The Kestrel

Quarterly Newsletter of the
Rocky Mountain Naturalists
2021winter solstice

Stewart Wilson

Can you find a good kestrel picture (our local species, the American Kestrel) for this spot? If so, please email it to the newsletter at rmnatskestrel@gmail.com.

Inside this Issue

Ram Creek Springs - Ecological Reserve # 26 September 14

Marianne Nahm

September 14th was a beautiful early fall day for the Naturalists outing to Ram Creek Ecological Reserve. This area was designated an Ecological Reserve in 1971 due to its unique qualities, which have arisen because of the micro-climate created by the warm spring.

The Naturalists have agreed to assume wardenship of the reserve in partnership with


heading into warmth of the sun to Ram Creek after a frosty start


Ram Creek tumbling toward the pools


George checking the temperature of one of the pools - 85° F

BC Parks. This means several visits a year and reports to the ministry.

Ten people turned up for an early start for the long drive and short hike up to the pools. Careful attention was paid to the profusion of poison ivy lining the banks of the creek. Poison ivy is not usually seen at this elevation (approximately 5,000 feet) but is part of the reserve's flora around the spring. As well, we saw field mint, bluegrass, and bull thistle, all thriving due to heat

the view from ER #26 on a gorgeous day

pools excavated over the years

generated by the spring. As part of our visit, we pulled some invasive weeds such as spotted knapweed and yellow hawkweed. We kept a lookout for the vivid dancer damselfly, which had been sighted there nine days previously, but none were to be found. Some of the birds seen were Clark's Nutcracker, an immature Golden Eagle and many American Robins. There were signs of bear in the area, and a small, black sow and her cub crossed the road in front of us on our way out.

Several other hikers arrived, during our time there, to sit in the springs, which is not an approved activity within an Ecological Reserve but has been going on long before the ER designation. The water temperature was 25ºC (77ºF). It was a pleasure to see that there was no garbage left around in spite of the obvious frequent use. Respect and care for this area is appreciated and will be further supported by regular visits from the Naturalists. If there are any reportable issues, the area is signed, and

hiking trail in to the pools on deactivated road

there is a number to call in the event that any problems arise.

Marianne Nahm
Marilyn Doggart photos (except the first)

poison ivy displaying autumn colours

heading 700 metres from pools to the east access boundary of the ER

Autumn Stroll in Kimberley Nature Park September 30

We were a very congenial group of eight as we headed into the Kimberley Nature Park this morning. It was a cool, cloudy morning but we were still able to enjoy some beautiful fall colours.

Along the trails we listened to nuthatches, crossbills, Clark's Nutcrackers, chickadees and

Ruth Goodwin
riparian walk

Judy Chapman
polypore mushrooms

Mary Holland
leaf miner etchings, leaf miner (inset)

kinglets. We noticed the leaf miner moth etchings in the leaves of the aspen and a few species of mushrooms and berries as we hiked at a leisurely pace.

Someone noticed a specimen of the tallest saprophyte in our area, pinedrops. After enjoying the rich diversity of a riparian area for about 15 minutes, we entered a

Siera Nystrom

pinedrops

Ruth Goodwin

starting down

section of the nature park where logging was completed last winter. It will be interesting to watch the return of shrubs and flowers to this somewhat desolate looking area.

Judy Chapman

waiting for new growth

We then began our descent on the Shapeshifter Trail and ultimately on the Hoodoo View Trail. The western larch is just beginning to turn, so in a few weeks the

hillsides should be a lovely golden colour!

The Hoodoo View trail is very scenic, with undulating trails, coming back out to Jimmy Russell Road just before the turnoff to the campground entrance of the park. As promised by the trail name, we enjoyed good views of some of the hoodoos in the St. Mary Valley as we rambled back to the vehicles!

