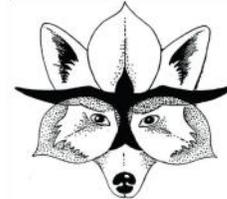


March 2016



Kamloops
Naturalist
Club

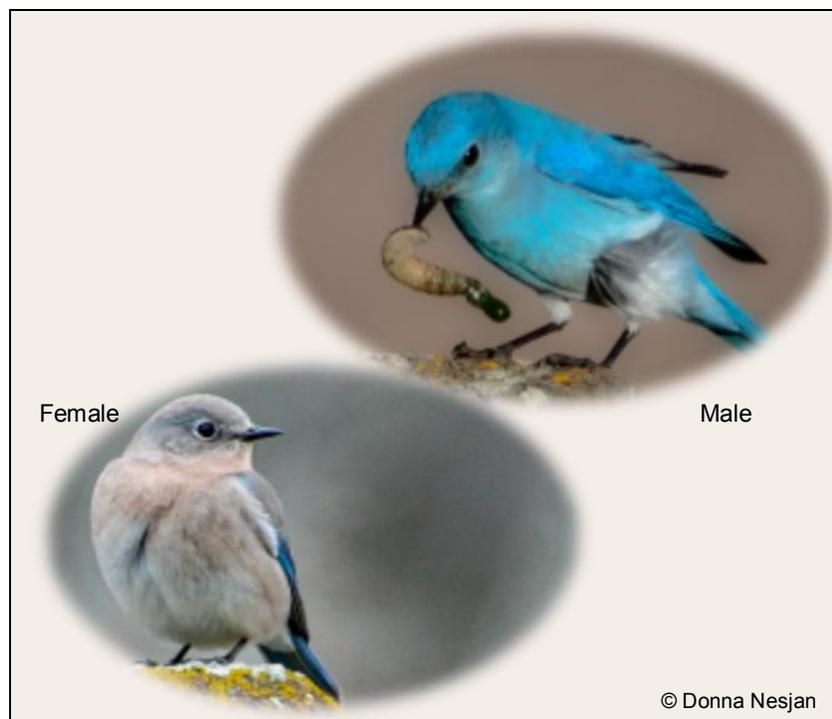
We enjoy, protect and promote nature



SAGE WHISPERS

Newsletter of the Kamloops Naturalist Club

www.facebook.com/kamloopsnaturalistclub



Mountain Bluebird

These Mountain Bluebirds were observed on East Shuswap Road on March 5, 2016. The male swallowed his dinner in one gulp. These birds are a sure sign of spring (we hope!)

What's Inside

Spring/Summer Field Trips
Kamloops Explorer Software
Research Update - Climate Change and Songbirds

INDEX

Coming Events/Community Calendar	2
News and Updates	3
Our Members	4
Ecology Reserves in the Thompson Grasslands - BC Parks	5/6
Research Update	7/8

KAMLOOPS NATURALIST CLUB

The Kamloops Naturalist Club was formed in 1971 and became a registered Society in 1981. It is a member of the Federation of British Columbia Naturalists <www.bcnature.ca> and Nature Canada <www.naturecanada.ca>.

Sage Whispers is published every two months except for July and August.
Editor: Paul Johansen
kncnewsletter@gmail.com

KNC Mailing Address
PO Box 625
Kamloops, B.C. V2C 5L7

Meetings

7:00 pm, the third Thursday of the month from Sept. to June. Meet at Heritage House, 100 Lorne St., Kamloops, BC.

Annual Membership

(Jan. 1st to Dec. 31st)
Family \$40, Individual \$28,
Student \$23
Contact:
Winnifred Fischer
Tel: 250-376-3944

KNC PROGRAMS

March 17 – Crystal Huscroft, M.Sc. Earth Sciences, SFU is a Senior Lecturer in Geography and Environmental Studies at TRU. Her topic will be “A guide to permafrost related landforms” such as pingos, rock glaciers, and frost boils. She will explain how various permafrost landforms are created and will share her favourite photographs of the weird and wonderful features that permafrost creates. Many nature-lovers think of arctic and subarctic landscapes when they think of permafrost, but alpine permafrost is found as far south as the 49th parallel in Canada.

