to band her first veery and chestnut-sided warbler, while Richard spotted his very first great-crested flycatcher.



After spring migration ended, the banding staff began running the MAPS (Monitoring Avian Productivity and Survivorship) program. It was a

great banding season with over 300 birds banded, which will be the second or third highest banding total in the 21 years of MAPS. Not only was the banding great, but Nicole was able to band her first yellow-bellied flycatcher.

Fall migration monitoring began on July 12 and will run

until the end of September. We are hoping for a busy season with some great birds. It will be interesting to see if the late spring arrival time has any impact on the fall migration timing. Happily, Richard banded his favorite bird already, a red-breasted nuthatch. He will have to have a super amazing encounter to beat that. We are also be conduct northern saw-whet owl monitoring through



September and October.



We also had the opportunity to assist with a couple of other project. A Canada warbler tracking study was being conducted at Hilliard's Bay by

the University of Alberta. We joined the field crew there for a couple days in June to assist in attaching radio transmitters onto Canada warblers. We also assisted in deploying geolocators onto Canada warblers within the Lesser Slave Lake Provincial Park in part of a study being conducted by the University of Manitoba.

With all the excitement there was some sadness. Our field assistant, Ryan Cathers, was lost in a traffic collision on his days off after only a few weeks of being here. He was an excellent and keen birder who was well on his way to becoming a very good bird bander. He was very involved in the birding community in his hometown of Nanaimo and was active in projects that would greatly benefit the birdlife in his area. He will be greatly missed by many, including us.

## Fall Banding Update as of September 15, 2014

Total Birds Banded: 1702 of 53 different species

Top 5 Species Banded: Myrtle warbler (336),  
Ovenbirds (296), Swainson's thrush (251),  
Tennessee Warbler (147), American redstart (67),

## Alberta Parks Visitor Services nearly one year in...

**By Ceiridwen Robbins**  
**AB Parks Visitor Services Coordinator**

The last week of August marks the one-year anniversary of my first glimpse of the Boreal Centre for Bird Conservation (BCBC) and the Lesser Slave Lake Bird Observatory (LSLBO). I'd travelled to Slave Lake for



my second interview, which was held at the BCBC. Patti was here to greet me and show me around briefly while I waited for the interview committee to invite me in to the boardroom. She was really friendly and enthusiastic about her work here; chatting with her, it was hard to remember I was supposed to be nervous about my upcoming interview. I remember wondering if she was observing me as part of the interview process. After I'd moved here, excited to begin my new career as Visitor Services Coordinator, she told me she had, in fact, been doing just that.

It's been a pretty busy year for me, both personally and professionally. I've made some friends, bought a home, and become involved with a couple of volunteer organizations in Slave Lake. At work, I've been climbing a steep learning curve while simultaneously trying to reboot interpretation programming at the park. I've gotten to know some great people who are as dedicated to nature education and research as I am; they include, of course, Patti Campsall, Cori Klassen, Susie vander Vaart, MJ Kristoff, Richard Krikun and Nicole Linfoot. Highlights from the past almost-a-year include entering a float in the Christmas parade, hosting Christmas in the Park, helping out with a **lot** of school programs, attending the Swan Festival in Grand Prairie and my first ever Songbird Festival here, meeting long-time volunteers Bill and Sue Walsh, putting on my first campfire sing-along in many years, and my first "professional" theatrical production ever. Wildlife Love Connection, the Lesser Slave Lake adaptation,

premiered August 2 at the Marten River Campground amphitheatre.

There's a lot of work to do yet! Patti and I were busy attending tourism workshops this spring, and with the assistance and expertise of Alberta Tourism, we just completed a professional photo shoot of visitor experiences in Lesser Slave Lake Provincial Park, including of course, the awesome LSLBO banding lab tours, which we can use to create new brochures for the BCBC and the park. That's just one of our winter projects. We already have some school programs booked, with more sure to follow, and we've got some special events in the planning stages, including another Family Owl Night, Halloween at the BOOreal Centre, and Christmas events. We're discussing the possibility of keeping the centre open on weekends after the holidays so that we can make better use of our ski and snowshoe lending program, and somewhere in there, I need to think about refreshing interpretation signs on some of our trails, as well as developing some new social studies based school programs in conjunction with the curriculum renewal that's ongoing right now.

