

2026

ER Warden Annual Report for Columbia Lake Ecological Reserve



View looking northeast to Columbia Lake and the Purcell Mountains from the clifftops in Columbia Lake Ecological Reserve, April 30, 2025.



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For BC Parks

3/2/2026

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ER Warden Annual Report for Columbia Lake Ecological Reserve

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1.0 Basic Information

1.1. Full Name of ER Warden: Ian Wesley Hatter, assisted by ER Warden Jenny Lynn Feick

1.2. Ecological Reserve Name: Columbia Lake, ER#20

1.3. Number of Times ER Visited in 2025: Ten (Apr. 30, May 25, Jun. 6, Jun. 11, Jun. 24, Jul. 11, Jul. 27, Aug. 17, Sept. 16, and Oct. 23)

1.4 Number of Hours spent Volunteering in the Ecological Reserve: **Total** = 34 hr, 15 min. x 2

Figure 1: Volunteer Hours Per Visit Inside Columbia Lake Ecological Reserve in 2025

Date	Time Start	Time End	Time in ER
April 30	11:45 am	4:45 pm	5 hr.
May 25	10:40 am	12:40 pm	2 hr.
June 6	8:45 am	2:30 pm	5 hr., 45 min.
June 11	11:00 am	3:00 pm	4 hr.
June 24	10:30 am	12:05 pm	1 hr., 45 min.
July 11	10:30 am	3:00 pm	4 hr., 30 min.
July 27	1:00 pm	3:30 pm	2 hr., 30 min.
August 17	12:00 pm	2:15 pm	2 hr., 15 min.
September 16	12:00 pm	4:30 pm	4 hr., 30 min.
October 23	12.25 pm	2:25 pm	2 hr.

Both Ian Hatter and Jenny Feick conducted the field visits. Vehicle travel time to/from the starting point (Invermere) to the reserve is one hour, so we spent two hours per trip travelling.

After each field visit, we spent many hours posting iNaturalist observations. Ian Hatter did e-Bird reports (Location: Columbia Lake Ecological Reserve), developed maps, and made trip report notes. Jenny Feick spent numerous hours over several months corresponding with iNaturalist identifiers, as well as others.¹ She also prepared and presented two PowerPoint shows on ecological reserves that included current information about Columbia Lake Ecological Reserve (See Section 5.2 Outreach). Ian Hatter spent at least one week of 8-10-hour days compiling the Columbia Lake ER report with help from Jenny Feick.

2.0 Description of Observations in the Ecological Reserve during Visits.

2.1. Extent of the Ecological Reserve Visited, &/or Tour Route:

Jenny Feick and I accessed the ER from the Camp One Access Road. During our ten visits, we visited parts of the ER that we had not seen in previous years, including rugged terrain (See [Figure 16](#) in Appendix J), and a hilltop on the north side of the ER (See [Figure 17](#)). The areas we have not yet visited are inaccessible cliffs where travel would be extremely difficult and

¹ Denise LeMaster of Invermere, Mike Fenger, Harry Crosby, Gary Fletcher, and Louise Beinhauer of the Friends of Ecological Reserves of BC, Canal Flats resident Waltraud Moos, geologist Kevin Root, forester Randy Moody, Kootenay Connect's manager Marcy Mahr, and biologists Ian Adams and Trevor Kinley.

dangerous ([Figure 18](#)). We also made repeat visits to monitor stream orchids and white clematis, and to install, check and remove a wildlife camera along a game trail. See Appendix A for maps of our routes for the ten trips ([Figures 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12](#)), and Appendix B for a map showing where all of our iNaturalist observations have been made since 2022 (See [Figure 13](#)).

2.2. Biodiversity (Plant, Animal and Fungi Species) Observed:

The biodiversity lists for the Columbia Lake Ecological Reserve now contain 547 (species) entries,² including: 3 millipedes (1 alien sp., 2 new species), 20 arachnids (8 research grade,³ 7 new), 85 insects (20 research grade, 7 new), 49 birds (8 research grade, 22 new), 12 mammals (6 research grade, 1 species-at-risk), 33 fungi including rusts (7 research grade, 2 species-at-risk, 15 new) 47 lichens (19 research grade, 1 species-at-risk, 19 new), 39 mosses (12 research grade, 1 species-at-risk, 25 new), 13 ferns and fern allies (9 research grade, 3 species-at-risk, 4 new), 10 gymnosperms (9 research grade, 1 species-at-risk, 1 new), and 236 angiosperms (162 research grade, 20 alien species, 3 species-at-risk, 53 new). See attached lists in Appendices C and D. These lists are based on what we see or hear in the reserve, as well as what evidence we find (e.g., track, scat, construction, gall, etc.), and all observations from all observers in the [BC Parks iNaturalist project for the Columbia Lake Ecological Reserve](#).

Several species identified last year were crossed off the list after identifiers in iNaturalist provided updated identifications. In some cases, they could not verify the species without additional detailed or difficult to get information (e.g., photographs of the underside of an organism, cross-sections of a stem, microscopic investigation of a collected specimen, DNA barcoding, etc.) and could only identify the genus or a group within a genus, or a higher-level taxonomic level, e.g., family or order. Taxonomic groups that are challenging to identify to a species level using iNaturalist include most of the arthropod groups (See [Figures 19](#) and [20](#)) and the species of deer based on scat or tracks, many fungi (See [Figure 21](#)) and lichens (See [Figure 22](#)), most mosses (See [Figure 23](#)), some ferns, spruce, and among the flowering plants, grasses, willows, paintbrush, golden-rods, cinquefoils, meadow-rues, wild roses, and members of the aster family (See [Figure 24](#)). In some cases, this would mean disturbing or collecting specimens.

This year we also recorded the number of flowering plant species by taxonomic order (See [Figure 2](#) next page).

² An entry could be an organism identified to the species level or a higher taxonomic classification (Subgenus, Genus, Subclass, Class, Subfamily, Family, Suborder, Order, etc.).

³ In iNaturalist, "Research Grade" is a designation for observations with a high-quality, community-verified identification, making them suitable for scientific research. To achieve this, an observation must have one or more photos and/or sounds, a valid date, accurate GPS location data, and a 2/3 majority consensus on identification at species level or lower, usually requiring at least two identifiers to agree on the identification. Research grade can only be assigned to a species level identification.

Figure 2: No. of Flowering Plant Species by Order Observed in Columbia Lake Ecological Reserve

Flowering Plant Order	# of species
Apiales	6
Asparagales	14
Asterales	73
Boraginales	5
Brassicales	5
Caryophyllales	4
Cornales	3
Dipsacales	8
Ericales	6
Fabales	8
Fagales	3
Gentianales	4
Lamiales	15
Liliales	7
Malpighiales	9
Poales	32
Rosales	13
Ranunculales	12
Santalales	2
Sapindales	2
Saxifragales	5

As of February 28, 2026, out of the 2674 observations made in iNaturalist, 401 species have been identified by 13 observers (See list in Appendix B) and verified by 270 Identifiers from the iNaturalist community. Of the 2674 observations of organisms, 1672 or ~63% achieved research grade. These figures change as additional Identifiers peruse the data in the project, and either assign research grade to observations or dispute the initial identification.⁴ These observations include 12 species at risk, five that are research grade (See Figures [25](#), [26](#), [27](#), [28](#), & [29](#)).

Appendix E lists the birds and mammals identified during each of the ten visits to the ecological reserve. Bird species diversity was greatest on June 6 (30 species identified) and dropped off substantially after July 11 (25 species identified).

⁴ For example, on March 1, 2026, dog vomit slime mold was added as a new species for 2025 and assigned research grade, Engelmann’s aster was replaced by something more generic, white prairie aster was confirmed as research grade, Greene’s mountain-ash was changed to European mountain-ash, an alien species, and lambsquarters, an alien species was changed to Freemont’s goosefoot, a native species.

2.3. New Plant and Animal Species Observed:

In 2025, 145 new organism listings⁵ were observed (see Appendices B, C, & D). New listings include two millipedes, seven arachnids (See [Figure 30](#)), seven insects, 12 birds, 15 fungi (See [Figure 31](#)), 19 lichens (See [Figure 32](#)), 25 mosses, four ferns, one conifer, and 53 flowering plants, including the Foothill deathcamas, a significant range extension, confirmed as research grade by iNaturalist Identifier and Curator Taylor Justason, a Parks Canada Ecologist, (See [Figure 33](#)) and the Green-band mariposa lily, an uncommon variety of the Sagebrush mariposa lily, confirmed as research grade by iNaturalist Identifier Jeffrey Murphy, a Canadian scientist (See [Figure 34](#)). iNaturalist Identifier and Curator Mark Egger from Seattle, Washington, USA alerted us that Columbia Lake Ecological Reserve appears to be a hotspot for paintbrush hybrids (See [Figure 35](#)) and that there may even be a previously unidentified one near the karst springs. Due to logistical challenges and safety concerns, none of the 2025 field visits took place when nocturnal species such as bats could be observed.

3.0 Issues

3.1. Public Access Issues:

Public access continues to be the Camp One Access Road that runs along the west side of ecological reserve (See [Figure 36](#)). Quads and trail bikes have no difficulty travelling along the road, but it is becoming increasingly difficult for all wheel SUVs. On our first visit on April 30, we saw no sign of recent winter logging or use of the fire pit located within the reserve. There continues to be an abundance of alien plant species along the edge of the access road (e.g. dandelions) and wherever trail bikes have entered and driven through the reserve.

3.2. Signage Issues:

The perimeter of this ER is well marked with signs on the south-western side. An ER sign also denotes the northwest perimeter. However, the remaining boundary is unmarked, and public confusion continues about where exactly the CLER boundaries are on the northeast, east, and southeast sides of the reserve. The illegal tree-cutting that took place in the winter of 2023/24 was within 200 metres of a sign (See [Figure 37](#)). The damage is still evident (See [Figure 38](#)).

3.3. Maintenance Issues:

The access road to the ecological reserve (Camp One Road) has continued to deteriorate since 2023. On our first visit (April 30), we dodged washouts (See [Figure 39](#)) and removed numerous small boulders from the road to reach the perimeter of the reserve. Water runs down and across the road and in places, pools on the road (See [Figure 40](#)). Once past the Spirit Trail junction, the access road's condition is no longer passible by vehicles other than ATVs. No maintenance is done on this road. The Town of Canal Flats still posts its sign denoting it as an "unmaintained trail".

⁵ Sometimes these are new species. Others are more generic taxonomic groups, including genera, family, order, etc. Sometimes the iNaturalist common name changed, as in the case of prickly wild rose becoming rosier acicularis.

4.0. Human Activities

4.1. Visitor Activities:

Mountain bikers, motorcyclists and quad riders riding the Camp One Access Road were seen occasionally on our site visits (See [Figure 41](#)). On June 6, four joggers were observed running on the road heading from Canal Flats to Fairmont (See [Figure 42](#)).

On June 11, Mike Fenger, a Board member of the Friends of Ecological Reserves of BC, and Joy Kruger accompanied us to the Columbia Lake Ecological Reserve to see the reserve and gain an understanding of the type of activities we carried out in the reserve and issues or challenges we faced (See [Figure 43](#)). Mike reported back to the FER Board of Directors at their next meeting.

On June 11, we met Waltraud Moos from Canal Flats who was visiting the ecological reserve. Waltraud, an ardent naturalist who lives in Canal Flats, was checking for flowering giant helleborine in the ecological reserve and expressed an interest in being an auxiliary warden for the reserve. She mentioned meeting Naturalist Bryan McArthur from Golden, a member of the Committee on the Status of Endangered Species in Canada (COSEWIC), and gave us his contact information. On June 27, she reported that someone in a pick-up truck appeared to be flying a drone above the reserve, which we reported to Darin Welch and Liza Pegura in BC Parks on June 28. That day, Ms. Moos also alerted us to the presence of poison ivy in the ecological reserve. On July 9, she sent us pictures of the poison ivy and described where we could find it to take photographs to post on the BC Parks iNaturalist project for Columbia Lake Ecological Reserve. When we checked the site on July 11, we saw that Western poison ivy is intermingled with a similar-looking plant called wild sarsaparilla (See [Figure 44](#)). On July 9, she also told us that the peak of the stream orchid blooming had not yet happened and that she thought she could see a few white clematis in bloom but could not obtain pictures of sufficient quality to confirm.

5.0. Warden Activities:

See Appendix G for the status of tasks that were planned for 2025 field season and other action items identified in previous years.

5.1 iNaturalist and eBird Observations

This year, as in previous years, much of our focus was on expanding the fauna, fungi and flora species lists for Columbia Lakes Ecological Reserves (see Appendices B, C, D and E). Bird observations were made visually aided by binoculars and aurally aided by the Merlin App.