Ruth Goodwin

Judy Chapman

hoodoo views

Judy

fall colours

Bonus: a Bear Story from the Nature Park

Sixteen years ago, Kent was walking on Jimmy Russell Road in the Kimberley Nature Park when he heard some noise in an old

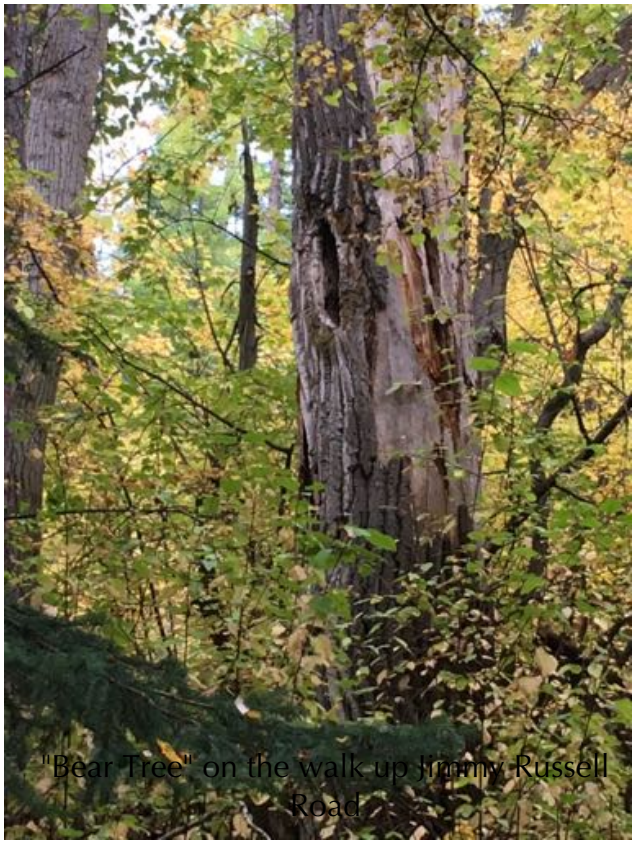
tree with a hole

There's something in that hole!

cottonwood tree. In another similar tree, a Barred Owl had nested for a number of years. Kent thought this could be another nest tree as it too was near a small creek. After confirming there was indeed something in the tree, approximately 15 feet off the ground, Kent returned home and then came back again in a few days with other members of the natural history committee of the park. How to find out what was in the hole? Folks stood on old stumps, but that was not helpful. Eventually a camera was fastened onto a long tree branch that was found in the wood nearby. It was set to flash in a few seconds. After

camera on a pole

inside the hole



"Bear Tree" on the walk up Jimmy Russell Road

bear tree

photo taken one autumn, before the top blew off, by an unknown photographer

several attempts this worked! But, what was it? The hole was filled with a black mass, but no one knew what it could be. Photos were sent to various folks to help determine the identity. Eventually it was identified as a year old female black bear. They are known to "nest" in similar trees and slip through an opening. In this tree, the opening was a 9 by 22 inch hole! The bear was originally found in the tree in November. Throughout the winter, we would visit the tree. Sometimes a foot would be hanging out the hole. Sometimes the bear was higher in the hole and you could see it from the ground. By mid-March, it was no longer seen. That same year, the top of the tree was blown off and the hole was exposed, no longer making it a safe home for any critter.

Ruth Goodwin

Kent Goodwin photos (except the last one)

Bear Seen by Birders

October 6

This morning the Early Morning Birders found this big brown-furred black bear sleeping about 60 feet up a ponderosa pine. It woke up to discover it had an audience and then went back to sleep again.

Lyle Grisedale

Devil’s Hole Tarn October 17

Naturalists gathered for a hike to view Devil's Hole Tarn at the base of the Western facing Southern Rocky Mountains.

With vehicles parked just beyond Lakit Forest Service Road, we were led by our guide, Gerry Warner, through the gate that opens to the moderate 4.5 km round-trip excursion.

It was a warm fall day, good weather for rock-hopping over water, namely Lakit Lake outflow, a gently flowing creek where we crossed. We passed through meadows scattered with erratic-like boulders. Whether they’re true glacial erratics - glacially deposited rocks geologically dissimilar to the rock of the area - or convincing imposters, we weren't unequivocally sure. There is a distinct outcropping of erratics up and over from where we were, on the east side of the Rockies.

The only steep hill on the trek was encountered early. While fairly challenging our toes' grip it gave a surpassing climb-launching stretch to the Achilles tendon.