It's hard to believe I've been here nearly a full year. Some days, I feel like I've accomplished a lot, and others, I keenly feel that there is still so much more to do. That's a good thing; it means I'll be challenged and engaged for many years to come. I'm really looking forward to discovering what the staff of the Lesser Slave Lake Bird Observatory and Alberta Parks will be able to do as we move together into the future.



# Canada Warbler Geocator Project

**By Richard Krikun  
Bander In Charge**

This summer, the Lesser Slave Lake Bird Observatory collaborated with Dr. Kevin Fraser from the University of Manitoba to map the migration routes of Canada warblers breeding in the Lesser Slave Lake Provincial Park using light-level geolocators. A geocator is a small data-logger that records the amount of daylight it receives each day, which can calculate the longitude and latitude, and be used to determine the bird's daily location. Geolocators provide detailed information on migration routes, migration timing, stopover sites, and overwintering areas. These geolocators also record temperature, which will help determine the altitudes that the birds migrate.

Canada warblers are a species at risk and the LSLBO has recently conducted a 2 year breeding habitat study. While there is little known about Canada warbler breeding habitat requirements, there is even less known about their overwintering areas and habitat requirements. It is speculated that loss of overwintering habitat is a major factor in Canada warbler population declines. Canada warblers are Neotropical migrants and overwinter in the mid-altitudes of the Andes through Columbia and Peru. The data obtained from the geolocators will help identify important overwintering areas, as well as critical migration stopover sites, allowing conservation biologists to develop recovery strategies that will focus on protecting these areas.

Geocator technology is becoming popular in migration studies of songbirds. It has been used on several species, including a current project on purple

martins in Alberta. The units are lightweight, which provides a means to obtain detailed data on specific movement patterns on birds that are too small for GPS or satellite recorders. The device sits on the lower back of the bird and is held on by a leg harness. A light sensor sticks out from the feathers to record light levels. All the information is stored in the unit – it can't transmit out, which is one of the major trade-offs of the lightweight design of geolocators. In order to retrieve the information, the bird needs to be recaptured when it returns to its breeding site the following year. Areas that have a high return rate and adult survival rate are usually chosen for these studies to ensure maximum chance of recovering the geolocators. The Canada warblers at the LSLBO have both, which is one of the reasons Kevin chose our area to conduct this geocator project.

This summer we spent a week in early June with Dr. Fraser and deployed 40 geolocators on male Canada warblers throughout the Park. Next year, we will attempt to recapture as many of these birds as possible and possibly deploy another batch of geolocators. His plans are to then deploy geolocators on Canada warblers in Manitoba to determine if different breeding populations share the same overwintering areas. The LSLBO is pleased to collaborate on this new Canada Warbler study and we look forward to sharing the results!



*Above and below: Dr. Kevin Fraser and Richard Krikun placing the first geocator on a Canada warbler*



*Above: Geocator on the back of a Canada warbler  
Below: Nicole LInfoot and Judith Kennedy, Environment Canada working on a Canada Warbler.*



# Enviro-Quest Camp 2014

**By Cori Klassen  
Boreal Educator**

Enviro-Quest camp provides youth ages 12-15 with opportunities to learn about the wide range of careers and recreational opportunities in the boreal forest. The camp is a joint project between the Lesser Slave Lake Bird Observatory and the Lesser Slave Forest Education Society and this was the second year running.

The camp ran from July 22-24 and the weather was exceptional! It was hot and sunny which meant that all of the outdoor activities we had planned went ahead as planned! The first day the youth learned about trapping from local trappers. Then in the afternoon we all went fishing at the weir. The fish were really biting and

almost everyone got to experience catching one. Then on the second day Bevan from WOLF (Woodland Operations Learning Foundation) set up a processor simulator so the youth got to experience what it was like to operate forestry equipment. In the afternoon we went tree planting in an area east of town that was affected by the 2011 wildfires. The final day began with a banding lab tour and finished up on Marten Mountain with a tour of the fire tower, an ecology hike with AB Parks staff and a scavenger hunt.