5.2. Outreach

Jenny Feick made two presentations in 2025 about ecological reserves, highlighting Mount Sabine and Columbia Lake. On May 8, Jenny did a luncheon presentation for the Wings Over the Rockies Nature Festival entitled “The Ecological Reserves of BC, Hidden Gems of BC’s Protected Areas System” for an audience of 50 people, including Denise LeMaster, whose family donated land adjacent to the Columbia Lake ER to the BC Nature Trust to protect tufa springs, limber pine and bighorn sheep habitat (See <https://www.naturetrust.bc.ca/news/kootenay-conservation-youth-crew-hard-at-work>). Ms. LeMaster said her father hoped their land would become part of the Columbia Lake ER but it ended up in the East Side Columbia Lake Wildlife

Management Area (WHA). On the evening of December 16, Jenny presented a talk called “[Ecological Reserves in the Columbia Headwaters](#)” to the Board of Directors of the Friends of Ecological Reserves via Zoom. This informed an upcoming meeting FER had with Community Engagement Specialist Kate Zealand and other BC Parks staff in Victoria. A pdf of the talk, which includes Columbia Lake Ecological Reserve, can be seen at – <https://ecoreserves.bc.ca/2025/12/16/presentation-to-the-fer-board-on-columbia-lake-and-mount-sabine-ers-by-jenny-feick/>.

5.3. Alien Plant Removal

We continue to identify and remove alien invasive plant species (21 species currently identified, see Appendix C). This year we uprooted and removed ~ 60 Common mullein plants (See [Figure 45](#)) from one site within the ecological reserve (near the location of Camera trap: see [Fig. 8](#)). All removed plants were taken to and disposed of at the Columbia Valley Landfill site.

5.4. Columbia Lake Ecological Reserve PEF Wildlife Camera Project

In 2025, ER warden Ian Hatter received approval from the Park Enhancement Fund (PEF) through the BC Parks Licence Plate Program for partial funding in the amount of \$650 to secure a wildlife camera for the Columbia Lake Ecological Reserve (Project title: Wildlife Monitoring Columbia Lake Reserve). Unfortunately, the price of the camera and necessary accessories escalated from when the application was submitted on May 28, 2025, to when it was approved on July 9, 2025, due to changing economic conditions, including US President Trump’s tariffs. As a result, Navaranda Smith, Community Liaison Officer, in consultation with Amanda Webber-Roy, Conservation Specialist, both from BC Parks Kootenay Region in Nelson purchased a wildlife camera compatible with other BC Parks wildlife monitoring cameras (See [Figure 46](#)) and sent it and the necessary accessories to us in Invermere by late July, 2025.

After assembling and testing the camera, we set up the camera trap along a game trail in the ecological reserve on August 17 (See [Figure 47](#)). [Figure 10](#) shows the camera location [Camera 1] within the reserve). We checked the camera for photos and replaced the SIM card on September 16 (See [Figure 48](#)). We reviewed the next set of pictures on October 23, when we removed the camera. During its 67-day operational period, the wildlife camera photographed two mule deer does with fawns, a bighorn sheep ewe, and a bighorn sheep yearling ram in the reserve. While we had already obtained indirect evidence of deer and bighorn sheep (from scats and tracks) using the reserve, the photos confirmed their presence within the reserve (See Appendix F for wildlife camera photos). The post-project information was submitted to BC Parks using their online form on March 1, 2026.

It is very hot and dry in the Columbia Lake Ecological Reserve in the summer and early autumn with little green vegetation, except near the karst springs (See [Figure 49](#)). We have noticed that mammal activity in the reserve and neighbouring areas tends to be greatest in the spring. It starts to increase again in late fall. The majority of the ungulate and snowshoe hare scat that we see in the reserve looks like winter scat (See [Figure 50](#)). The East Side Columbia Lake WHA was set aside to protect Ungulate **Winter** Range (See [Figure 51](#)) and we suspect that there is a

greater variety and quantity of wildlife using the reserve from November to April (See [Figure 52](#)). Joan Galloway with the Wings Over the Rockies Nature Festival Society and Wildsight has noticed more wildlife sightings during that period, including wolverine, in wildlife camera traps that she has deployed in the Columbia Valley near Windermere. Mid-October to late April may be a more fruitful time period to use a wildlife camera in this particular reserve.

5.5. Giant Helleborine (Stream orchid) Monitoring

This was the third year we monitored Stream orchids at two patches in the reserve (See Figure 3 for location, titled GIANT HELI). On July 9, **2023** we counted 177 orchids in the south patch. Later that year, we found a second patch (north patch) but did not count them (post flowering). On July 19, **2024** we counted an average of 175 plants from three replicate counts (178, 163,184) in the south patch, and an average of 32 (33, 33, 30) in the north patch.

This past field season, on July 11, **2025**, we counted an average of 93 plants from three replicate counts (97, 95, 86) in the south patch (See [Figure 53](#)) and an average of 12 (12, 12, 12) in the north patch. On July 27, **2025**, we recounted the orchids, finding an average of 149 plants from three replicate counts (140, 154, 152) in the south patch and 18 (17, 17, 18) in the north patch. Flowers looked near end of term (starting to wilt). Our **2025** count was about 80% of what was observed during the 2024 count with little difference between the 2023 and 2024 counts.

Besides our counts, on July 9, **2025**, Canal Flats resident, Waltraud Moos, checked for Stream orchid flowers. She noted only a few blooming in the south and north patches, with more blooming in the south patch. On July 18, **2025**, she checked for flowers again and counted 120 plants in the south patch and 20 in the north patch.

6.0. Wardens' Proposals or Suggestions:

1. **Improve communications between ER Wardens and BC Parks:**

- a. **Improve email communications between ER Wardens and BC Parks Regional staff.** At a minimum, if an ER Warden sends an email, acknowledge its receipt, indicate when to expect a response, and provide a response, including feedback on plans for the 2026 field season and specific issues (e.g., specimen disturbance or collection in order to make species-level identifications for biodiversity lists).
- b. **BC Parks to Provide Updates Previously Identified by ER Wardens:** It would be helpful to obtain an update from BC Parks staff about boundary marking along the north-eastern boundary of the Columbia Lake ER, drone use for studying the geology of the limestone cliffs and monitoring limber pine for white pine blister rust, and using a camera trap for wildlife monitoring during the winter.
- c. **Meet:** An ER Warden regional meeting is long overdue.
- d. **Joint Site Visit:** Ideally, a BC Parks employee should accompany the ER Wardens on a site visit to Columbia Lake Ecological Reserve in 2026.

2. Carry out specific field work tasks as well as follow up and other actions. See Appendix H for plans for the 2026 field season.

- a. **Make more detailed photographic observations for iNaturalist** - More time is needed per field visit in order to obtain the type and number of pictures required by iNaturalist Identifiers to verify the observations as research grade or get as precise an identification as possible. The organisms requiring additional pictures include: arthropods, chipmunks, fungi, lichens, mosses, ferns, and numerous flowering plants, e.g., grasses, willows, paintbrush, and bog orchids. In some cases, to get the type of pictures required for identification, the organism would need to be damaged (e.g., to photograph the underside of a gilled mushroom) or collected (e.g., arthropods, mosses and lichens).
- b. **Conduct site visits with experts to learn more about the reserve** – This includes Geologist Kevin Root from Windermere, Bryan Kelly-McArthur from Golden, Conservation biologist Randy Moody from Kimberley, and iNaturalist Identifier and Paintbrush expert Mark Egger, from Seattle, Washington.
- c. **Explore possibility to acoustically monitor bats in the reserve** – Follow up on Biologist Ian Adams’ suggestion in 2023 to obtain and use bat acoustic monitoring devices to detect what bat species use the reserve. This would require collaboration with bat monitoring groups and researchers. Some funding would be needed to pay for data interpretation, necessitating submission to the Community Park Enhancement Fund or PEF in May 2026 (See Appendix I).
- d. **Monitor wildlife use in winter with a Camera Trap** – Obtain permission to use the wildlife camera purchased in 2025 through the PEF during the 2026/27 winter. To date, we have only employed the camera from mid-August–late October and most mammal use takes place in the late fall/winter/early spring.
- e. **Initiate Succession Planning** – We recommend that BC Parks accept Waltraud Moos’s application to become an Ecological Reserve Warden and ensure that she is onboarded by the spring of 2026. This will facilitate her being able to assist us in the 2026 field season. Jenny Feick and I can mentor her so that she can assume the role of ER Warden for both the Mount Sabine and Columbia Lake ecological reserves in the future. Given all of the help she provided in 2025, we encouraged her to apply to become an ER warden. She submitted her application in mid-September, 2025. As of March 2, 2026, she had not heard back from BC Parks to confirm if her application was accepted.

APPENDIX A: ER Wardens' 2025 Travel Routes for Columbia Lake Ecological Reserve

The following maps show the routes taken by ER Wardens Ian Hatter and Jenny Feick on their ten field visits to Columbia Lake Ecological Reserve from April 30 to Oct. 23, 2025.

Figure 3: Map of ER Wardens' Travel Route on April 30, 2025. GPS route: ~ 5 km.



Figure 4: Map of ER Wardens' Travel Route on May 25, 2025. GPS route: 10.7 km

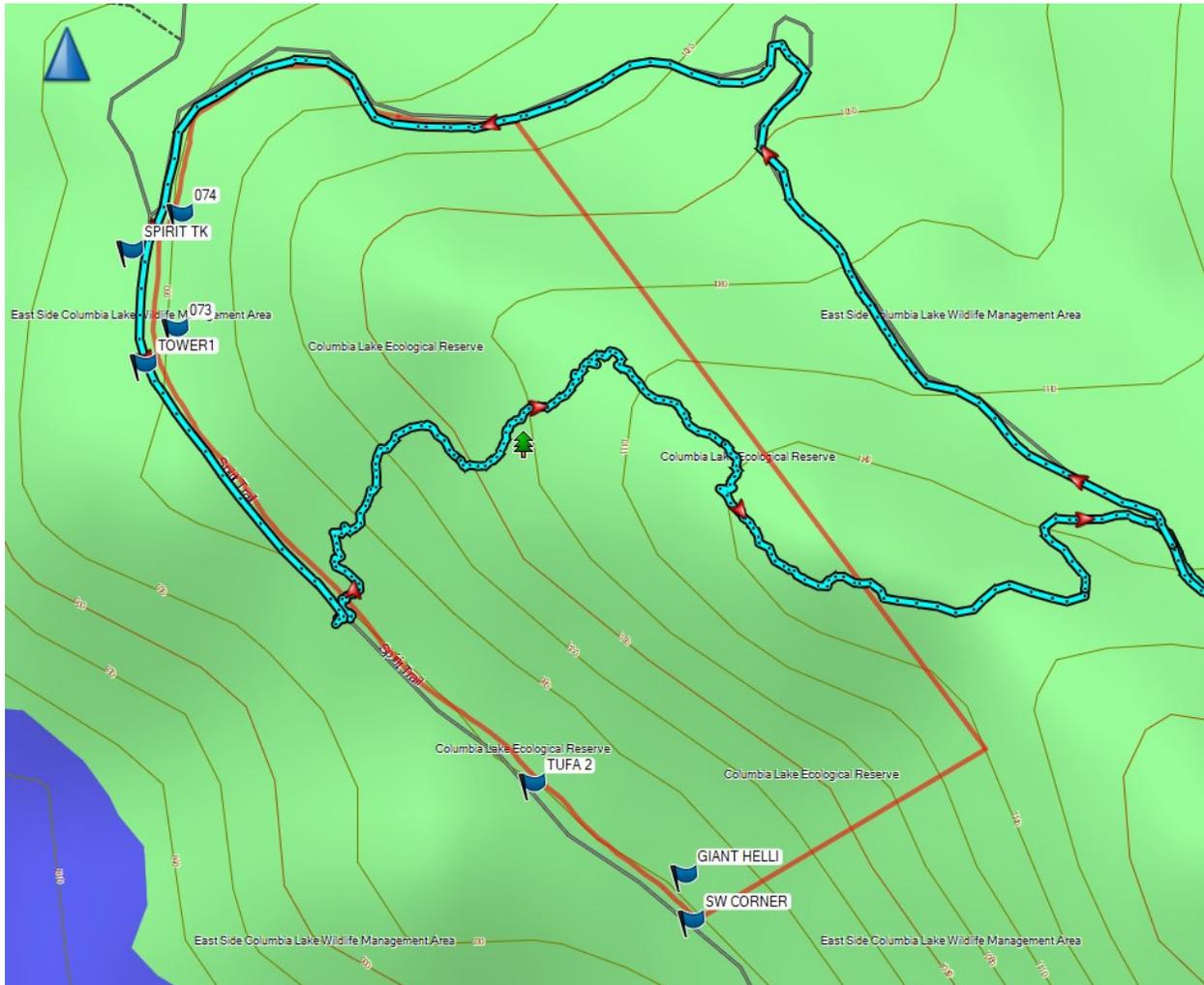


Figure 5: Map of ER Wardens' Travel Route on June 6, 2025. GPS route: 5.7 km.