We surmounted this steep part, came to the trail and continued through montane forest to 200 m above the start of the hike, our destination/lunch spot.

From that bluff a panorama was visible, with Mt. Baker southward; the Rockies, which we stood almost beneath, east; Lakit Lake, north and a touch west; and the Purcells, due west. - The Purcells are part of the Columbia Mountains, which also comprise the Selkirk, Monashee and Cariboo ranges.

Our group was looking over the broadest part of the Rocky Mountain Trench (RMT), which has a mostly flat floor averaging 3 - 20 km wide. The walls of the trench, the mountains, tending to be

. . .to see this view

high, are 600 - 1000 m above sea level, hence the moniker Valley of a Thousand Peaks. They are sedimentary, volcanic and igneous, according to the Canadian encyclopedia. The length of the trench is 1600 km, running from the Yukon to northern Montana. One of the longest valleys on earth, it is visible from (outer) space.

The tarn we came to see, at the base of our lunching bluff, is at the bottom of a smaller valley system, one of many within the RMT. Although this entire area, the whole RMT with its U-shaped sides, has been highly glaciated, this little trench went through a different geomorphology: steep rockslide sides evince that this canyon with its V-shaped sides was likely incised by glacial outwash rivers quite possibly carved out by melt from the bottom of a glacier sitting right where we sat for lunch. Because of the steep sides and the broken rock, fault movement and fracturing would have been involved, perhaps from the impact of a massive plunging ice dam.

The tarn, a malachite gem, an emerald jewel in springtime, appeared, at most, half its full volume and exhibited less colour than that in many photos. It appeared disconcertingly wedged, trapped, sky-starved more than any other mountain lap-lake I, for one, have glimpsed. A white collar

defines its former size: marine limestone ground by glacial action and dissolved out as calcium carbonate bands the mud of the tarn's perimeter.

As for bird life on the plateau, Emma pointed out a bald eagle soaring above us with the requisite hawk or two, smaller satellites. There were sweet avian murmurings, possibly from pine siskins, coming from somewhere down the length of the gully.

After lunch and animated conversation, Gerry suggested we return by going up over the bluff and looping back to the trail. And so we did, strolling through forest and meadow, listening for and catching glimpses of the mid-sized of the three nuthatch species, the red- breasted. A most welcome feathered friend indeed with its cinnamon blush, striking black-flanked white supercillium, and its song, if not complex and lyrical, comfortingly predictable.

We again crossed Lakit Lake outflow, a few of us looking lingeringly down its slope, as down the slope of the season to the cusp of the season to come. And then we dispersed to our vehicles to take up our Sunday lives.

Fisher Peak

Thank you to George for setting me straight on the cardinal points; to Emma for knowing birds; Lyle and Ralph for allowing the use of their writeup, attached below; and to Gerry for setting it (us) all in motion.

Pamella Wik

Judy Chapman photos

Geology of Devil's Hole

The rock definitely looks like the Moyie Intrusive Sills of gabbro or diorite igneous rock, the same formation that forms the big cliff above Dipper Lake and the large outcrops on Rock Slide Trail. To get a canyon as straight as this one, it has to be structurally controlled, probably by a fault. Fault movement would act to break up the rock and make it more susceptible to erosion. I would expect a stream at one time flowed through the canyon, down-cutting it, possibly when there was water all over the place during glacial melt. If there is no stream there now, only isolated "sag ponds" with no obvious flow in or out, this again suggests a fault controlled canyon.

Lyle Grisedale and Ralph Rudser

Fall Fungus Hunt

October 24

A group of large puffballs was growing in the Wilks Woods during the third week of September. In this group, the two largest were 8 and 9 inches in diameter. I thought other Rocky Mountain Naturalists might like to see them, so I decided to offer a field trip out there.

On a late October Sunday afternoon, six of us headed to the base of Sunflower Hill, just off the north end of Wilks Road, searching for large puffballs. Many puffballs are in the genus *Lycoperdon,* but I believe the balls we located may be *Calvatia gigantea*. These solid balls of spongy flesh do not have gills and appear in temperate areas of the world in late summer and autumn.