Local community involvement in the camp was phenomenal! Organizations and individuals who contributed to the camp include: the Rod and Gun club, Darrell and Joanne Walde, WOLF, Mistik Environmental Services, Environment and Sustainable Resource Development and Alberta Parks. Thanks to everyone who made this year's camp a huge success!



# Volunteer Journal

## (or how I spent my summer vacation!)

**By Sue Walsh**  
**BCBC/Alberta Parks Volunteer**

My family and I began volunteering at the Boreal Centre for Bird Conservation (BCBC) in 2007. Why did we come up here? We were motivated by two factors:

1. We wanted to be campground hosts for Alberta Parks at Carson Pegasus Provincial Park and they would not place “novices” at such a busy campground; we had to do “time” at a less busy location.
2. We wanted free camping!

We came up to the BCBC with much trepidation: one child and one teenager, and what on earth would we be doing? Could we keep the teenager busy or was this a big mistake? This is now 2014 and we have been back to the BCBC most of the years in-between!

At first it was a very steep learning curve—what did we know about birds, costumes, nocturnal migration monitoring stations, etc.? The staff has been very kind and patient with us!

What makes us keep coming back? The whole family instantly fell in love with the BCBC and the incredible staff. Our duties have been wide and varied: setting up a nocturnal migration monitoring station; building new aerial nets, making costumes; answering phones; giving tours, campground walk-throughs, etc. We have never once been bored and have always felt that our efforts are sincerely appreciated! The couple of years that we missed—2011 due to the fire and 2013 due to work obligations—left us feeling empty, like something was missing!

In retrospect, we feel that we would not have lasted very long as campground hosts. We like to be busy



*Above: Michelle, our information officer modelling the new Wood Frog Costume*

(I am not saying campground hosts aren't busy), and we have discovered the creative side in all of us!

My husband is a power engineer and chief costume designer extraordinaire! I am a registered nurse and enjoy giving building tours and makes costumes, too! Our children have grown up but continue to volunteer with any tasks that the BCBC or Alberta Parks may have for us!

As with all volunteer work, we feel we get more than we ever give and we love it!

*Message from the BCBC staff: It isn't the same at the Boreal Centre without you. We love having you here and you make our summer!*



*Above: Another new costume...this time a beautiful Canada Warbler!*



*Ready to make a "Wildlife Love Connection" at the Amphitheatre show: (left to right) Sue Walsh aka Queen Bee, Bill Walsh the Wood Frog, Cassie the Canada Warbler and Michael the Moose.*

# Invasion of the Forest Tent Caterpillars

By Michelle Karpa  
Information Officer



Did you know that the forest tent caterpillar is the only 'tent' caterpillar the spins a silk mattress and veil-like cocoon rather than a tent? Did you know that a bear can eat 25,000 forest tent caterpillars in one day? Did you know that, during an outbreak, the biomass of forest tent caterpillars in one square kilometre weighs approximately half as much as a blue whale? I sure didn't prior to this summer!

This year was the year of the caterpillars! Everywhere you looked in Lesser Slave Lake Provincial Park there were caterpillars; on roads, on buildings, even in the wheel well of the Alberta Parks van. The abundance of caterpillars meant there were no leaves left on the trees. It looked like the middle of winter, just without the snow!

According to multiple sources, forest tent caterpillars follow a 7-12 year cycle, meaning there should be massive amounts of these creepy-crawlies approximately every 10 years. We've been told that the last forest tent caterpillar outbreak in the Slave Lake area was in the late 1980's, which means we have really lucked out!



*You would never guess this is summer on the Songbird Trail.*

The caterpillars arrived in early June (after Songbird Festival, thankfully!) and they arrived by the thousands. Spots of Highway 88 were stained black from the unlucky caterpillars trying to cross, the parking lot had a caterpillar carpet, and, near the beginning of July, it seemed that every forest tent caterpillar within a 15 km radius



wanted to spin its cocoon on the Boreal Centre.

By the beginning of July, the caterpillars were done eating and started to look for good places to make their cocoons. Usually they look for places high up in trees, but with all of the leaves gone, there was almost no shade and no protection in the forest. Apparently, the Boreal Centre was the next best option.