Figure 6: Map of ER Wardens' Travel Route on June 11, 2025. GPS route: 5.3 km.



Figure 7: Map of ER Wardens' Travel Route on June 24, 2025. GPS route: 12.6 km (includes travel to and from the Mt. Sabine ER.)



Figure 8: Map of ER Wardens' Travel Route on July 11, 2025. GPS route: 4.3 km.

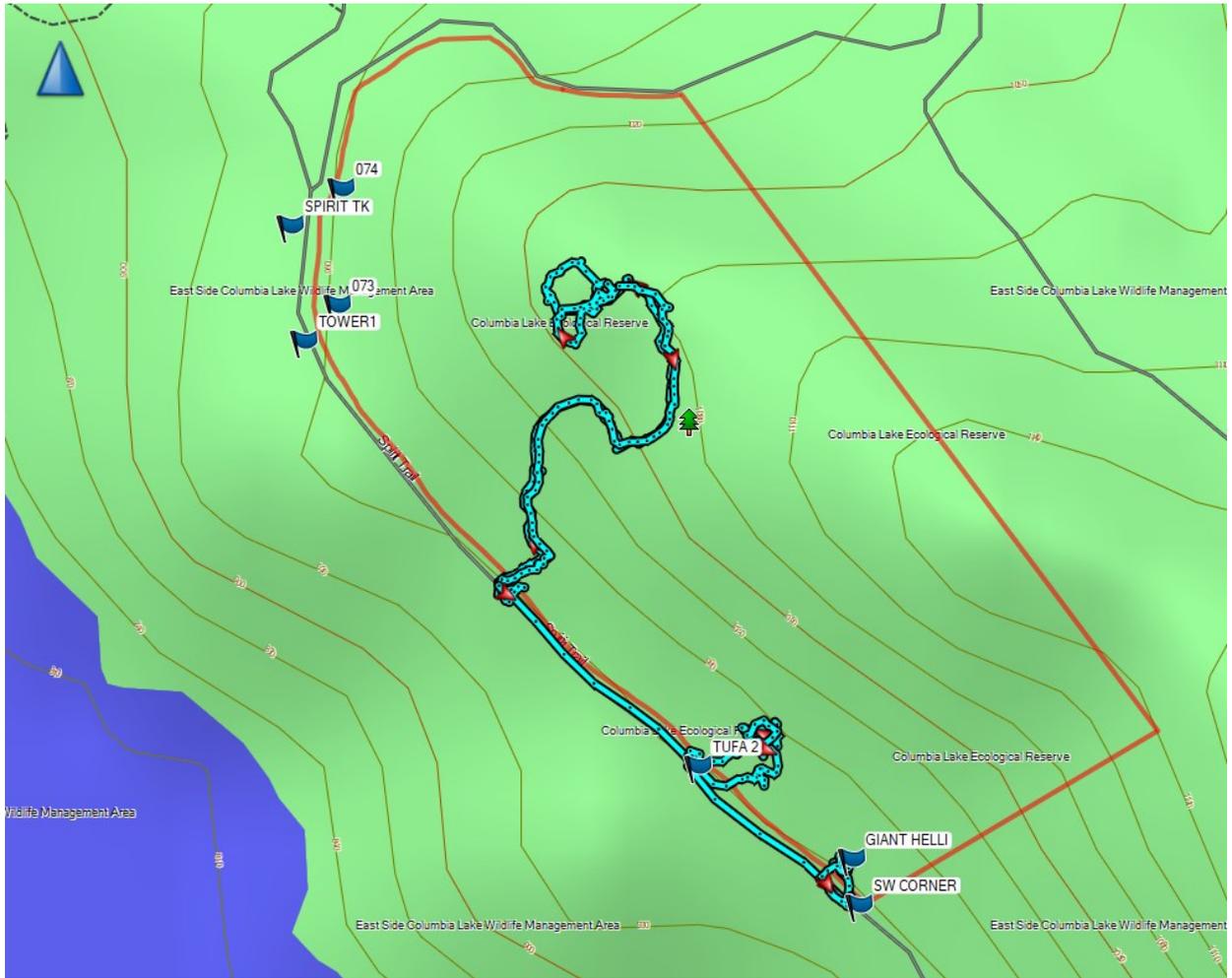


Figure 9: Map of ER Wardens' Travel Route on July 27, 2025. GPS route: 2.0 km.

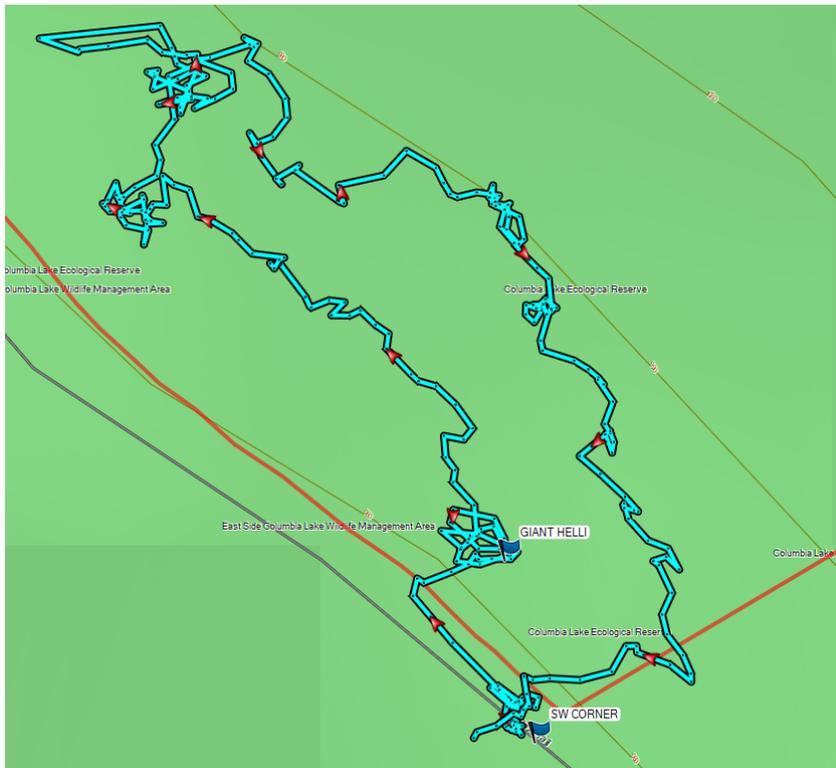


Figure 10: Map of ER Wardens' Travel Route on August 17, 2025. GPS route: 1.6 km. Camera 1 marks spot where camera trap established.

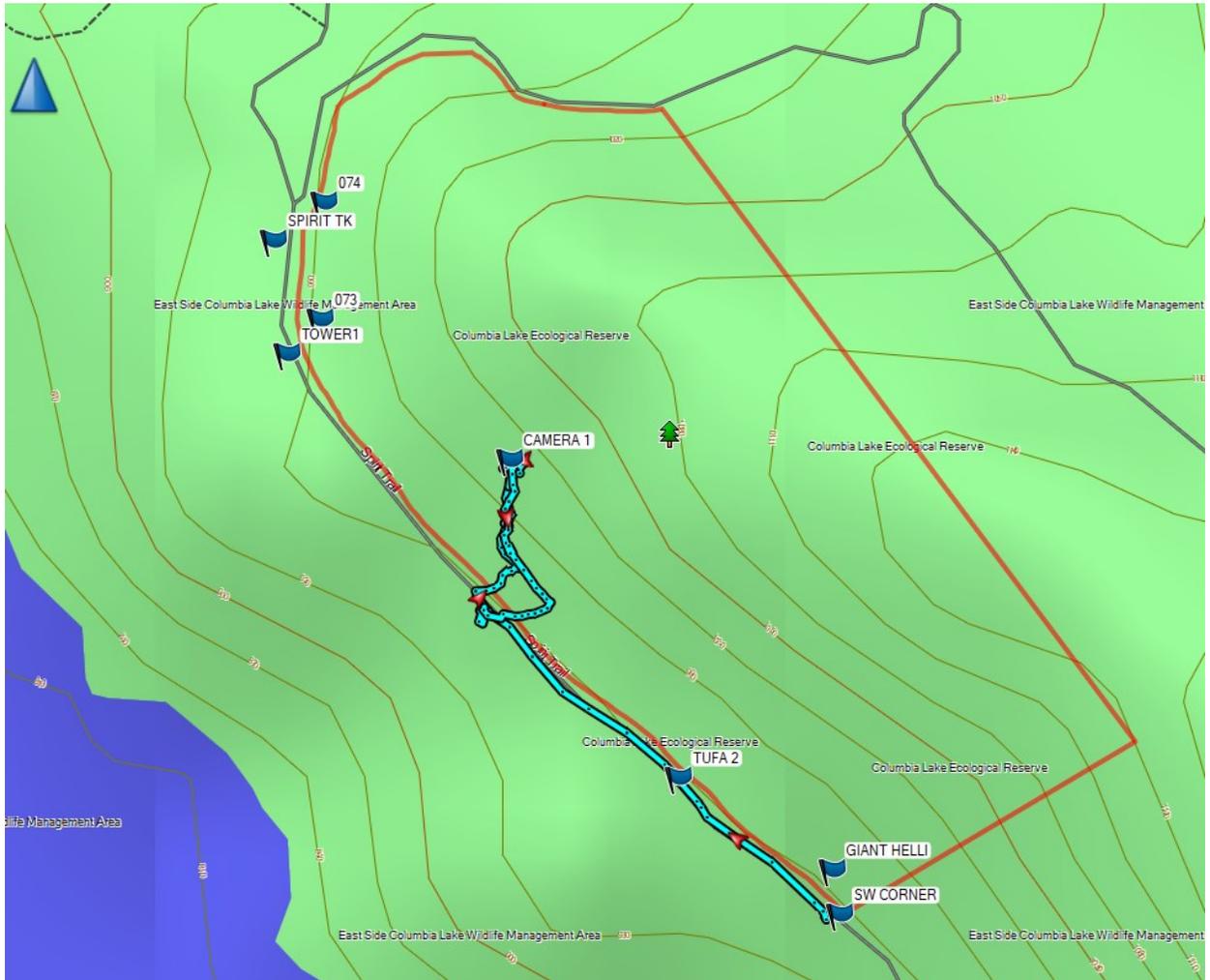


Figure 11: Map of ER Wardens' Travel Route on September 16, 2025. GPS route: 2.6 km. Camera 1 marks spot where camera trap established.