Marianne Nahm

large puffball, September 29

Lyle Grisedale

Lyle

surface close up

Puffballs are saprobic organisms, which means they live off dead or decaying matter. *Calvatia* puffballs go through several colour changes, beginning with white, turning yellowish, then brown and finally black when

Lyle Grisedale

they are ready to release their spores.

en.wikipedia.org

puffballs for sale in a market

Puffballs can be good to eat, absorbing the flavours around them. Frying puffball slices in butter and garlic would be my recipe of choice. It is important to correctly identify the puffball and then check the interior. It must have thick, firm white flesh.

Jo Ellen Floer

spores inside of a burst puffball

We continued up Sunflower Hill to enjoy a view of Aq'am and St. Eugene, with snow on the peaks of the Rockies, before following a trail for a quick look at Wycliffe. A few different fungi were spotted and photographed along the way. Hikers also saw puffballs in the spore-releasing stage of maturity. Backtracking a few hundred metres pointed us in the direction of the Whisky Jack viewpoint. We returned down a steep section to complete a lovely autumn loop with swaths of golden larches to enjoy at every viewpoint.

Lyle

small orange mushroom

Jo Ellen

large white leucopax mushrooms

Marianne Nahm

Visiting the Ammonite Fossil

November 1

This magnificent 5-foot+ diameter ammonite (luckily not a carnivore) cast from a Jurassic ocean bottom had waited roughly 150 million years for our visit.

Lyle Grisedale

On a brisk mid November day, 10 sexagenarian and septuagenarian *Homo sapiens* led by the intrepid Gretchen finally ascended to stare in awe at this cast so graciously revealed on the canyon's hillside, overlooking Coal Creek, behind Fernie.

Lyle

In these times of COVID, the brief moments of conversation with a fellow mammal on the trail were a delight. After the forest walk, with crampons in place, the ascent up that magic creek bed, bejeweled with sparkling ice ornaments affixed to branches large and small, the glazing rime of the rocks with the burble of disturbed flow and misty haze in the valley above, all added to the magic of the moment.

Lyle

Lyle Grisedale

Creek jumping, helping hands, and suddenly we were at the current resting place of this wondrous beast. There it was lying peacefully on its side, hundreds of feet above the valley floor on what would have once been ocean bottom. Made of iron rich stone (indicated by its colour), it looked like a perfect mould with visible septae hollowed out. Had the inside been filled by precipitates to act as a mold, only to be dissolved out at a later date, or had it been encased initially by sediments? Questions and few answers.

Roger Mitchell

Roger

With wet feet, a magnificent creekside view of the valley, requisite pictures taken, possibly a brief appreciation of the ridiculous transience of our lives when compared to the geological time scale over which this fellow being had been entombed, we soon were descending into the late November warming sunshine.

One cannot view this prehistoric creature without a sense of awe, and it is staggering the amount of paleontological study devoted to these amazing cephalopods.

A filter feeder or scavenger of monstrous proportions, this individual is but one of over 10,000 recorded ammonite species. First appearing in the geological record 450 million years ago and suddenly extinct 66 million years ago after the meteor strike that brought the

Roger Mitchell

demise of the dinosaurs, it and its species continue to aid the dating of geological ocean bottom sediments.

The *Nautilus* is possibly its only current but distant relative and useful in generating theories concerning ammonites' locomotion, feeding and respiratory management in those low oxygen seas that offered a hypoxic barrier to other marine life enabling them to remain intact and to present their fossil remains today for our edification.

Luckily for us, the ocean conditions were such that low oxygen and pH aided the precipitation of minerals around its shell, forming the perfect cast of the outer carapace. Twisting and writhing of tectonic plates had not disturbed its rest other than to bring it to the surface through uplift and weathering.

This individual possibly died from any number of causes and was certainly on the meal plan of numerous razor-toothed fish of that era. Was it inadequate oxygen, rapid pH changes and ocean acidification due to catastrophic climate change, inadequate calories or just old age? We will never know.

Will our fossil record be as generous, or will we just be a layer of Teflon-like Saran wrap encircling the globe?

Thank you, Gretchen for allowing us to join you as fellow time travelers.