The main entrance to the Boreal Centre was covered in furry little creatures. It was difficult to even get through the door without one falling down onto your head. This was unacceptable! We had enough of the caterpillars trying to take over the park. My first thought was to spray them down with water. We gathered a hose and nozzle and went to work, but those things are strong. I had to spray very close to the caterpillars in order to get them to move, but I was determined. After almost an hour out there spraying caterpillars, I was happy. I thought I had accomplished my goal and removed them from the premise. I was wrong. They came back, and they came with vengeance. By the time I packed up the hose and put everything away, the building was covered again. It was even worse than before; if that was possible! Obviously, water was not the answer. Bill Walsh, our lovely volunteer, tried sweeping them away but they would just come straight back after that, as well. We needed something more permanent to keep them away. Finally, he came up with the idea of throwing them away. As Bill swept, he collected the caterpillars into the dust pan and put them in the bear-proof garbage can outside the Boreal Centre. That way, they couldn't get back to the building. During one

*(Continued on page 9)*

*(Continued from page 8)*

sweeping session, Bill dumped 11 dust pans full of caterpillars into the garbage! Although it was a lot, it barely made a dent in the population. The efforts were seemed fruitless, but it made all of us feel a little better.



If NPV didn't get them, the predators definitely did. There were flies and two different species of wasps laying their eggs in the defenseless cocooned caterpillars! Neither of these predators poses any threat to humans either since these types of wasps use their stingers for laying eggs rather than stinging.

The moral of the story is that Mother Nature knows what she is doing! When we try to intervene, like when we tried spraying the caterpillars with water, we usually just make it worse. The trees re-foliated and hardly any of the moths were seen. The few moths that made it will lay their eggs now and these will hatch next summer. We can only hope that, since we didn't see too many moths, this was the peak year of the cycle!

Finally, Mother Nature came to our rescue! A disease, called nuclear polyhedrosis virus, began spreading throughout the caterpillar population. It spreads very easily when there

are this many caterpillars and is believed to have a 100% fatality rate. The good news is this disease only affects caterpillars; not humans, and not the organisms that eat the caterpillars. NPV makes the caterpillars very sluggish and lazy. They begin to hang vertically and eventually their insides liquefy. This took care of a fair amount of the forest tent caterpillars.



*Thank you to the Long Lake JFR Crew for helping us clean off all the caterpillars from the BCBC windows! Beautiful!!*



## Familiar Faces

Fall migration brought more than just beautiful warblers to the Boreal Centre for Bird Conservation this summer. Tom Bennett and his wife Laura stopped by on their way back south on their latest travelling adventure north to Inuvik and the Arctic! Tom and Laura were volunteer hosts at the Boreal Centre back in 2010, so it was wonderful to see them again. Thanks for stopping by and good luck on your next adventure.

Next stop...Australia!

# 19th Annual Songbird Festival

By Michelle Karpa, Information Officer

It was another successful year for our **19th Annual Songbird Festival** at the Boreal Centre for Bird Conservation on May 31st. Over 180 guests and volunteers came out for the event, and as always, a great time was had by all. With the great weather came lots of bugs, but also a lot of birds! Every banding lab tour and birding hike were thrilled to be able to see a bird banded, as well as many others migrating around the area.

There was no shortage of things to do at the festival. Along with the banding lab tours and guided hikes, there were also the crowd favourite Marsh Monsters, Native Cultural Arts Museum programs at the Tipi, a FireSmart presentation, face painting, birdhouse building, and multiple scavenger hunts! Of course, we can't forget to mention the tasty pancake breakfast (with designer pancakes) and barbeque lunch provided by our friendly LSLBO board members.

Our **10th Annual Bird Run/Walk** was held on June 1st, with many brave participants facing the not so nice weather and even more bugs than the previous day! 38 adults and children took to the Trans-Canada Trail to help support the LSLBO in this annual fund raiser.

Thank you to all of our volunteers and sponsors for both the Songbird Festival and the Bird Run/Walk. Without you, it would not be possible to make these events the success they have become. We hope to keep these events going for many years to come!



Above: Joe and friend from the Lesser Slave Wildfire Management Area getting ready to show visitors how to FireSmart their homes.