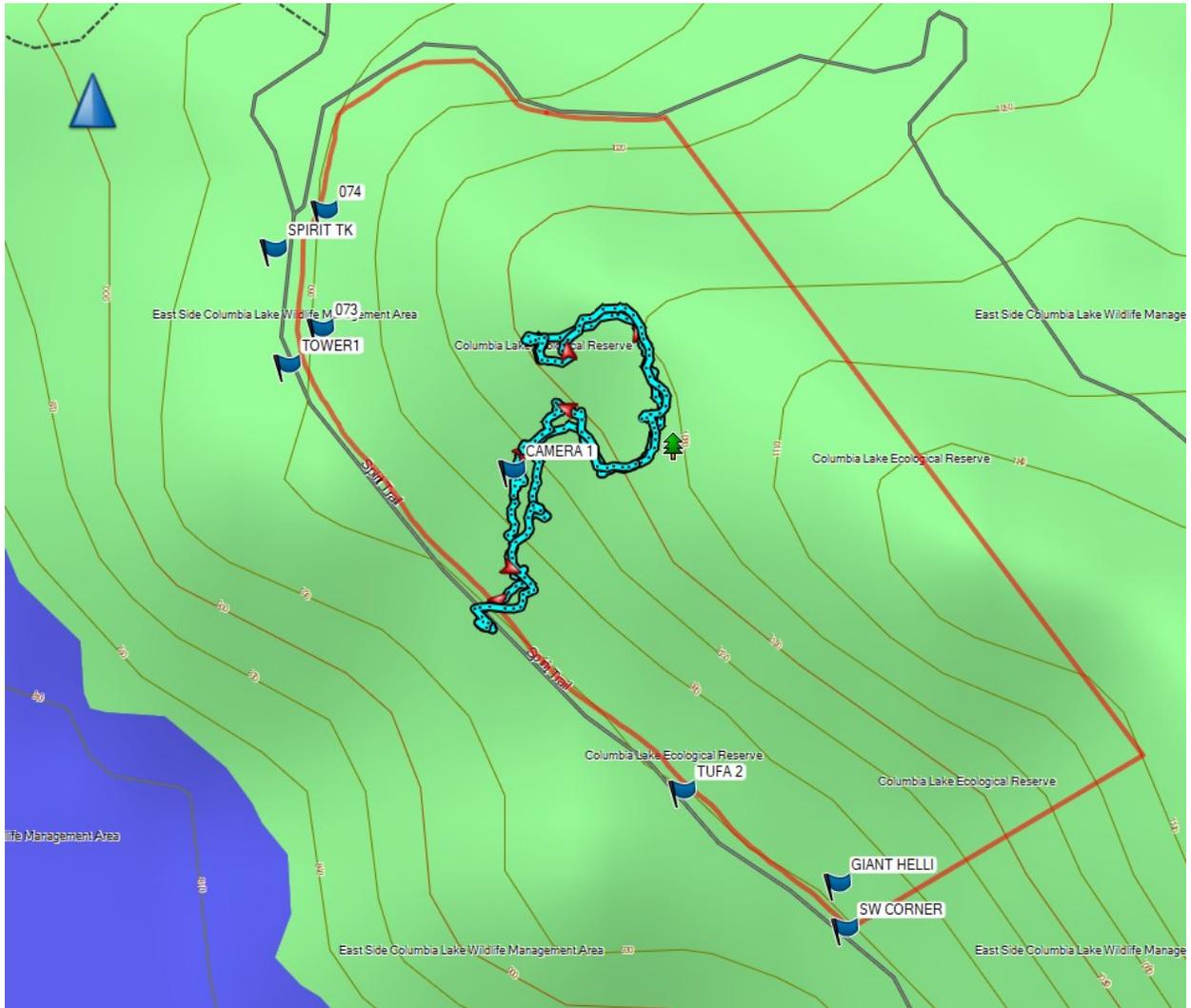
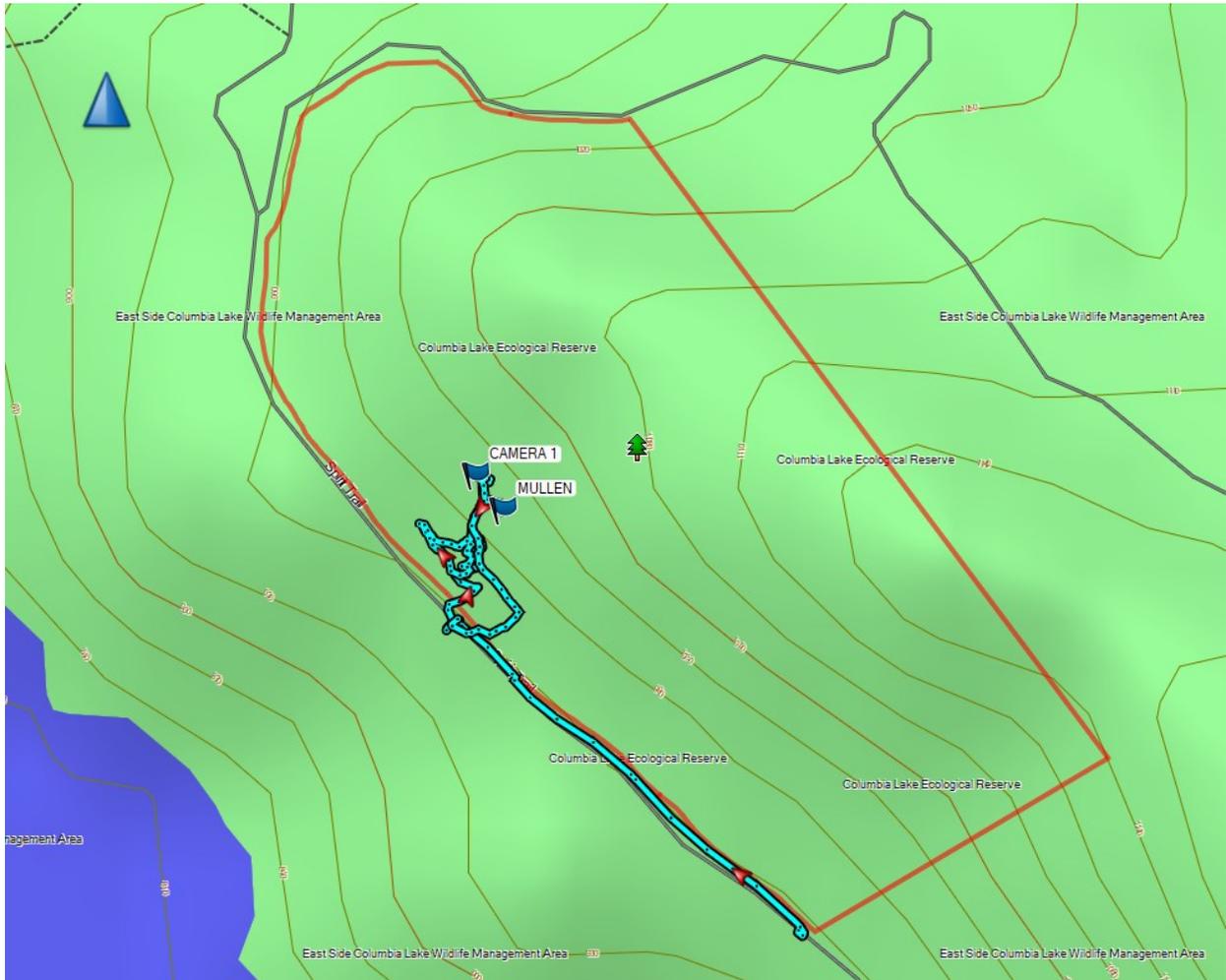


Figure 12: Map of ER Wardens' Travel Route on October 23, 2025. GPS route: 1.6 km. Camera 1 marks spot where camera trap established.



APPENDIX B: iNaturalist Observations in Columbia Lake Ecological Reserve

iNaturalist Statistics as of February 28, 2026 for Columbia Lake Ecological Reserve include:

- **No. of Observations:** 2674 observations up from 1657 in 2024, a 61% increase.
- **Research Grade:** 1672 observations or 63% were classified as research grade⁶ (up from 869 or 53% in 2024), ~10% increase in confirmed identifications to this level.
- **Species Numbers:** 401 species confirmed (up from 342 in 2024), a 17% increase.
- **Identifiers:** 270 identifiers (up from 180 in 2024), a 50% increase, indicating greater interest in observations made in the Columbia Lake Ecological Reserve.
- **Observers:** 13 in total⁷ including Jenny Feick and Ian Hatter.

Figure 13: Map of iNaturalist Observations in Columbia Lake Ecological Reserve (as of 28/02/26).

Areas without observations are largely in cliffy terrain where travel is extremely difficult.



⁶ In iNaturalist, "Research Grade" is a designation for observations with a high-quality, community-verified identification, making them suitable for scientific research. To achieve this, an observation must have one or more photos and/or sounds, a valid date, accurate GPS location data, and a 2/3 majority consensus on identification at species level or lower, usually requiring at least two identifiers to agree on the identification.

⁷ List of observers include Jenny Feick, Shane Johnson, Finn McGhee, Ian Hatter, Rebecca Reader-Lee, Abby Hyde, Jack Bindernagel, Lisa Pegura, Brett (brettxmccull7), Ian Adams, Yip van M (yipvanm), Annie Pumphrey, and Robyn (rangerrobyn). Names provided are from the iNaturalist profiles and indicate how individuals wish to be identified.

APPENDIX C: Fauna, Fungi and Flora of Columbia Lake Ecological Reserve (Common Name First)

This list includes both the common and scientific names for species observed during ten site visits in 2025 (in alphabetical order by common name). Names **in bold** refer to a change in 2025, usually a species or other taxonomic level first identified in 2025, but sometimes a name change. Names underlined refer to species that are designated as research grade by iNaturalist, (i.e. an observation considered reliable enough for scientific research). Names with an asterisk (*) refer to alien species. Names with two asterisks (**) refer to species at risk (i.e. vulnerable, threatened or endangered). Naming protocols follow iNaturalist and eBird. Names are listed in alphabetical order according to common name.

Animals

Arthropods

Myriapods (Centipedes and Millipedes)

Diplopods (Millipedes)

Barrel millipede*

Round-backed millipede

Snake millipede

Arachnids

Bowl-and-doily spider

Cat-faced orbweaver

Entelegyne spider

Filmy dome spider

Gall and rust mite

Gall and rust mite

Goldenrod crab spider

Ground crab spider

Mesh weaver spider

Orbweaver

Plum finger gall mite

Proszynski's jumping spider

Rocky Mountain maple felt mite

Rocky Mountain wood tick

Running crab spider

Sheet-weaver spider

Slender crab spider

Stealthy ground spider

Velvet mite

Woodland jumping spider

Animalia

Arthropoda

Myriapoda

Diplopoda

*Cylindroiulus caeruleocinctus**

Superorder *Juliformia*

Order *Julida*

Arachnida

Frontinella pyramitela

Araneus gemmoides

Infra-order *Entelegynae*

Neriene radiata

Eriophyes sp.

Family *Eriophyidae*

Misumena vatia

***Xysticus* sp.**

Family *Dictynidae*

Superfamily *Araneoidea*

Eriophyes emarginatae

Evarcha proszynskii

Aceria calaceris

Dermacentor andersoni

Philodromus sp.

Pityohyphantes sp.

***Tibellus* sp.**

***Gnaphosa* sp.**

Family *Erythraeidae*

Complex Evarcha falcata

Insects

Adelgid

Ant

Antlion

Anthemid aphid

Aphid ("black aphid")

Aphid ("green aphid")

Aphid ("red aphid")

Armoured resin bee

Armoured resin bee

Bee

Bee-mimic beetle

Bourdon à ceinture rouge

Cicada

Cicada

Cicada

Click beetle

Crackling forest grasshopper

Cyclorrhaphan fly

Delicate cycna moth

Distinct lace bug

Douglas fir adelgid

Douglas-fir beetle

Fall webworm moth

False flower beetle

Field crescent butterfly

Flood water mosquito

Flower moth

Gall midge

Gall wasp

Great basin bumble bee

Hercules carpenter ant

Hydaspe fritillary

Ichneumonid/braconid wasp

Ichneumonid wasp

Impolite mound ant

Inland floodwater mosquito

Jewel beetle

Jewel beetle

Jewel beetle

Large daisy aphid

Leaf-miner fly

Insecta

Adelges sp.

Family *Formicidae*

Family *Myrmeleontidae*

Macrosiphoniella sp.

Tribe *aphidini*

Family *aphididae*

Subfamily *aphidinae*

Heriades sp.

Heriades* Subgenus *Neotrypetes

Epifamily *anthophila*

Trichiotinus assimilis

Bombus rufocinctus

Okanagana sp.

Subfamily *tibicininae*

Subtribe *tibicinina*

Prosternon bombycinum

Trimerotropis verruculata

Infraorder *Cyclorrhapha*

Cycnia tenera

Corythucha distincta

Adelges cooleyi

Dendroctonus pseudotsugae

Hyphantria cunea

Subfamily *Anaspidinae*

Phyciodes pulchella

Subgenus *Ochlerotatus*

Landryia sp.

Blaesodiplosis sp.

Periclistus sp.

Bombus centralis

Camponotus herculeanus

Argynnis hydaspae

Superfamily *Ichneumonoidea*

Family *Ichneumonidae*

Formica subpolita

Aedes vexans

Anthaxia prasina

Genus *Anthaxia*

Subgenus *Melanthaxia*

Uroleucon sp.

Aulagromyza sp.