April 21 – Hugh Murdoch, Forest Protection Officer, Kamloops Fire Zone. Hugh will speak about elements of fire suppression with the possibility of a field trip at a later date to visit a burn area. Student Janelle Paulson will give a brief update on her research in Lac du Bois on snow removal and drought.

May 19 – Francis Iredale, wildlife biologist with FLNRO will speak about grizzly bears.

June 16 – Annual picnic. Location to be determined.

September 15 – TBA

October 20 – Gary Hunt on Mushrooms.

November 17 – Karl Larsen on Badgers and Rattlesnakes plus a student on his research with Asian elephants.

FIELD TRIPS AND COMMUNITY CALENDAR

March 20, 2016; Sunday: *Clean Up Day of Dewdrop Range* by the Kamloops Naturalist Club. Contact Frank Ritcey at 250-318-7276.

We will be meeting on the Dewdrop

flats, 3.5 km in on the Frederick Road at 10:00 am. To get there, take Tranquille Road past Cinnamon Ridge and turn right onto the Tranquille-Criss Creek Road. Cross the tracks and stay on the road for 4.3 km where the Frederick Road goes off to the left at the switchback.

Dress for the weather. Bring a good pair of gloves, proper footwear, water, and a snack. Other items you might bring include buckets, rakes, wheelbarrows, flat shovels, tarps, travel mug.

March 22, 2016; Tuesday: TRU Tour. Meet at 2:30 pm at Tranquille for a gold panning/nature hike. Please let Frank Ritcey know if you plan to attend!

March 23, 2016; Wednesday: TRU Tour. Meet at 6:30 pm at Tranquille for a night hike. Please let Frank Ritcey know if you plan to attend!

April 17, 2016; Sunday: Sandhill Crane field trip to Separation Lake. Meet near the theatres in Aberdeen Mall to car pool at 9 am. Bring a snack as we may be out for a few hours in case we have to go looking for cranes elsewhere. The leader is Rick Howie.

Early May; date TBA. Waterfowl at McGowan and/or Pineview Valley.

May 28, Saturday; Celebrate the 5th Annual International Herp Day by learning about local reptiles and amphibians. Lead by Frank Ritcey. Meet at the Tranquille River parking lot (near Pine Park) at 9:00 am.

May 29, Sunday; 5th Annual International Herp Day. Practice your new Herp Skills. Amateur herpetologists are encouraged to spend the day in the field with their notebooks and cameras. Record all of the herps



you find with as much data as you feel is relevant: species, size, sex, location and any field notes you feel are pertinent. Oh, and take a picture as well. All species recorded on May 29th between midnight to midnight will count towards our efforts.

May 29, 2016; Sunday: Bird Fest. Two teams will compete to find the most bird species. This fun, friendly competition takes place on Sunday, May 29th. The search begins at MIDNIGHT and ends at 4:00 PM on the 29th. Phone Glenn Dreger 250-372-3837 to be placed on Team South. Team North leader is to be confirmed. Bird Fest contestants are welcome to look for herps.

HOME BIRDERS are most welcome. Bring your own dinner and lawn chairs to the home of Bruce and Anne Ritcey at 877 Crestline Street in Brocklehurst starting at 5:00 PM. Coffee and tea will be provided. Bird sightings will be tallied and prizes will be awarded for *Best Backyard Bird*, *Most Unusual Sighting* and the *Team with the Most Species*.

NEWS AND UPDATES

**Meeting with Terry Lake
Friday March 4**
by Margaret Graham

Joan Best and Margaret Graham met with Terry Lake in his office on Friday, March 4, 2016. Prior to our meeting, we had emailed copies of Julie's letter which summarized our request for funding for resources needed in the parks as well as a copy of the fact sheet about BC Parks which was compiled by the Outdoor Recreation Council of BC with information obtained from BC Government Sources.