Middle: Kaley using her great artistic skills at facepainting.  
Below: Interpreters from the Native Cultural Arts Museum in Grouard sharing metis and aboriginal culture.



Above: Amber shows off her face paint animal for this year!  
Below: Bird house building is always a huge hit with the kids.



## Speciation: Name That Bird!

**By Nicole Linfoot**  
Assistant Bander

This spring, an avid photographer, Istvan Orosi, snapped some pictures of a hybrid warbler right near the Boreal Centre. At first, when Michelle called me to ask me to come in and help ID it, I was very skeptical and believed that I would drive to the centre just to see a blurry picture of a juvenile bird with weird alternate plumage. The reason I was so skeptical is that hybrids are very rare in the bird world. There are a lot of factors working against their existence. For starters, female birds are attracted to a particular mate by its song – a female bird will only respond to the song of her species' male. Then, once attracted to check out the male, she will evaluate his appearance and decide if he looks like a suitable mate. Even if the female bird responds to the wrong song and fails to recognize the male as the wrong species chances are good that he won't acknowledge her since she is not what he is instinctually programmed to look for. If the two confused love-birds make it past all that, they face the challenge of actually creating viable eggs. Finally the young hybrids have to grow and survive migration. And this is the only way a hybrid can be made; in birds, male hybrids are sometimes fertile, but females never are, so a hybrid cannot breed with another hybrid to perpetuate its kind.

Most hybrid reports are not hybrids at all. There are a few situations that can cause a bird to be different than how it is supposed to look. In birds that have an alternate moult (i.e. specific breeding plumage); young birds often don't have as bright or well-defined alternates, and if a bird comes under stress while undergoing its alternate, it may only get half-way through it giving the bird a rough, unfinished look. Birds can also be what's called leucistic, which is when they lack black pigmentation. Leucisism is often mistaken for albinism which is a lack of all colour pigmentation (albinos always have pink eyes as a result of this; any animal that is 'albino' without pink eyes is actually leucistic). The opposite of leucistic is melanistic which is having too much black pigmentation. Either of those pigment anomalies can cause a bird to not "look right".

Despite the rarity of hybrids, this particular bird at the Boreal Centre this summer certainly was one. His one parent – a bay-breasted warbler was easy to see - he sang like one and had an obvious bay coloured breast. But the other parent was harder to figure out. My first impression was that it was a black-and-white warbler based on the heavy white eyebrow and white stripes on

a black back. Upon further inspection I believe that the other half of it is actually a blackburnian warbler. Excluding colouration, the facial pattern is an exact match to that of a Blackburnian and although it is hard to see in the picture, there is also has a small coloured

marking on the crown of its head. Many warblers have stripes down the crown of their head or concealed crown patches, but a small coloured spot on the top of the head is distinctive of the Blackburnian warbler. The strongest evidence I have to support my theory of its parentage, however, is its wingbars. Only two species of warbler have such wide wingbars that converge together in a white patch: the Blackburnian and the Magnolia. Considering it has no other characteristics similar to a Magnolia, I am left with the Blackburnian. These two species do have similar songs and live in similar habitat so it is not surprising that they have been reported to hybridize before, but this is still a truly rare sighting.

This hybrid bird got me mentally stuck on one of my favourite subjects in the scientific world: speciation. Speciation is by definition 'the evolutionary process by which new species arise', and although hybrids aren't typically the source of new species, they do make me think about the fine lines that divide the 10,000 species of bird in the world and how they all came about and what makes them different and keeps them distinct from one another. Although there are different ways that a species will diverge into multiple species, there is one thing that holds true for all speciation events and that is that a new niche needs to become available. A niche is a position in an ecosystem; if you think of nature as a factory there are a multitude of machines and resources and there are positions that need to be filled by employees. If the factory diversifies and adds another component, new positions open up for new workers. Species are the workers in nature's factory.