Leaf-miner fly
Leaf miner fly
Leaf-miner fly
Lethal antlion
Long-legged fly
Lorquin's admiral
Many-spined twig gall wasp
Metallic sweat bee
Metallic wood-boring beetle
Morril lace bug
Moth fly
Mourning cloak butterfly
Native dragonfly
New world red bearded ant
Nomad bee
None-biting midge
None-biting midge
None-biting midge
North American spur-throated grasshopper
North American tarnished plant bug
Northern crescent butterfly
Northern checkerspot butterfly
Ornate checkered beetle
Pit-trapping antlion
Planthopper
Plume moth
Rabbitbrush stem gall moth
Short-faced bee
Simple wave moth
Soldier beetle
Spittlebug/froghopper
Two-tailed swallowtail
Turfgrass ant
Typical bark beetle
Typical cicadas
Typical weevil wasp
Ugly-nest caterpillar moth
Uhler's stink bug
Varigated meadow hawk
Western black carpenter ant
Western thatching ant
Wood boring beetle

Subfamily *Phytomyzinae*
Phytomyza sp.
Complex *Phytomyza periclymeni* Superspecies
Myrmeleon exitialis
Family *Dolichopodidae*
Himenitis lorquini
Diplolepis spinosa
Genus *Lasioglossum*, Subgenus *Dialictus*
Genus *Anthaxia* Subgenus *Melanthaxia*
Corythucha morrilli
Subfamily *Psychodinae*
Nymphalis antiopa
Aeshna sp.
Formica neorufibarbis
Nomada sp.
Family *Chironomidae*
Chironomus sp.
Subgenus *Chironomus*
***Melanoplus* sp.**
Lygus lineolaris
Phyciodes cocyta
Chlosyne palla
Trichodes ornatiss
Tribe *Myrmeleontina*
Infraorder *Fulgoromorpha*
Subfamily *Pterophorinae*
Gnorimoschema octomaculella
Duporea sp.
Scopula junctaria
Rhagonycha sp.
Superfamily *Ceracopoidea*
Papilio multicaudata
Lasius neoniger
Scolytus sp.
Family *Cicadidae*
Cerceris sp.
Archips cerasivorana
Subgenus *Chlorochroa*
Sympetrum corruptum
Camponotus modoc
Formica obscuripes
Tribe *Agrilini*

Wood, mound, and field ant
Woolly aphid

Chordates, Vertebrates

Birds

American crow
American kestrel
American robin
American three-toed woodpecker
Bald eagle
Barn swallow
Black-billed magpie
Black-capped chickadee
Canada goose
Cassin's vireo
Cedar waxwing
Chipping sparrow
Clark's nutcracker
Common nighthawk
Common raven
Dark-eyed junco
Downy woodpecker
Dusky flycatcher
Falcon
Golden-crowned kinglet
Hairy woodpecker
Hammond's flycatcher
Hermit thrush
Hummingbird
Lazuli bunting
MacGillivray's warbler
Merlin
Mountain chickadee
Northern flicker
Pileated woodpecker
Pine grosbeak
Pine siskin
Red-breasted merganser
Red-breasted nuthatch
Red-eyed vireo
Red-naped sapsucker
Red-tailed hawk

Formica sp.
Family *Adelgidae*

Chordata, Vertebrata

Aves

Corvus brachyrhyncho
Falco sparverius
Turdus migratorius
Picoides dorsalis
Haliaeetus leucocephalus
Hirundo rustica
Pica hudsonia
Poecile atricapillus
Branta canadensis
Vireo cassinii
Bombycilla cedrorum
Spizella passerina
Nucifraga columbiana
Chordeiles minor
Corvus corax
Junco hyemalis
Picoides pubescens
Empidonax oberhoiseri
Falco sp.
Regulus satrapa
Leuconotopicus villosus
Empidonax hammondii
Catharus guttatus
Selasphorus sp.
Passerina amoena
Geothlypis tolmiei
Falco columbarius
Poecile gambeli
Colaptes auratus
Dryocopus pileatus
Pinicola enucleator
Spinus pinus
Mergus serrator
Sitta canadensis
Vireo olivaceus
Sphyrapicus nuchalis
Buteo jamaicensis

Ruby-crowned kinglet
Ruffed grouse
Rufous hummingbird
Spotted towhee
Swainson's thrush
Townsend's solitaire
Turkey vulture
Violet-green swallow
Warbling vireo
Western tanager
Western wood peewee
Yellow-rumped warbler

Mammals

American black bear
American red squirrel
Bighorn sheep**
Bushy-tailed woodrat
Least chipmunk
Red fox
Rocky Mountain elk
Rocky Mountain mule deer
Snowshoe hare
Western chipmunk
White-tailed deer
Yellow-pine chipmunk

Fungi & Lichens

Non-lichenized fungi

Birch polypore

Brittle gill

Candle flame lichen
Cedar-apple rust
Cedar-hawthorn rust
Common gilled mushroom
Common gilled mushroom

Conifer mazegill

Copper brittle gill

Corky bark disease

Earthstar

Field/button mushroom

Rugulus calendula
Bonasa umbellus
Selasphorus rufus
Pipilo maculatus
Catharus ustulatus
Myadestes townsendi
Cathartes aura
Tachycineta thalassina
Vireo gilvus
Piranga ludoviciana
Contopus sordidulus
Setophaga coronata

Mammalia

Ursus americanus
Tamiasciurus hudsonicus
*Ovis canadensis***
Neotoma cinerea
Neotamias minimus
Vulpes vulpes
Cervus canadensis ssp. canadensis
Odocoileus hemionus ssp. hemionus
Lepus americanus
Neotamias sp.
Odocoileus virginianus
Neotamias amoenus

Fungi

Fungi (Non-Lecanoromycetes)

Fomitopsis betulina

Russula sp.

Candelaria sp.

Gymnosporangium juniper-virginianae

Gymnosporangium globosum

Order Agaricales

Family Omphalotaceae

Gloeophyllum sepiarium

Russula decolorans

Diplodia tumefaciens

Geastrum sp.

Agaricus sp.

Juniper broom rust
Leaf curl fungi
Lilac bonnet
Map fungus
Multiflora rose rust
Northern cinnabar polypore
Orange-yellow rust
Pet-de-loup
Pinelitter gingertail
Rose rust
Russet scaly tricholoma
Rust fungi
Rust fungi
Rustgill/gym**
Snowmelt clitocybe**
Spruce witch's broom rust
Stocked hairy fairy cup
Tarspot fungus
Tinder polypore
Turkey-tail
Veiled polypore

Lichens

Alternating dog lichen
Antlered powderhorn
Beard lichen
Black-eye lichen
Black-eyed rosette lichen
Blue-gray rosette lichen
Bristly beard lichen
Blushing scale lichen
Bottlebrush frost lichen**
Drummond's rock pimple lichen
Effervescent tarpaper lichen
Elegant sunburst lichen
Fishscale lichen
Gold cobblestone lichen
Hairy shadow lichen
Hooded tube lichen
Horsehair lichen
Lapland beard lichen
Leather lichen

Gymnosporangium nidus-avis
Taphrina sp.
Mycena pura
Coccomyces dentatus
Phragmidium rosae-multiflorae
Trametes cinnabarina
Puccinia caricis-shepherdiae
Family Lycoperdaceae
Xeromphalina caudicinalis
Phragmidium mucronatum
Tricholoma vaccinum
Order Pucciniales
Phragmidium sp.
Gymnopilus sp.**
Clitocybe albirhiza**
Chrysomyxa arctostaphyli
Lachnum birgineum
Rhytisma arbuti
Fomes excavatus
Trametes sp.
Cryptoporus volvatus

Lecanoromycetes

Peltigera didactyla
Cladonia subulata
Usnea sp.
Tephromela atra
Physcia phaea
Physcia caesia
Usnea hirta
Psora decipiens
*Physconia detersa***
Staurothele drummondii
Collema furfuraceum
Rusavskia elegans
Psora sp.
Pleopsidium flavum
Phaeophyscia hirsuta
Hypogymnia physodes
Bryoria sp.
Usnea perplexans
Dermatocarpon miniatum

Lesser sulphur-cup lichen
Lung lichen
Mealy pixie cup
Mountain wolf lichen
Netted shield lichen
Orange rock posy
Pebbled pixie cup
Pelt lichen
Pixie cup/reindeer lichen
Powder-tipped rosette lichen
Powdery sunburst lichen
Rock whitewash
Rosette/frost lichen
Rosette lichen
Rosette pixie-cup lichen
Salted shield lichen
Shield lichen
Smooth-footed powderhorn
Split-peg lichen
Sugared sunburst lichen
Sunburst lichen
Sunburst lichen/firedot
Sunken disk lichen
Trumpet lichen
Veinless pelt lichen
Witch's hair
Wolf lichen
Wolf lichen

Plants

Cryptogams (no seeds)
Bryophytes
Bristle moss
Bristle-moss
Bristly haircap moss
Brocade moss
Brook-moss
Bryum moss
Bud-headed groove-moss
Claw-leaved hook-moss
Feather moss

Cladonia deformis
Lobaria sp.
Cladonia chlorophaea
Letharia lupina
Parmelia sulcata
Physcia phaea
Cladonia pyxidata
Peltigera sp.
Cladonia sp.
Physeia dubia
Xanthomendoza ulophyllodes
Phlyctis petraea
Family *Physciaceae*
Physcia sp.
Cladonia pocillum
Parmelia saxatilis
Parmelia sulcata
Cladonia ochrochlora
Cladonia cariosa
Rusavskia soorediata
Order *Teloschistales*
Subfamily *Xanthorioideae*
Aspicilia sp.
Cladonia fimbriata
Peltigera malacea
Alectoria sarmentosa
Letharia sp.
Letharia vulpina

Plantae

Cryptogamae (no seeds)
Bryophyta
Family *Orthotrichaceae*
Pulviger a sp.
Polytrichum piliferum
Callicladium imponens
Hygrohypnum sp.
Family *Bryaceae*
Aulacomnium androgynum
Palustriella falcata
Brachythecium sp.

Feather mossFern-leaved hook-mossFir tamarisk-moss**Forkmoss**Fragile fork-moss

Grimmia dry rock moss**

Homalothecium moss

Hook-moss**Hypnum moss****Joint-toothed moss**

Joint-toothed moss

Joint-toothed moss**Joint-toothed moss****Kneiff's hook-moss**Red-stemmed feather moss**Revolvate hypnum moss**Rhizomnium moss

Rock moss

Scorpion moss**Sessile grimmia****Smooth-stalk feather-moss****Spreading-leaved grimmia**Stairstep mossStar moss**Tangled thread moss**

Thyme moss

Thyme-moss**Twisted moss****Whitish feather moss**

Woodsy thyme-moss

Ferns and Fern Allies**Cliff fern****Cliffbrake**Fee's lip fernField horsetailFragile fernGastony's Cliffbrake**

Horsetail

Oregon woodsia

Rocky Mountain woodsia

Rough horsetail**Order Hypnales**Cratoneuron filicinumAbietinella abietina***Dicranum sp.****Dicranum tauricum**Grimmia laevigata****Homalothecium sp.****Drepanocladus sp.*****Family Hypnaceae****Family Bartramiaceae**

Family Pottiaceae

Ptychostomum sp.**Class Bryopsida*****Drepanocladus aduncus****Pleurozium schreberi****Roaldia revoluta****Rhizomnium glabrescens**Schistionium sp.****Scorpidium sp.******Schistidium apocarpum******Brachythecium salebrosum******Grimmia ramondii****Hylocomium splendens**Syntrichia ruralis****Hygroamblystegium varium****Plagiomnium sp.***Family Mniaceae****Complex *Tortella tortuosa******Brachythecium albicans****Plagiomnium cuspidatum****Pteridophyta******Woodsia sp.******Pellaea sp.****Myriopteris gracilis**Equisetum arvense**Cystopteris fragilis**Pellaea gastonyi****Equisetum sp.**Woodsia oregana**Woodsia scopulina****Equisetum hyemale***

Simple cliffbrake**
Smooth cliffbrake**
Western scouringrush

Phanaerogams (has seeds)
Gymnosperms (no flowers)

Common juniper
Creeping juniper
Douglas-fir
Interior spruce
Juniper
Limber pine**
Western ponderosa pine
Rocky Mountain juniper
Rocky Mountains Douglas-fir
White spruce

Angiosperms (has flowers)

Alfalfa*
Alaskan bellflower
American aster
American groundsel/ragwort
Arrowleaf balsamroot
Aster
Aster
Balsam ragwort
Bastard toadflax
Bearberry
Beardtongue
Beautiful sedge
Bicolor sedge
Big rough fescue
Bigseed biscuitroot
Blazingstar
Black cottonwood
Bluebunch wheatgrass
Blue wild rye
Bog orchid
Bonneville shooting star
Boreal sage
Boreal sweet-vetch
Bull thistle*

Pellaea glabella simplex**
Pellaea glabella**
Equisetum hyemale ssp. affini

Phanaerogamae (has seeds)
Gymnosperma (no flowers)

Juniperus communis
Juniperus horizontalis
Pseudotsuga menziesii
Picea albertiana
Juniperus sp.
Pinus flexilis**
Pinus ponderosa
Juniperus scopulorum
Pseudotsuga menziesii glauca
Picea glauca

Angiospermae (has flowers)

Medicago sativa*
Campanula alaskana
Symphotrichum sp.
Packera sp.
Balsamorhiza saqittata
Subfamily Asteroideae
Tribe Astereae
Packera paupercula
Comandra umbellata
Arctostaphylos uva-ursi
Penstemon sp.
Carex concinna
Carex Sect. bicolores
Festuca campestris
Lomatium macrocarpum
Mentzelia sp.
Populus trichocarpa
Pseudoroegneria spicata
Elymus glaucus
Platanthera sp.
Primula conjugens
Artemisia borealis
Hedysarum boreale
Cirsium vulgare*