Joan and I expressed our disappointment that the recent budget did not include an increase in funds for the provincial parks and protected areas. Terry said that all ministries were looking for funds and it was a case of where to put the money without increasing taxes,

referring to his own Ministry of Health as the biggest expense. He said a distinction must be made between the parks which are away from population centers and easier to maintain as wilderness areas and those closer to large urban centers such as Lac du Bois. He is well aware of the problems with off-road vehicle use and garbage dumping although he hasn't visited the Dewdrop area in the last few months to see the latest increase in destruction first-hand. He said to let his office know about the clean-up as he is interested in helping out.

We stressed the lack of manpower to enforce regulations in the parks resulting in damage to rare grassland ecosystems by off-road vehicles, garbage dumping and target shooting. We mentioned the lack of an area manager in the Kamloops area means 4 people are responsible for 97 parks and protected areas within the region, resulting in low staff morale. We stressed the need to bring back the park interpreters, which enhances the visitor experience and educates a generation of children on appreciating and caring for nature. We mentioned the health benefits of interacting with nature.

Terry said that if the Kinder Morgan pipeline was approved, it would be an opportunity to work with them to get funding for restoration of sensitive grasslands not only along the pipeline route but in other areas of Lac du Bois as well as the Dewdrop range. He cited the loop through Jasper where the restoration work done by Kinder Morgan has won awards. Terry also brought up the subject of a conservation corps, hiring summer students to build trails and other infrastructure within parks.

Terry promised to pass our concerns to Environment Minister Mary Polak. He will look into filling the position of area manager in Kamloops. He will also look into asking Kinder Morgan for funding to help with restoration if the pipeline goes through.

KNC Executive and Officers

President

Julie Schooling

Past President

Jean Crowe

Vice-President

Frank Ritcey

Secretary

Adele Stapleton

BC Nature Director

Ken Lipinski

Treasurer

Jean Crowe

Directors

Justine

Densmore-McCulloch

Andy Raniseth

Communications

Margaret Graham

marggraham@shaw.ca

250-554-1285

Membership

Winnifred Fischer

Newsletter Committee

Paul Johansen

Carrie Dougan

Programs

Justine

Densmore-McCulloch

Margaret Graham

Bluebird Co-ordinator

Susan Weilandt



Jo Chipperfield

by Joan Best

Previously based in Langley where her husband's firm had an office, Jo, along with their two sons, moved to Kamloops when her husband's firm opened an office here. As with quite a number of our Club members and many more area residents, the family was not favourably impressed, initially, with the contrast between the lush, green coastal countryside and this area. However, again as with others who made similar moves, the family grew to appreciate the change in climate and all its manifestations in the different flora and fauna here.

Their stay was short, however, as, in response to an opening that offered job improvement, the family moved, in 1984, to Australia where they lived for 7 years, based in Sydney and Brisbane. Again, a drastic change in all aspects of climate, terrain and attendant plants, wildlife, lifestyle though at least the aridity of some areas was reminiscent of Kamloops! While resident in Australia, the family took full advantage of their stay to explore the unique attributes of Australia. They visited Uluru, formerly known as Ayers' Rock and numerous other sites.

On returning to Kamloops, Jo who worked as an ophthalmic technician, also found work and looked around for leisure activities. She decided to participate in a Club field trip, visiting the Deadman Creek fish monitoring site. She was hooked! From that time on Jo has been a regular at Club meetings, joins Club field trips from time to time but also enjoys being a member of a Club-within-a-Club which sees a small group of members take regular birding trips. The group took a trip to Point Pelee last year; what an adventure that was; an outing highly recommended to eve-