Roger Mitchell

Roger

Visiting the Big Juniper

November 28

"Holy jumpin' juniper," someone might have said as we scrambled down a mossy gully to see the biggest registered juniper tree in the province. The old tree is tucked into the shadows of a north-facing ravine and pressed against moss-coated bedrock.

"Juniper, you say? Aren't they just scrawny shrubs?" I said in disbelief.

"Those are the common juniper," Gretchen said. "This one is the Rocky Mountain juniper." It's big—we measured it!

All the math and measurements aside, it was a fun hike in the Cranbrook Community Forest. About 20 of us (in two groups) started on a cool, cloudy day from the Fraggle Rock trailhead and climbed a rocky viewpoint summit. Just below that rocky knoll, we strolled into a narrow gully and wound around jagged bedrock mounds, each blanketed in thick layers of moss and lichen.

Lyle Grisedale

How big is the Cranbrook Community Forest Rocky Mountain

Lyle Grisedale

Lyle

Lyle

juniper?

Gretchen and helpers calculated the diameter. Once we measured the circumference and with a math calculation involving *pi*, Gretchen determined the tree's diameter is 24.8-inches or .63-metres. The official diameter is .64 metres.

Then, using several helpers, Gretchen calculated the height. With a hundred-foot-tape plus an inclinometer (Jamie has an inclinometer app on his phone), using trigonometry, they calculated the top to be about 19-metres. This is taller than the official height of 14 metres because the tree is leaning and has multiple crowns.

Junipers have lacy coniferous foliage, fibrous, ropy bark, similar to cedar, and female trees produce dark blue berries covered with whitish bloom [powdery coating]. The berries are botanically seed cones. The

cone/berries have an astringent, bitter flavour, and many birds, especially Townsend Solitaire, and rodents eat them.

BC Outdoors magazine claims that the white surface on the berries is a wild yeast and can be used for sourdough starter.

The big juniper grows near mounds of red/brown bedrock coated in thick layers of moss and multi-coloured lichen.

"Based on the rock's colour and texture," Doug said, "I am 90% sure this is Proterozoic Aldridge formation quartzite or siltite (metamorphosed quartz rich sandstone and siltstone). The exciting thing about this rock, as a generalization, is it's far older than rocks of the Rockies."

Janice Strong

Dina Hanson

According to Doug, the rock is over a billion years old, dated by researchers to 1.6 billion years old. Whereas the bedrock of the Rockies is only 400 to 600 ma (millions of years old). The Aldridge stone is typical around Cranbrook.

Gretchen led one group of Rocky Mountain Naturalists on Sunday, November 28, 2021. Bob and Lyle led the second group.

Notes:

1. Rocky Mountain juniper- *Juniperus scopulorum* Sarg, Lat: 49.573 Long:-115.73

Big Tree Registry of UBC
Search Juniper. You'll find it.

Janice Strong

https://bigtrees.forestry.ubc.ca/bc-bigtree-registry/conifers/
https://bigtrees.forestry.ubc.ca/measuring-trees/

2. BC Outdoors Magazine — sourdough starter from Juniper berries.
https://www.bcoutdoorsmagazine.com/how-to-use-juniper-to-create-a-wild-yeast-starter/

The rock of the Rockies is very different in age and composition than the much older rock found around the Big Juniper. This is a generalization, as I have seen outcrops of Aldridge while hiking in the Hughes range, which is considered part of the Rockies. The assemblage that is found throughout the valley (Quartzite, silt, and shale) is about 1.6 BYO (billion years old) - really old! This rock was originally sedimentary but was altered through burial to a metamorphic rock.

Janice Strong

Dina Hanson

Spruceland Stump Bump Loop December 5

On Sunday, December 5, 2021 a keen group of 11 Naturalists led by Marianne met for an outing to the Spruceland Stump Bumps. Brilliant sunshine poured out of a clear, blue sky as the hikers climbed their way up a steep terrain through a thick forest of Douglas-fir, ponderosa pine and western larch.