Bulrush sedge
Bush penstemon
Butterwort
Caespitose fleabane
Canada bluegrass*
Canada hawkweed
Canadian bluejoint
Canadian buffalo-berry
Canadian gooseberry
Carrotleaf biscuitroot
Cheatgrass*
Choke cherry
Cinquitoil
Coast goldenrod
Common blue lettuce
Common butterwort
Common dandelion*
Common gaillardia
Common lambsquarters*
Common mullein*
Common snowberry
Common yarrow
Cool-season grass
Creeping mahonia
Crested-tongue beardtongue
Cutleaf anemone
Cut-leaf fleabane
Dandelion*
Dark-throated shooting star
Douglas' bladderpod
Dropseed rockcress
Elegant goldenrod
Englemann's aster
False goldenaster
Fescues
Field locoweed
Field sagewort
Fleabane
Foothill deathcamas
Fragrant bedstraw
Fremont's goosefoot
Fringed brome

Carex scirpoidea
Penstemon fruticosus
Pingicula sp.
Eriqeron caespitosus
Poa compressa*
Hieracium umbellatum
Calamagrostis canadensis
Sheperdia canadensis
Ribes oxyacanthoides
Lomatium multifidum
Bromus tectorum*
Prunus virginiana
Potentilla sp.
Solidago spathulata
Lactuca pulchella
Pinguicula vulgaris
Taraxacum officinale*
Gaillardia aristata
Chenopodium album*
Verbascum thapsus*
Symphoricarpos albus
Achillea millefolium
Subfamily Pooideae
Berber repens
Penstemon eriantherus
Anemone multifida
Eriqeron compositus
Taraxacum sp.*
Primula pauciflora
Physaria douglasii
Boechera pendulocarpa
Solidago lepida
Dogllingeria englemannii
Heterotheca sp.
Festuca sp.
Oxytropis campestris
Artemisia campestris
Eriqeron sp.
Toxicoscordion paniculatum
Galium triflorum
Chenopodium fremontii
Bromus ciliatus

Fringed sagebrush
Giant red paintbrush
Glaucous honeysuckle
Golden corydalis
Golden sedge
Grayleaf willow
Great Basin wildrye
Green alder
Green-band mariposa lily
Green bog orchid
Green-flowered wintergreen
Greene's mountain ash
Groundsels
Hardy slipper orchid
Hawksbeard
Hair-like sedge
Hairy false goldenaster
Heartleaf arnica
Hemp dogbane
Hillside arnica
Honeysuckle
Hooker's pussytoes
Hooker's thistle
Hookedspur violet
Horned butterwort
Inland sedge
Lanceleaf stonecrop
Leafy aster
Lewis flax*
Lindley's aster
Linearleaf phacelia
Locoweed
Longleaf fleabane
Low milkvetch
Low pussytoes
Kalm's lobelia
Knapweed*
MacKenzie's willow
Maryland sanicle
Matte saxifrage
Meadow deathcamas
Meadow-rue

Artemisia frigida
Castilleja miniata
Lonicera dioica
Corydalis aurea
Carex aurea
Salix glauca
Leymus cinereus
Alnus alnobetula
Calochortus macrocarpus var. macrocarpus
Platanthera huronensis
Pyrola chlorantha
Sorbus scopulina
Senecio sp.
Cypripedium sp.
Crepis sp.
Carex capillaris
Heteroheca villosa
Arnica cordifolia
Apocynum cannabinum
Arnica fulgens
Lonicera sp.
Antennaria racemosa
Cirsium hookerianum
Viola adunca
Pinguicula macroceras
Carex interior
Sedum lanceolatum
Symphyotrichum foliaceum
Linum lewisii*
Symphyotrichum ciliolatum
Phacelia linearis
Oxytropis sp.
Erigeron corymbosus
Astragalus lotiflorus
Antennaria dimorpha
Lobelia kalmii
Centaurea sp.*
Salix prolixa
Sanicula marilandica
Saxifraga bronchialis
Toxicoscordion venenosum
Thalictrum sp.

Menzies' catchfly
Missouri goldenrod
Mountain ash
Mountain deathcamas
Mountain tansymustard
Narrow-leaved hawksbeard*
Narrow-leaved wirelettuce
Nodding onion
North wind bog orchid
Northern bedstraw
Northern bog sedge
Northern bog violet
Northern comandra
Northern goldenrod
Northern paintbrush
Northern sweetgrass
Northern stickseed
Northwestern sedge
Northwestern wild rye
Oregon grape
Oxeye daisy*
Paintbrush
Paintbrush hybrid
Paintbrush hybrid
Paintbrush hybrid
Paper birch
Perennial sow thistle*
Pine reed grass
Pipsissewa
Prairie cinquefoil
Prairie junegrass
Prairie pasqueflower
Prairie smoke
Purple clematis
Pussytoes
Red baneberry
Red osier dogwood
Red-seeded dandelion*
Reflexed rockcress
Rhexia-leaved paintbrush
Rocky Mountain groundsel
Rocky Mountain maple

Silene menziesii
Solidago missouriensis
Sorbus sp.
Anticlea elegans
Descurainia incisa
Crepis tectorum*
Stephanomeria tenuifolia
Allium cernuum
Platanthera aquilonis
Galium boreale
Carex alascana
Viola nephrophylla
Geocaulon lividum
Solidago multiradiata
Castilleja septentrionalis
Anthoxanthum hirtum
Hackelia deflexa
Carex concinnoides
Leymus innovates
Berberis aquifolium
Leucanthemum vulgare*
Castilleja sp.
Castilleja miniata x C. septentrionalis
Castilleja septentrionalis x C. rhexiifolia
Castilleja septentrionalis x C. purpurascens
Betula papyrifera
Sonchus arvensis*
Calamagrostis rubescens
Chimaphila umbellata
Potentilla pensylvanica
Koeleria macrantha
Pulsatilla nuttalliana
Geum triflorum
Clematis occidentalis
Antennaria sp.
Actaea rubra
Cornus sericea
Taraxacum erythrospermum*
Boechera retrofracta
Castilleja rhexiifolia
Packera streptanthifolia
Acer glabrum

Rosier acicularie

Rosy pussytoes
Rough-fruited fairybells
Roundleaf alumroot
Rubber rabbitbrush
Sagebrush mariposa lily
Sand ricegrass
Saskatoon
Shaggy fleabane
Sheathed sedge
Shinyleaf meadowsweet
Shooting star
Short-fruit willow
Showy aster
Shrubby cinquefoil
Silverleaf phacelia
Slender bog orchid
Slender hawksbeard
Slender wheatgrass
Small-leaf pussytoes
Small round-leaved orchid
Smooth blue aster
Smooth fleabane
Snowberry
Sow thistle*
Spreading dogbane
Spike trisetum
Starry false Solomon's-seal
Sticky goldenrod
Stream orchid**
Strict blue-eyed grass
Striped coralroot
Subalpine fleabane
Sutherland's larkspur
Swamp meadow-grass
Tall goldenrod*
Ternate desert-parsley
Thread-leaf fleabane
Timber milkvetch
Timothy grass*
Trembling aspen
True sedge

Rosa acicularis

Antennaria rosea
Prosartes trachycarpa
Heuchera cylindrica
Ericameria nauseosa
Calochortus macrocarpus
Eriocoma hymenoides
Amelanchier alnifolia
Eriqeron pumilus
Carex vaginata
Spirea lucida
Primula sp.
Salix brachycarpa
Eurybia conspicua
Dasiphora fruticosa
Phacelia hastata
Platanthera stricta
Crepis atribarba
Elymyus trachycaulus
Antennaria parvifolia
Galearis rotundifolia
Symphyotrichum laeve
Eriqeron qlabellus
Symphoricarpos sp.
Sonchus sp.*
Apocynum androsaemifolium
Koeleria spicata
Maianthemum stellatum
Solidago simplex
Epipactis gigantea**
Sisyrinchium montanum
Corallorhiza striata
Erigeron glacialis
Delphinium southerlandii
Poa palustris
Solidago altissima*
Lomatium triternatum
Erigeron filifolius
Astragalus miser
Phleum pretense*
Populus tremuloides
Carex sp.

Tufted hair grass
Twinberry honeysuckle
Twinflower
Two-rowed stickseed*
Umber pussytoes
Umbrella desert-parsley
Utah honeysuckle
Veiny meadow-rue
Violet
Virginia strawberry
Water birch
Wavyleaf thistle
Western aster**
Western fescue
Western meadow aster
Western meadow-rue
Western paintbrush
Western poison ivy
Western rattlesnake plantain
Western snowberry
Western sticky goldenrod
Western stoneseed
Western white clematis
White bog orchid**
White-grained mountain ricegrass
White-margined goldenrod
White-point vetch
White prairie aster
White sweet clover*
Whitestem blazingstar
Wild buckwheat
Wild lettuces
Wild sarsaparilla
Wood lily
Wood whitlow-grass
Woods' rose
Woolly groundsel
Woolly yarrow
Wormwood/Sagebrush
Yellow beardtongue
Yellow lady's slipper
Yellow salsify*

Deschampsia cespitosa
Lonicera involucrata
Linnaea borealis
Lappula squarrosa*
Antennaria umbrinella
Lomatium simplex
Lonicera utahensis
Thalictrum venulosum
Viola sp.
Fragaria virginiana
Betula occidentalis
Cirsium undulatum
Symphyotrichum ascendens**
Festuca occidentalis
Symphyotrichum campestre
Thalictrum occidentale
Castilleja oxidentalis
Toxicodendron rydbergii
Goodyera oblongifolia
Symphoricarpos occidentalis
Solidago spathulata ssp. glutinosa
Lithospermum ruderales
Clematis liusticifolia
Platanthera dilatata**
Oryzopsis asperifolia
Solidago Subsect. humiles
Oxytropis sericea
Symphyotrichum falcatum
*Melilotus alba**
Mentzelia albicaulis
Eriogonum sp.
Lactuca sp.
Aralia nudicaulis
Lilium philadelphicum
Draba nemorosa
Rosa woodsii
Packera cana
Achillea borealis
Artemisia sp.
Penstemon confertus
Cypripedium parviflorum
*Tragopogon dubius**

Yellow-spot saxifrage
Yoho paintbrush

Saxifraga bronchialis austromontana
Castilleja purpurascens

APPENDIX D: Fauna, Fungi and Flora of Columbia Lake Ecological Reserve (Scientific Name First)

This list includes both the scientific and common names for species observed during ten site visits in 2025 (in alphabetical order by scientific name). Names **in bold** refer to a change in 2025, usually a species or other taxonomic level first identified in 2025, but sometimes a name change. Names underlined refer to species that are designated as research grade by iNaturalist, (i.e. an observation considered reliable enough for scientific research). Names with an asterisk (*) refer to alien species. Names with two asterisks (**) refer to species at risk (i.e. vulnerable, threatened or endangered). Naming protocols follow iNaturalist and eBird. Names are listed in alphabetical order according to scientific name.

Animalia

Arthropoda

Myriapoda

Diplopoda

Cylindroiulus caeruleocinctus*

Order Julida

Superorder *Juliformia*

Arachnida

Aceria calaceris

Araneus gemmoides

Complex Evarcha falcata

Dermacentor andersoni

Eriophyes emarginatae

Eriophyes sp.

Evarcha proszynskii

Family *Dictynidae*

Family *Eriophyidae*

Family *Erythraeidae*

Frontinella pyramitela

Gnaphosa sp.

Infra-order *Entelegynae*

Misumena vatia

Neriene radiata

Philodromus sp.

Pityohyphantes sp.

Superfamily *Araneoidea*

Tibellus sp.

Xysticus sp.

Animals

Arthropods

Myriapods (Centipedes and Millipedes)

Diplopods (Millipedes)

Barrel millipede*

Snake millipede

Round-backed millipede

Arachnids

Rocky Mountain maple felt mite

Cat-faced orbweaver

Woodland jumping spider

Rocky Mountain wood tick

Plum finger gall mite

Gall and rust mite

Proszynski's jumping spider

Mesh weaver spider

Gall and rust mite

Velvet mite

Bowl-and-doily spider

Stealthy ground spider

Entelegyne spider

Goldenrod crab spider

Filmy dome spider

Running crab spider

Sheet-weaver spider

Orbweaver

Slender crab spider

Ground crab spider

Insecta

Adelges cooleyi

Adelges sp.

Aedes vexans

Aeshna sp.

Anthaxia prasina

Archips cerasivorana

Argynnis hydaspe

Aulagromyza sp.

Blaesodiplosis sp.

Bombus centralis

Bombus rufocinctus

Camponotus herculeanus

Camponotus modoc

Cerceris sp.

Chironomus sp.

Chlosyne palla

Complex *Phytomyza periclymeni* Superspecies

Corythucha distincta

Corythucha morrilli

Cycnia tenera

Dendroctonus pseudotsugae

Diplolepis spinosa

Duporea sp.

Epifamily *anthophila*

Family *Adelgidae*

Family *aphididae*

Family *Chironomidae*

Family *Cicadidae*

Family *Dolichopodidae*

Family *Formicidae*

Family *Ichneumonidae*

Family *Myrmeleontidae*

Formica neorufibarbis

Formica obscuripes

Formica sp.