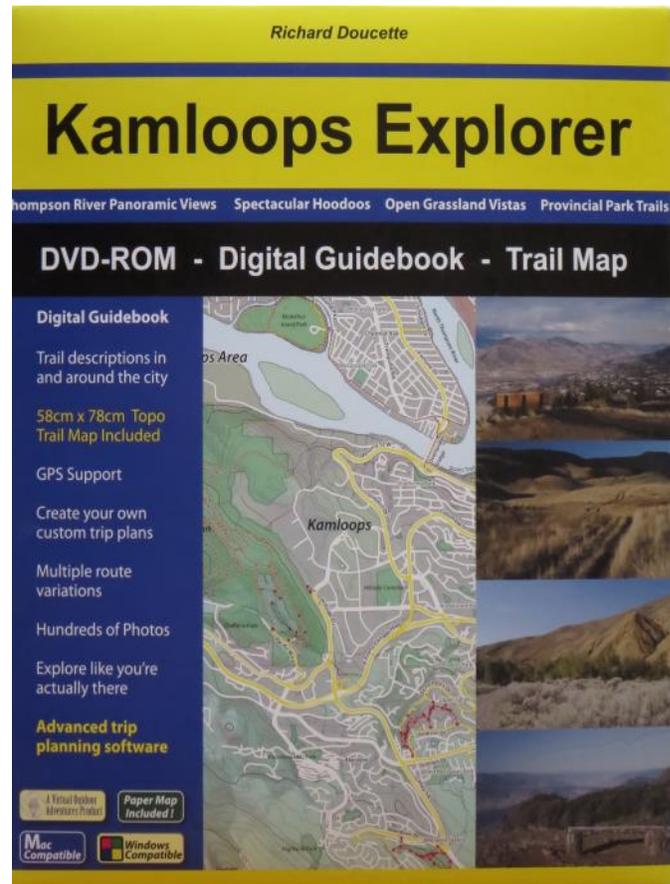


ryone who is able to make the trip. As well, Jo has monitored a Bluebird route in the Rose Hill area for 17 years.

Jo's three grandchildren keep her busy as do her interests in birding and reading; she is a member of the Book Club, and also does volunteer work for, amongst others, the Western Canada Theatre and the Kamloops Symphony.

Kamloops Explorer Software

Kamloops Explorer is the name of Kamloops outdoor trip planning software created by KNC member Richard Doucette and marketed by Virtual Outdoor Adventures in Vancouver. Contact details are on their website at www.virtualoutdooradventures.com and by phone at (604) 248 4716. Kamloops Explorer was seen in the bookstore at TRU.



Ecological Reserves in the Thompson Grasslands (Kamloops) Area, BC Parks.

by Joan Best

The Ecological Reserves system grew out of a global initiative that took place in the decade between 1964 and 1974. At that time the project was entitled the International Biological Program (IBP) and involved 58 nations. A sub-committee for the Conservation of Terrestrial Communities (IBP-CT) was created, aimed at the establishment of a system of representative terrestrial and aquatic ecosystems around the world. In Canada this was largely funded by the National Research Council and involved the description of biologically important sites as outlined on internationally standard check sheets. Nearly 1,000 of these sites were identified in Canada, many of them in British Columbia.



Rare fragile Mineral Springs

It was soon realized that an effective conservation program required more than identification and description of ecosystems deemed important. The lands so identified had to be legally and permanently set aside if they were to serve their intended long-term purpose. The Government of British Columbia, encouraged by Dr. Vladimir Krajina, then of UBC, and other scientists set up, in 1968, an Ecological Reserves Committee to advise on the selection of potential sites. A year later the Government formally embarked on the project by setting aside lands under the Land Act. In 1971 the Legislature gave unanimous approval to the Ecological Reserves Act and B.C. became the first province in Canada to do so. On May 4 of that year the

first 29 reserves received protective status by Order-in-Council. A full-time coordinator was hired in 1974 and the volunteer warden program came into effect in 1980.