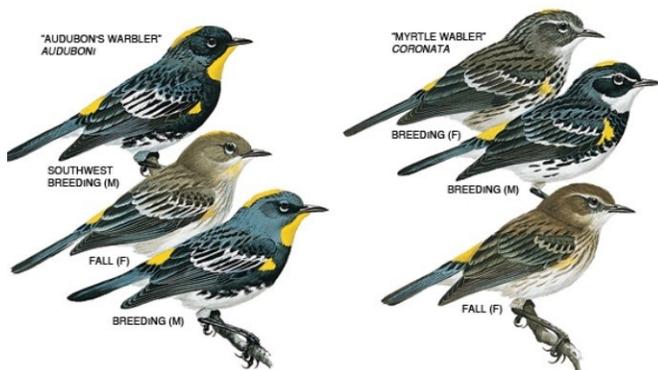


*Bay-breasted warbler and Blackburnian warbler hybrid*

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A species can loosely be defined as a group of individuals capable of reproducing to create fertile offspring. The classification below species is a subspecies. Sometimes a species is split into sub-groups as a result of geographic isolation – the individuals can still interbreed if given the opportunity, but some major obstacles, like the Rocky Mountains for example, prevents them. Prolonged isolation between the subspecies often results in them looking and sounding different for each other although they are still one species. The yellow-rumped warbler is the perfect example of this; on our side of the Rockies we have the myrtle subspecies and west of the Rockies they have the Audubon's. Myrtles and Audubon's look quite different but they do interbreed and intergrades



Yellow-rumped warbler subspecies ([http:// animals.nationalgeographic.com](http://animals.nationalgeographic.com))

between the two groups can be found in a narrow strip where the two groups meet. Even as far away from the mountains as we are, we see the occasional myrtle with some of the yellow throat feathers of an Audubon's. Continued isolation of this sort is actually the most common circumstances for a new species to form. Eventually the two subspecies will become so different from one another that they will no longer be able to breed to produce fertile offspring.

There is one instance of a hybrid that may end up forming its own species. Golden-winged warblers and blue-winged warblers are very closely related and often interbreed. They hybridize so often that the hybrids actually used to be regarded as distinct species. Hybrids of these two species end up looking one of two ways and each has its own name – Lawrence's warbler and Brewster's warbler. The golden-winged warbler has very specific habitat requirements and as a result their population is suffering from severe decline. The blue-winged warbler is a more cosmopolitan species that will use a broad range of habitats. Lawrence's and Brewster's warblers are also both very cosmopolitan

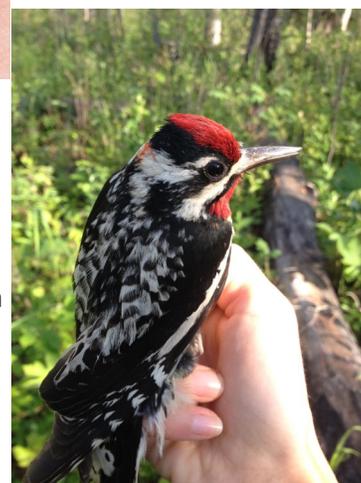
and the male hybrids will breed with female golden-winged or blue-winged. Unfortunately for the golden-winged warbler, habitat fragmentation is what is bringing these two species into contact more often (taking away the geographic isolation) and allowing for more and more hybridization. Many researchers believe the success of the hybrids is one of the main reasons for the continued decline of the pure golden-winged warbler – it is being out-competed by its own hybrids.

Speciation is a hot-topic in the birding community and there are two main factions: the splitters and the lumpers. As their names imply, the splitters are keen on using genetic testing to tease apart every little species and subspecies conclusively whereas the



Above: Myrtle warbler with yellow throat feathers  
Right: Red-naped sapsucker and Yellow-bellied sapsucker hybrid

lumpers are content with status-quo and feel that 'if you can't tell them apart by looking at 'em, they are the same species!' The most current and heated debate was the splitting of the winter wren species into two different species: the pacific wren and the winter wren. They look identical and sound nearly identical, but



genetics have proved that the 'winter wrens' on the West Coast are not like the winter wrens in the rest of Canada.

Another species that used to be one but was split up was the yellow-breasted sapsucker. All North American sapsuckers used to be considered one species with three subspecies, but in the 80's they were split into three distinct species. There is still some debate over this since the red-naped species (west of Rockies) looks almost identical to the yellow-bellied (east of Rockies) except it has some additional red at its nape (back of head). The two species hybridize quite a bit and lots of intergrades show up – one was even caught at one of our MAPS stations this year.