Formica subpolita

Genus *Anthaxia*

Genus *Anthaxia* Subgenus *Melanthaxia*

Genus *Lasioglossum*, Subgenus *Dialictus*

Gnorimoschema octomaculella

Heriades sp.

Insects

Douglas fir adelgid

Adelgid

Inland floodwater mosquito

Native dragonfly

Jewel beetle

Ugly-nest caterpillar moth

Hydaspe fritillary

Leaf-miner fly

Gall midge

Great basin bumble bee

Bourdon à ceinture rouge

Hercules carpenter ant

Western black carpenter ant

Typical weevil wasp

None-biting midge

Northern checkerspot butterfly

Leaf-miner fly

Distinct lace bug

Morril lace bug

Delicate cycnia moth

Douglas-fir beetle

Many-spined twig gall wasp

Short-faced bee

Bee

Woolly aphid

Aphid ("green aphid")

None-biting midge

Typical cicadas

Long-legged fly

Ant

Ichneumonid wasp

Antlion

New world red bearded ant

Western thatching ant

Wood, mound, and field ant

Impolite mound ant

Jewel beetle

Metallic wood-boring beetle

Metallic sweat bee

Rabbitbrush stem gall moth

Armoured resin bee

Heriades Subgenus Neotrypetes

Himenitis lorquini

Hyphantria cunea

Infraorder Cyclorrhapha

Infraorder Fulgoromorpha

Landryia sp.

Lasius neoniger

Lygus lineolaris

Macrosiphoniella sp.

***Melanoplus* sp.**

Myrmeleon exitialis

Nomada sp.

Nymphalis antiopa

Okanagana sp.

Papilio multicaudata

***Periclistus* sp.**

Phyciodes cocyta

Phyciodes pulchella

Phytomyza sp.

Prosternon bombycinum

Rhagonycha sp.

Scolytus sp.

Scopula junctaria

Subfamily Anaspidinae

Subfamily Aphidinae

Subfamily Phytomyzinae

Subfamily Psychodinae

Subfamily Pterophorinae

Subfamily Tibicininae

Subgenus *Chironomus*

Subgenus *Chlorochroa*

Subgenus *Melanthaxia*

Subgenus *Ochlerotatus*

Subtribe *tibicinina*

Superfamily *Ceracopoidea*

Superfamily *Ichneumonoidea*

Sympetrum corruptum

Tribe *Myrmeleontina*

Tribe *Agrilini*

Tribe *aphidini*

Trichotinus assimilis

Trichodes ornatus

Armoured resin bee

Lorquin's admiral

Fall webworm moth

Cyclorrhaphan fly

Planthopper

Flower moth

Turfgrass ant

North American tarnished plant bug

Anthemid aphid

North American spur-throated grasshopper

Lethal antlion

Nomad bee

Mourning cloak butterfly

Cicada

Two-tailed swallowtail

Gall wasp

Northern crescent butterfly

Field crescent butterfly

Leaf miner fly

Click beetle

Soldier beetle

Typical bark beetle

Simple wave moth

False flower beetle

Aphid ("red aphid")

Leaf-miner fly

Moth fly

Plume moth

Cicada

None-biting midge

Uhler's stink bug

Jewel beetle

Flood water mosquito

Cicada

Spittlebug/frog hopper

Ichneumonid/braconid wasp

Varigated meadow hawk

Pit-trapping antlion

Wood boring beetle

Aphid ("black aphid")

Bee-mimic beetle

Ornate checkered beetle

Trimerotropis verruculata
Uroleucon sp.

Chordata, Vertebrata

Aves

Bombycilla cedrorum

Bonasa umbellus

Branta canadensis

Buteo jamaicensis

Cathartes aura

Catharus guttatus

Catharus ustulatus

Chordeiles minor

Colaptes auratus

Contopus sordidulus

Corvus brachyrhyncho

Corvus corax

Dryocopus pileatus

Empidonax hammondii

Empidonax oberholseri

Falco columbarius

Falco sp.

Falco sparverius

Geothlypis tolmiei

Haliaeetus leucocephalus

Hirundo rustica

Junco hyemalis

Leuconotopicus villosus

Mergus serrator

Myadestes townsendi

Nucifraga columbiana

Passerina amoena

Pica hudsonia

Picoides dorsalis

Picoides pubescens

Pinicola enucleator

Pipilo maculatus

Piranga ludoviciana

Poecile atricapillus

Poecile gambeli

Regulus satrapa

Rugulus calendula

Crackling forest grasshopper

Large daisy aphid

Chordates, Vertebrates

Birds

Cedar waxwing

Ruffed grouse

Canada goose

Red-tailed hawk

Turkey vulture

Hermit thrush

Swainson's thrush

Common nighthawk

Northern flicker

Western wood peewee

American crow

Common raven

Pileated woodpecker

Hammond's flycatcher

Dusky flycatcher

Merlin

Falcon

American kestrel

MacGillivray's warbler

Bald eagle

Barn swallow

Dark-eyed junco

Hairy woodpecker

Red-breasted merganser

Townsend's solitaire

Clark's nutcracker

Lazuli bunting

Black-billed magpie

American three-toed woodpecker

Downy woodpecker

Pine grosbeak

Spotted towhee

Western tanager

Black-capped chickadee

Mountain chickadee

Golden-crowned kinglet

Ruby-crowned kinglet

Selasphorus rufus
Selasphorus sp.
Setophaga coronata
Sitta canadensis
Sphyrapicus nuchalis
Spinus pinus
Spizella passerina
Tachycineta thalassina
Turdus migratorius
Vireo cassinii
Vireo gilvus
Vireo olivaceus

Mammalia

Cervus canadensis ssp. canadensis
Lepus americanus
Neotamias amoenus
Neotamias minimus
Neotamias sp.
Neotoma cinerea
Odocoileus hemionus ssp. hemionus
Odocoileus virginianus
*Ovis canadensis***
Tamiasciurus hudsonicus
Ursus americanus
Vulpes vulpes

Fungi

Fungi (Non-Lecanoromycetes)

Agaricus sp.
Candelaria sp.
Chrysomyxa arctostaphyli
Clitocybe albirhiza**
Coccomyces dentatus
Cryptoporus volvatus
Diplodia tumefaciens
Family Lycoperdaceae
Family *Omphalotaceae*
Fomes excavatus
Fomitopsis betulina
Geastrum sp.

Rufous hummingbird
Hummingbird
Yellow-rumped warbler
Red-breasted nuthatch
Red-naped sapsucker
Pine siskin
Chipping sparrow
Violet-green swallow
American robin
Cassin's vireo
Warbling vireo
Red-eyed vireo

Mammals

Rocky Mountain elk
Snowshoe hare
Yellow-pine chipmunk
Least chipmunk
Western chipmunk
Bushy-tailed woodrat
Rocky Mountain mule deer
White-tailed deer
Bighorn sheep**
American red squirrel
American black bear
Red fox

Fungi & Lichens

Non-lichenized fungi

Field/button mushroom
Candle flame lichen
Spruce witch's broom rust
Snowmelt clitocybe**
Map fungus
Veiled polypore
Corky bark disease
Pet-de-loup
Common gilled mushroom
Tinder polypore
Birch polypore
Earthstar

Gloeophyllum sepiarium

Gymnopilus sp.**

Gymnosporangium globosum

Gymnosporangium juniper-virginianae

Gymnosporangium nidus-avis

Lachnum birgineum

Mycena pura

Order Agaricales

Order Pucciniales

Phragmidium mucronatum

Phragmidium rosae-multiflorae

Phragmidium sp.

Puccinia caricis-shepherdiae

Rhytisma arbuti

Russula decolorans

Russula sp.

Taphrina sp.

Trametes cinnabarina

Trametes sp.

Tricholoma vaccinum

Xeromphalina caudicinalis

Lecanoromycetes

Alectoria sarmentosa

Aspicilia sp.

Bryoria sp.

Cladonia cariosa

Cladonia chlorophaea

Cladonia deformis

Cladonia fimbriata

Cladonia ochrochlora

Cladonia pocillum

Cladonia pyxidata

Cladonia sp.

Cladonia subulata

Collema furfuraceum

Dermatocarpon minutum

Family Physciaceae

Hypogymnia physodes

Letharia lupina

Letharia sp.

Letharia vulpina

Conifer mazegill

Rustgill/gym**

Cedar-hawthorn rust

Cedar-apple rust

Juniper broom rust

Stocked hairy fairy cup

Lilac bonnet

Common gilled mushroom

Rust fungi

Rose rust

Multiflora rose rust

Rust fungi

Orange-yellow rust

Tarspot fungus

Copper brittlegill

Brittlegill

Leaf curl fungi

Northern cinnabar polypore

Turkey-tail

Russet scaly tricholoma

Pinelitter gingertail

Lichens

Witch's hair

Sunken disk lichen

Horsehair lichen

Split-peg lichen

Mealy pixie cup

Lesser sulphur-cup lichen

Trumpet lichen

Smooth-footed powderhorn

Rosette pixie-cup lichen

Pebbled pixie cup

Pixie cup/reindeer lichen

Antlered powderhorn

Effervescent tarpaper lichen

Leather lichen

Rosette/frost lichen

Hooded tube lichen

Mountain wolf lichen

Wolf lichen

Wolf lichen

Lobaria sp.
Order Teloschistales
Parmelia saxatilis
Parmelia sulcata
Parmelia sulcata
Peltigera didactyla
Peltigera malacea
Peltigera sp.
Phaeophyscia hirsuta
Phlyctis petraea
Physcia caesia
Physcia phaea
Physcia phaea
***Physcia* sp.**
*Physconia detersa***
Physeia dubia
Pleopsidium flavum
Psora decipiens
***Psora* sp.**
Rusavskia elegans
Rusavskia sorediata
Staurothele drummondii
Subfamily Xanthorioideae
Tephromela atra
Usnea hirta
Usnea perplexans
Usnea sp.
Xanthomendoza ulophyllodes

Plantae
Cryptogamae (no seeds)
Bryophyta
Abietinella abietina
Aulacomnium androgynum
Brachythecium albicans
Brachythecium salebrosum
***Brachythecium* sp.**
Callicladium imponens
Class Bryopsida
Complex *Tortella tortuosa*
Cratoneuron filicinum

Lung lichen
Sunburst lichen
Salted shield lichen
Netted shield lichen
Shield lichen
Alternating dog lichen
Veinless pelt lichen
Pelt lichen
Hairy shadow lichen
Rock whitewash
Blue-gray rosette lichen
Black-eyed rosette lichen
Orange rock posy
Rosette lichen
Bottlebrush frost lichen**
Powder-tipped rosette lichen
Gold cobblestone lichen
Blushing scale lichen
Fishscale lichen
Elegant sunburst lichen
Sugared sunburst lichen
Drummond's rock pimple lichen
Sunburst lichen/firedot
Black-eye lichen
Bristly beard lichen
Lapland beard lichen
Beard lichen
Powdery sunburst lichen

Plants
Cryptogams (no seeds)
Bryophytes
Fir tamarisk-moss
Bud-headed groove-moss
Whitish feather moss
Smooth-stalk feather-moss
Feather moss
Brocade moss
Joint-toothed moss
Twisted moss
Fern-leaved hook-moss

Dicranum sp.

Dicranum tauricum

Drepanocladus aduncus

Drepanocladus sp.

Family Bartramiaceae

Family Bryaceae

Family Hypnaceae

Family Mniaceae

Family Orthotrichaceae

Family Pottiaceae

*Grimmia laevigata***

Grimmia ramondii

Homalothecium sp.

Hygroamblystegium varium

Hygrohypnum sp.

Hylocomium splendens

Order Hypnales

Palustriella falcata

Plagiomnium cuspidatum

Plagiomnium sp.

Pleurozium schreberi

Polytrichum piliferum

Ptychostomum sp.

Pulviger a sp.

Rhizomnium glabrescens

Roaldia revoluta

Schistidium apocarpum

Schistidium sp.

Scorpidium sp.

Syntrichia ruralis

Pteridophyta

Cystopteris fragilis

Equisetum arvense

Equisetum hyemale

Equisetum hyemale ssp. affini

Equisetum sp.

Myriopteris gracilis

*Pellaea qastonyi***

*Pellaea qlabella simplex***

*Pellaea qlabella***

Pellaea sp.

Forkmoss

Fragile fork-moss

Kneiff's hook-moss

Hook-moss

Joint-toothed moss

Bryum moss

Hypnum moss

Thyme-moss

Bristle moss

Joint-toothed moss

Grimmia dry rock moss**

Spreading-leaved grimmia

Homalothecium moss

Tangled thread moss

Brook-moss

Stairstep moss

Feather moss

Claw-leaved hook-moss

Woodsy thyme-moss

Thyme moss

Red-stemmed feather moss

Bristly haircap moss

Joint-toothed moss

Bristle-moss

Rhizomnium moss

Revolute hypnum moss

Sessile grimmia

Rock moss

Scorpion moss

Star moss

Ferns and Fern Allies

Fragile fern

Field horsetail

Rough horsetail

Western scouringrush

Horsetail

Fee's lip fern

Gastony's Cliffbrake**

Simple cliffbrake**

Smooth cliffbrake**

Cliffbrake

Woodsia oregana
Woodsia scopulina
Woodsia sp.