The basic objective of Ecological Reserves is to permanently preserve natural ecosystems, species and phenomena. The major users of the Reserves are researchers, educators and resource managers but all of society benefits from this very practical program and its long-term objectives. Reserves serve as permanent outdoor research laboratories. As such it is necessary to have Reserves that encompass representative samples of all major ecosystems in the province and that they suffer as little intrusion from human and other outside influences as possible. The intent is for long-term research into such areas as productivity, diversity, nutrient cycling, energy flow and so on over time and to use this information as a benchmark against which to measure outside human-caused changes.

Reserves may also provide outdoor classrooms in which students or other groups, by permit, may learn about the natural environment. This is particularly important in landscapes that have already been extensively modified. However, Ecological Reserves are established primarily for conservation and for scientific research. They are not another kind of park or recreation area. Although they vary greatly in size, from a minimum of 35 hectares to several hundred they can be easily damaged by public use.

Samples of ecosystems included may be areas where rare, endangered or sensitive plants, animals and habitats require protection. Or an area may contain unique or special examples of botanical, zoological or geological phenomena. Areas needed for research into biological productivity, diversity and related aspects of the natural environment are also included as are examples of ecosystems that have been modified by humans and thus provide an opportunity to study their recovery when protected from these modifications. While many Reserves were selected for protection on the basis of species rarity, ecosystem vulnerability or



uniqueness the majority were chosen on the basis of the terrestrial ecosystems they represent.

While the Act stipulates that only Crown land may be assigned as an Ecological Reserve some private lands have been given or leased to the Crown, thereby allowing them to be included. The establishment of Reserves is an ongoing process



Garry Oak Meadow

and is led by staff of the Ecological Reserves Program under B.C. Parks but scientists, resource managers, naturalists and the concerned public also put forward proposals for a given area to be included. New proposals are assessed by BC Parks staff and referred to the Government for further action. Currently, there are 154 Ecological Reserves in BC.

BC Parks staff are responsible for the administration of the program but volunteer Wardens play a big part in monitoring and other activities geared to the continued health and protection of each Reserve. Volunteer Wardens represent a wide spectrum of the concerned public and include naturalists, conservation clubs, foresters, biologists and individuals living in the vicinity of a Reserve. Wardens regularly visit the Reserves where they serve, monitor activities in or near them, place signs, report any destructive activities such as vandalism, unlicensed livestock grazing or damage, all-terrain vehicle use or cutting of trees. They may also inform the general public of Ecological Reserves and their value as well as assist with inventory and research projects within their respective Reserves.

The Thompson-Grasslands Area of BC Parks has five Ecological Reserves that are monitored by local naturalists:

ER #3, Soap Lake - above the junction of the Nicola and Thompson Rivers.

ER #29, Tranquille - on the Dew Drop flats west of Kamloops.

ER # 88, Skwaha Lake - north of Botanie Lake near Lytton.

ER #92, Skihist - along the Thompson River north of Skihist Park near Lytton.

ER #110, McQueen Creek - above the north end of Westsyde.



Southern Interior Wetland

Summary of Benefits

Ecological reserves are established for the maintenance of biological diversity. They assist in developing and promoting an environmental consciousness and provide outdoor laboratories and classrooms for studies concerned with the natural environment. Ecological reserves are benchmarks against which environmental changes can be measured.

As many ecological processes are as yet poorly understood, today's scientists cannot predict some of the questions that will require research in unaltered ecosystems. Ecological reserves keep our options open for the future. A system of ecological reserves is a "genetic data bank" which may hold the key to new discoveries in forestry, ecology, agriculture and medicine.



Research Update: Climate Change and Songbirds of the Kamloops Grasslands

by Sarah McArthur, M.Sc., B.I.T.
Environmental Science Program Graduate 2016
Department of Biological Sciences
Thompson Rivers University

Research Overview

Grasslands are one of the most threatened ecosystems in North America, with less than 20% of native grasslands intact across the continent. This biome is expected to face additional challenges with global climate change, including alteration of temperature and precipitation regimes. Grassland songbirds are already under



increasing pressure due to reductions of their breeding and foraging habitats from land-use changes and forest encroachment, and global climate change will no doubt provide further challenges to these species.