# Canine Encounters

**By Susie vander Vaart**  
**FireSmart Educator**

It seems that the summer months have been awash with sightings of the wild dogs of Lesser Slave Lake Provincial Park. From the cunning red fox, through the enterprising coyote to the stately grey wolf, my summer has been filled with wild dogs of every description, which for a dog lover has been a wonderful experience.

In eastern Canada, the red fox is probably the most proliferate of wild dogs. Their small stature and cunning ability to adapt to changing situations have allowed them to thrive in the increasingly urban environment. In Lesser Slave Lake Provincial Park (LSLPP) however, encountering one of these russet hunters happens only rarely. Perhaps this is due to the vastness of the park preventing the fox from having to follow its cousins the coyotes to the roadsides. Or perhaps coyotes and red foxes are in greater competition in this region. Like their tan cousins, red foxes are highly adaptable omnivores eating both plants and animals. And seeing as how their size or stature is much more similar here in the park than in the Eastern provinces, they would likely be competing for similar food sources. Whatever the reason, I have seen one perhaps two red foxes in the park since my arrival in May 2013. The most memorable was about a month ago where I witnessed a “half-silver” red fox who appeared for lack of a better word slinky. Slinky is a word that has long been associated with foxes, and it takes seeing one in action to understand how such a word applies to foxes. “Silver” foxes are a dark furred variety of red fox. A typical red fox is an orange russet



*How FireSmart is this house? Susie helps students figure it out!*

colour while a silver fox is a black colour. Sometimes, red foxes appear half between both variations, with black backs and red legs or red backs and dark legs. In either situation, the animal is still a red fox just like a tan black bear is still a black bear.

Anyone who lives in the vicinity of Slave Lake has encountered a coyote or two in their time, probably even one a week. These enterprising canines have an incredible ability to adapt to just about any situation and environment. Their small western stature allows them to inhabit areas that would be prohibitive to their larger eastern counterparts. Coyotes are one of the most flexible creatures in the boreal forest. They have the ability to live in the forest, plains, marshes, bogs, hills, farmland, and even in urban areas and can flex their diet depending on the situation. They will eat anything from berries to bugs to roadkill to deer and this flexibility allows them to thrive in many different situations. Their pup production responds to the quality of their habitat...coyotes with a large productive habitat will have more pups while coyotes with a smaller habitat or where food is harder to come by will have fewer pups. This balances the amount of work a coyote pair must do to support their families and adds to their survival prowess. In LSLPP, coyote encounters are very common. From ditch hunting in the winter, jam session on cool fall evenings and popping out of the bush on the trails, I have seen more than my fair share of these intrepid canines. My favourite is the seldom seen “black-back” whose colouring makes him unique and of course “my coyote” who lives near the Boreal Centre and is encountered quite often.

One of most awe-inspiring creatures of the boreal forest and the nation in general is the grey wolf. As the world’s largest wild dog, this animal can grow close to 200 pounds in some places with a body length of over 6 feet. The vastness of a wolf’s body size relates to its eating habits. Unlike the coyote or red fox who live in pairs, wolves live in communal groups called packs. Pack size relates directly to the quality of a habitat and litter size directly to the availability of food. The pack leaders (the alpha male and alpha female) are usually the only pair to mate and will dictate whether there are to be any pups born in a harsh year while allowing other pairs to bear pups in a good year. Like their enterprising cousins the coyotes, this response allows for a higher rate of survivorship of the pups and prevents over taxing the adults trying to bring food