Summiting the first bump, a panoramic view of a deep valley lay before us while forest clad hills rose up from the other side. Marianne pointed out the Douglas-firs covered in bright greenish-sulphur yellow wolf lichen (*Letharia vulpina*). Once the Interior Natives processed this lichen it turned a yellow-greenish colour which was then used to dye their fur, moccasins, feathers, wood and even used as a face and body paint. A Rocky Mountain juniper crouched on the edge of the cliff. The female junipers produce small fleshy, scaled seeds that look like berries but are really cones and a favourite food of Townsend's Solitaires. The cones actally have a white coating on them which is a wild yeast powder.

We wound our way along to the second bump to look down upon Stump Lake which was completely dry this time of year. It does make quite a good birding spot when it is full of water.

Further along our journey trees could be seen with long hanging tendrils of black edible horsehair lichen. The Southern Interior indigenous people used edible horsehair lichen as a staple and emergency food. It is washed, cooked in a pit with onions, roots and bulbs, made into dried cakes and then boiled again to be eaten. It is a favourite food of deer, elk, moose, caribou and especially flying squirrels.

A lovely meandering trail along a ridge top brought us back to our vehicles.

Paula Rogers

pictures by Susan MacMillan

Internet Links

The website for Rocky Mountain Naturalists can be found at:
http://www.rockymountainnaturalists.org/
It has a calendar of events, a blog with photographs, archived newsletters, and more.

Make sure you are up to date on the latest techniques for keeping yourselves safe in the wild. Visit this site now and then to see how the science has given us new information.
www.wildsafebc.com

Cranbrook Community Forest https://www.cranbrookcommunityforest.com/

For reporting invasive plant species https://bcinvasives.ca/take-action/report/

East Kootenay Invasive Species Council (EKISC) https://www.ekisc.com/

Bird Observations https://ebird.org

About Field Trips

Leaders:

Radios and first aid kits are available from Paula.
Find a replacement leader if necessary.
Keep the group together.
All leaders must have trip waiver forms [available from Paula] in case any non-members come along on the trip. Non-members must sign, and forms must be returned to Paula. Non-member insurance costs $2.00.
Make sure everybody leaves the parking area safely.
Get someone to write an account of the field trip for the newsletter. Send it in to rmnatskestrel@gmail.com, along with pictures, as soon as possible.

Carpoolers: Please offer to chip in for gas. On a round trip with a driving time of under an hour the compensation should be $5.00, and on a round trip with a driving time of an hour or more the compensation should be $10.00.

No dogs on field trips, please

Events and Activities

These are the events planned at the present time. Watch your inbox for notices of events and activities, or check the calendar on the website.

Christmas Bird Counts (CBC): Dianne
- Cranbrook: Sunday 26 December 2021
- Kimberley: Sunday 2 January 2022

Club Information


Jo Ellen Floer

Executive

President	Marianne Nahm
Vice President	Hilary Anderson
Past President	Helga Knote
Secretary	
Treasurer	Gretchen Whetham
BC Nature Director	Wendy Maisonneuve
Director at Large	Janice Strong

Committees, Co-ordinators and Representatives

Bats	Scott Bodaly
Bluebirds	Marianne Nahm
Bylaws and Policies	Gretchen Whetham/Wendy Maisonneuve
Christmas Bird Count	Dianne Cooper
Club Camp	Jackie Leach/Ruth Goodwin
Communications	Susan Walp/Gerry Warner
Early Morning Birding	Daryl Calder
East Kootenay Invasive Species Council	Frank Hastings
Elizabeth Lake	Stewart Wilson
Field Trips	Paula Rogers
Internal Communications	Paula Rogers
Kootenay Conservation Program	Helga Knote
Little Big Day	Greg Ross
Membership	Hasi Oates
Newsletter	Susan Walp
Personal Information/Privacy	Jim Hurvid
Presentations	Marianne Nahm/Paula Rogers
Records	Wendy Maisonneuve
Rocky Mountain Trench Natural Resources Society	Jo Ellen Floer
Skookumchuck Prairie IBA	Dianne Cooper
Turtle Monitoring	Greg Ross
Upper Columbia Basin Environmental Collaborative	Emma DeGroot
Webmasters	Dianne Cooper

RMNats meetings - every two months, on the third Wednesday of odd-numbered months

Next meetings -	Wednesday	19	January (AGM plus regular meeting)	7 pm
	Wednesday	16	March	7 pm