My M.Sc. thesis research focused on two grassland songbirds that occupy similar yet distinct ecological niches: the ground-foraging insectivorous mountain bluebird and the aerial-foraging insectivorous tree swallow. Both species are obligate secondary cavity nesters that breed in the temperate grasslands around Kamloops, and readily accept artificial nest boxes for breeding. In collaboration with the Kamloops

Naturalist Club Bluebird Trails Program, I used long-term monitoring data for mountain bluebirds and tree swallows breeding in nest boxes to assess how certain environmental factors impact nesting success in these two species.

I asked how local weather, regional climate, and nest box features influenced the breeding performance of mountain bluebirds and tree swallows from 1980 to 2014. First, I transcribed all physical KNC Bluebird Trails records and notes into a digital dataset, then compared this information to local weather station data as well as regional climate data (El Niño/La Niña cycles that affect the jet stream over the Pacific Northwest region). I also assessed the impact of nest box features, such as elevation, aspect of nest box opening, type of nest opening (hole or slot opening), and placement of nest box (tree or fencepost). Additionally, I looked at how weather impacts the parental care behaviour of mountain bluebirds and whether these factors play a role in nestling growth and survival. I conducted field work for this part of my study in the summers of 2013 and 2014 along the bluebird trails of Long Lake Rd, Jackson Rd and Edith Lake Rd.



Results

I found that local weather patterns significantly influenced the nesting success of both mountain bluebirds and tree swallows. Locally high precipitation reduced the breeding performance



of mountain bluebirds, while higher mid-summer temperatures reduced the breeding performance of tree swallows. For bluebirds, I found no association between weather conditions, parental care, and rates of nestling growth, so I suggest that the relationship between weather and reproductive success is likely an effect of a direct, acute nestling mortality rather than prolonged stress.

For tree swallows, higher mid-summer temperatures may cause egg mortality from overheating, which is entirely possible considering how hot it can get in the grasslands around Kamloops in mid-summer. I also found that tree swallow breeding performance was associated with regional climate: birds were more successful during Springs with warmer, more humid El Niño conditions, possibly due to increased plant productivity and thus insect productivity during those years.

As well, I found that nest box features also influenced breeding performance for both species. Mountain bluebirds had better breeding performance in hole-type nest boxes compared to boxes that had slot openings; boxes with hole-shaped entrances appeared to buffer against ambient temperature shifts more effectively than slot boxes, which may help explain this pattern. Tree swallows had better breeding performance in nest boxes attached to fences rather than trees; boxes mounted on fences in open areas may better support foraging success (and thus breeding success) of tree swallows because it is easier for them to catch flying insects out in the open, rather than a treed area.

Significance

Given that experts predict significant changes to spring and summer grassland weather conditions with future climate change, and given the response of mountain bluebirds and tree swallows to weather and climate, I predict that climate change may impact these species negatively. However, it is encouraging to note that many dedicated people are committed to supporting these species with conservation programs such as those from KNC Bluebird Trails Program.

On the basis of my results, I recommend that bluebird nest box program managers in B.C.'s grasslands **consider constructing all future nest boxes with hole type openings**, as well as replacing current slot nest boxes with hole nest boxes. Additionally, if support of tree swallow populations is also of concern to nest box monitoring programs, I recommend placing new or existing nest boxes on fences in open grassland meadows, rather than on trees in more wooded areas.

It is also important to note that for continued success in future monitoring programs, continuity of nest box construction and placement is vital. Any changes in nest box construction or placement should be noted in robust monitoring databases for future reference. Additionally, database management should also be of primary concern to maintain the integrity and longevity of monitoring programs, and I recommend all field data be digitized within a master database that is maintained year to year.

It was a pleasure to work with many of the KNC Bluebird Trails Program volunteers over the course of my M.Sc. degree program at TRU. In particular, I'd like to thank Susan Weilandt, Glenn and Di Dreger, and Peter and Judy Gray for their continued support throughout this study.