*(Continued on page 14)*

(Continued from page 13)

home. Pack life allows these social creatures to hunt larger animals than their smaller cousins. Wolves are nearly exclusively carnivores and rely on their pack to be able to take down large game like: deer, elk, moose, caribou, and even, in some regions, bison and musk-ox. Working together as a team means more meat on the table than as a solitary hunter. Though wolves prefer larger game, they will take the opportunity to hunt hares and rodents when times are lean. Sometimes in the winter, you can hear the song of the wolf pack in the park. I have only visually encountered one of the wolves of LSLPP a young dark-backed, tawny wolf who I have seen at least twice, if not more. The most memorable of these encounters occurred in the space of 2 hours. I first saw the wolf as it slowly ambled down the road to the bird observatory. Upon seeing humans it stopped, rolled its eyes seeming to say "now-what" and taking a look both right and left, shrugged and walked slowly in the bush along the roadside. The second encounter occurred just a few hours later while eating lunch at the Boreal Centre. A deer had bounded out of the bush, which I thought was a bit odd, then behind it loped the same wolf that had been at the observatory. It was an awesome experience. Unlike their enterprising and adaptable cousins, wolves are uncomfortable with city life and require vast territories with uninterrupted forests. Not surprisingly this makes them a rarer encounter than their smaller cousins. Wolves are also considered an "umbrella species" due to their vast requirements for food and territory. Scientists use wolves as an indicator of habitat quality. If a region can support a healthy wolf population that means that it is likely supporting a large variety of other animals. It is as if the wolf holds an umbrella and under it is a huge variety of other species. As top predator with high demands, it takes a lot to support these awesome canines.

Although I have been fortunate enough to have visual encounters with these awesome boreal creatures, you are more likely to find their tracks and scat than the creatures themselves. The challenge lies in determining whether the signs you encounter are from someone's domestic dog or from a wild dog. So here are a few tricks to seeing what you've found is domestic or wild in nature.



Above: Wolf scat discovered on an early morning walk.

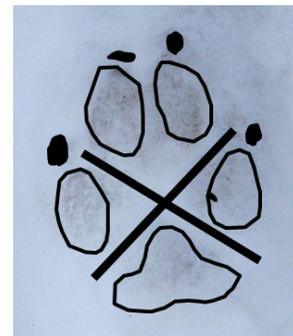
### Check out the Scat!

Wild Dog scat has hair. Hair and fibres from plants are common in wild-dog scat such as the coyote scat pictured in the lower left.

### What about the tracks?



Domestic Dog



Wild Dog

#### 1) Wild dog tracks make an X

As you can see in the pictures above, a coyote track has a defined X between the 2 outside toes pads and the rear pad, while the domestic dog does not



Domestic dog tracks overlap



Wild dogs walk in their track

#### 2) Wild dogs walk in their own tracks

Like most wild creatures, wild dogs walk in their own tracks, placing the hind paw in the track from the forepaw. This makes for one line of evenly spaced tracks. Domestic dogs (especially small ones) have a tendency to make a print with each paw and in the case of larger domestic dogs, the hind print slightly overlaps with the fore-print but not completely.

## Past, Present and Future(?) staff



*(l-r, Shauna Kristoff, Kaley Donaldson, Michelle Karpa)*

We love it when previous staff members come to visit—we love it even more when they volunteer with us! In June, we were very happy to have Shauna Kristoff and Kaley Donaldson volunteer at our Songbird Festival. Shauna was the Information Officer in 2010, Kaley was Information Officer in 2011 and 2012. and Michelle Karpa was our information officer this summer! We are so fortunate that these are/were the smiles that greet visitors to the BCBC every summer.

Introducing the LSLBO's youngest volunteer-Myles Grieve (see below)! For the second year in a row Myles volunteered for a week at the Lesser Slave Lake Bird Observatory's migration monitoring station. Thank you Myles! We are already looking forward to seeing you again next year!



### 2014 Team Picture!

Every summer, it takes a great team to deliver all our programs for students, summer visitors, and for the birds! So here is our wonderful 2014 team! Thank you!

*Left to right: Patti Campsall (Executive Director), Susie vander Vaart (FireSmart Educator), Richard Krikun (Bander in Charge), Michelle Karpa (Information Officer), Cori Klassen (Boreal Educator), Nicole Linfoot (Assistant Bander), and Ceiridwen Robbins (Alberta Parks Visitor Services Coordinator).*

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Sara Scobie  
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To become a member of the LSLBO, please fill out the information below and send this form, along with a cheque or money order to the address below.

Name: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_  
First Last

Address: \_\_\_\_\_  
Street City Province/State Postal Code/Zip

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 Individual \$30 Benefactor \$250  
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**Thank you for  
supporting the Lesser  
Slave Lake Bird  
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