Phanaerogamae (has seeds)
Gymnosperma (no flowers)

Juniperus communis
Juniperus horizontalis
Juniperus scopulorum
Juniperus sp.

Picea albertiana

Picea glauca
Pinus flexilis**
Pinus ponderosa
Pseudotsuga menziesii
Pseudotsuga menziesii glauca

Angiospermae (has flowers)

Acer glabrum
Achillea borealis
Achillea millefolium
Actaea rubra
Allium cernuum
Alnus alnobetula
Amelanchier alnifolia
Anemone multifida
Antennaria dimorpha
Antennaria parvifolia
Antennaria racemosa
Antennaria rosea
Antennaria sp.
Antennaria umbrinella
Anthoxanthum hirtum
Anticlea elegans
Apocynum androsaemifolium
Apocynum cannabinum
Aralia nudicaulis
Arctostaphylos uva-ursi
Arnica cordifolia
Arnica fulgens
Artemisia borealis
Artemisia campestris

Oregon woodsia
Rocky Mountain woodsia
Cliff fern

Phanaerogams (has seeds)
Gymnosperms (no flowers)

Common juniper
Creeping juniper
Rocky Mountain juniper
Juniper
Interior spruce
White spruce
Limber pine**
Western ponderosa pine
Douglas-fir
Rocky Mountains Douglas-fir

Angiosperms (has flowers)

Rocky Mountain maple
Woolly yarrow
Common yarrow
Red baneberry
Nodding onion
Green alder
Saskatoon
Cutleaf anemone
Low pussytoes
Small-leaf pussytoes
Hooker's pussytoes
Rosy pussytoes
Pussytoes
Umber pussytoes
Northern sweetgrass
Mountain deathcamas
Spreading dogbane
Hemp dogbane
Wild sarsaparilla
Bearberry
Heartleaf arnica
Hillside arnica
Boreal sage
Field sagewort

<u>Artemisia frigida</u>	<u>Fringed sagebrush</u>
Artemisia sp.	Wormwood/Sagebrush
<u>Astragalus lotiflorus</u>	<u>Low milkvetch</u>
<u>Astragalus miser</u>	<u>Timber milkvetch</u>
<u>Balsamorhiza sagittata</u>	<u>Arrowleaf balsamroot</u>
<u>Berber repens</u>	<u>Creeping mahonia</u>
<u>Berberis aquifolium</u>	<u>Oregon grape</u>
<u>Betula occidentalis</u>	<u>Water birch</u>
<u>Betula papyrifera</u>	<u>Paper birch</u>
Boechera pendulocarpa	Dropseed rockcress
<u>Boechera retrofracta</u>	<u>Reflexed rockcress</u>
Bromus ciliatus	Fringed brome
<u>Bromus tectorum*</u>	<u>Cheatgrass*</u>
<u>Calamagrostis canadensis</u>	<u>Canadian bluejoint</u>
<u>Calamagrostis rubescens</u>	<u>Pine reed grass</u>
<u>Calochortus macrocarpus</u>	<u>Sagebrush mariposa lily</u>
Calochortus macrocarpus var. macrocarpus	Green-band mariposa lily
<u>Campanula alaskana</u>	<u>Alaskan bellflower</u>
<u>Carex alascana</u>	<u>Northern bog sedge</u>
<u>Carex aurea</u>	<u>Golden sedge</u>
<u>Carex capillaris</u>	<u>Hair-like sedge</u>
<u>Carex concinna</u>	<u>Beautiful sedge</u>
Carex concinnoides	Northwestern sedge
<u>Carex interior</u>	<u>Inland sedge</u>
<u>Carex scirpoidea</u>	<u>Bulrush sedge</u>
<u>Carex Sect. bicolores</u>	<u>Bicolor sedge</u>
<u>Carex sp.</u>	<u>True sedge</u>
<u>Carex vaginata</u>	<u>Sheathed sedge</u>
Castilleja miniata	Giant red paintbrush
Castilleja miniata x C. septentrionalis	Paintbrush hybrid
<u>Castilleja occidentalis</u>	<u>Western paintbrush</u>
<u>Castilleja purpurascens</u>	<u>Yoho paintbrush</u>
<u>Castilleja rhexiifolia</u>	<u>Rhexia-leaved paintbrush</u>
Castilleja septentrionalis	Northern paintbrush
Castilleja septentrionalis x C. purpurascens	Paintbrush hybrid
Castilleja septentrionalis x C. rhexiifolia	Paintbrush hybrid
<u>Castilleja sp.</u>	<u>Paintbrush</u>
<u>Centaurea sp.*</u>	<u>Knapweed*</u>
<u>Chenopodium album*</u>	<u>Common lambsquarters*</u>
<u>Chenopodium fremontii</u>	<u>Fremont's goosefoot</u>
<u>Chimaphila umbellate</u>	<u>Pipsissewa</u>
<u>Cirsium hookerianum</u>	<u>Hooker's thistle</u>

Cirsium undulatum
Cirsium vulgare*
Clematis ligusticifolia
Clematis occidentalis
Comandra umbellata
Corallorhiza striata
Cornus sericea
Corydalis aurea
Crepis atriebata
Crepis sp.
Crepis tectorum*
Cypripedium parviflorum
Cypripedium sp.
Dasiphora fruticosa
Delphinium southerlandii
Deschampsia cespitosa
Descurainia incisa
Dogllingia englemannii
Draba nemorosa
Elymus glaucus
Elymus trachycaulus
Epipactis qiqantea**
Ericameria nauseosa
Erigeron caespitosus
Erigeron compositus
Erigeron corymbosus
Erigeron filifolius
Erigeron glabellus
Erigeron glacialis
Erigeron pumilus
Erigeron sp.
Eriocoma hymenoides
Eriogonum sp.
Eurybia conspicua
Festuca campestris
Festuca occidentalis
Festuca sp.
Fragaria virginiana
Gaillardia aristata
Galearis rotundifolia
Galium boreale
Galium triflorum

Wavyleaf thistle
Bull thistle*
Western white clematis
Purple clematis
Bastard toadflax
Striped coralroot
Red osier dogwood
Golden corydalis
Slender hawksbeard
Hawksbeard
Narrow-leaved hawksbeard*
Yellow lady's slipper
Hardy slipper orchid
Shrubby cinquefoil
Sutherland's larkspur
Tufted hair grass
Mountain tansymustard
Englemann's aster
Wood whitlow-grass
Blue wild rye
Slender wheatgrass
Stream orchid**
Rubber rabbitbrush
Caespitose fleabane
Cut-leaf fleabane
Longleaf fleabane
Thread-leaf fleabane
Smooth fleabane
Subalpine fleabane
Shaggy fleabane
Fleabane
Sand ricegrass
Wild buckwheat
Showy aster
Big rough fescue
Western fescue
Fescues
Virginia strawberry
Common gaillardia
Small round-leaved orchid
Northern bedstraw
Fragrant bedstraw

Geocaulon lividum
Geum triflorum
Goodyera oblongifolia
Hackelia deflexa
Hedysarum boreale
Heteroheca villosa
Heterotheca sp.
Heuchera cylindrica
Hieracium umbellatum
Koeleria macrantha
Koeleria spicata
Lactuca pulchella
Lactuca sp.
Lappula squarrosa*
Leucanthemum vulgare*
Leymus cinereus
Leymus innovates
Lilium philadelphicum
Linnaea borealis
Linum lewisii*
Lithospermum ruderales
Lobelia kalmii
Lomatium macrocarpum
Lomatium multifidum
Lomatium simplex
Lomatium triternatum
Lonicera dioica
Lonicera involucrata
Lonicera sp.
Lonicera utahensis
Maianthemum stellatum
Medicago sativa*
Melilotus alba*
Mentzelia albicaulis
Mentzelia sp.
Oryzopsis asperifolia
Oxytropis campestris
Oxytropis sericea
Oxytropis sp.
Packera cana
Packera paupercula
Packera sp.

Northern comandra
Prairie smoke
Western rattlesnake plantain
Northern stickseed
Boreal sweet-vetch
Hairy false goldenaster
False goldenaster
Roundleaf alumroot
Canada hawkweed
Prairie junegrass
Spike trisetum
Common blue lettuce
Wild lettuces
Two-rowed stickseed*
Oxeye daisy*
Great Basin wildrye
Northwestern wild rye
Wood lily
Twinflower
Lewis flax*
Western stoneseed
Kalm's lobelia
Bigseed biscuitroot
Carrotleaf biscuitroot
Umbrella desert-parsley
Ternate desert-parsley
Glaucous honeysuckle
Twinberry honeysuckle
Honeysuckle
Utah honeysuckle
Starry false Solomon's-seal
Alfalfa*
White sweet clover*
Whitestem blazingstar
Blazingstar
White-grained mountain ricegrass
Field locoweed
White-point vetch
Locoweed
Woolly groundsel
Balsam ragwort
American groundsel/ragwort

Packera streptanthifolia
Penstemon confertus
Penstemon eriantherus
Penstemon fruticosus
Penstemon sp.
Phacelia hastata
Phacelia linearis
*Phleum pretense**
Physaria douglasii
Pinguicula sp.
Pinguicula macroceras
Pinguicula vulgaris
Platanthera aquilonis
Platanthera dilatata**
Platanthera huronensis
Platanthera sp.
Platanthera stricta
Poa compressa*
Poa palustris
Populus tremuloides
Populus trichocarpa
Potentilla pensylvanica
Potentilla sp.
Primula conjugens
Primula pauciflora
Primula sp.
Prosartes trachycarpa
Prunus virginiana
Pseudoroegneria spicata
Pulsatilla nuttalliana
Pyrola chlorantha
Ribes oxycanthoides
Rosa acicularis
Rosa woodsii
Salix brachycarpa
Salix glauca
Salix prolixa
Sanicula marilandica
Saxifraga bronchialis
Saxifraga bronchialis austromontana
Sedum lanceolatum
Senecio sp.

Rocky Mountain groundsel
Yellow beardtongue
Crested-tongue beardtongue
Bush penstemon
Beardtongue
Silverleaf phacelia
Linearleaf phacelia
Timothy grass*
Douglas' bladderpod
Butterwort
Horned butterwort
Common butterwort
North wind bog orchid
White bog orchid**
Green bog orchid
Bog orchid
Slender bog orchid
Canada bluegrass*
Swamp meadow-grass
Trembling aspen
Black cottonwood
Prairie cinquefoil
Cinquefoil
Bonneville shooting star
Dark-throated shooting star
Shooting star
Rough-fruited fairybells
Choke cherry
Bluebunch wheatgrass
Prairie pasqueflower
Green-flowered wintergreen
Canadian gooseberry
Rosier acicularie
Woods' rose
Short-fruit willow
Grayleaf willow
MacKenzie's willow
Maryland sanicle
Matte saxifrage
Yellow-spot saxifrage
Lanceleaf stonecrop
Groundsels

Shepherdia canadensis
Silene menziesii
Sisyrinchium montanum
Solidago altissima*
Solidago lepida
Solidago missouriensis
Solidago multiradiata
Solidago simplex
Solidago spathulata
Solidago spathulata ssp. glutinosa
Solidago Subsect. humiles
Sonchus arvensis*
Sonchus sp.*
Sorbus scopulina
Sorbus sp.
Spirea lucida
Stephanomeria tenuifolia
Subfamily Asteroideae
Subfamily Pooideae
Symphoricarpos albus
Symphoricarpos occidentalis
Symphoricarpos sp.
Symphyotrichum falcatum
Symphyotrichum ascendens**
Symphyotrichum campestre
Symphyotrichum ciliolatum
Symphyotrichum foliaceum
Symphyotrichum laeve
Symphyotrichum sp.
Taraxacum erythrospermum*
Taraxacum officinale*
Taraxacum sp.*
Thalictrum occidentale
Thalictrum sp.
Thalictrum venulosum
Toxicodendron rydbergii
Toxicoscordion paniculatum
Toxicoscordion venenosum
Traqopoqon dubius*
Tribe Astereae
Verbascum thapsus*
Viola adunca

Canadian buffalo-berry
Menzies' catchfly
Strict blue-eyed grass
Tall goldenrod*
Elegant goldenrod
Missouri goldenrod
Northern goldenrod
Sticky goldenrod
Coast goldenrod
Western sticky goldenrod
White-margined goldenrod
Perennial sow thistle*
Sow thistle*
Greene's mountain ash
Mountain ash
Shinyleaf meadowsweet
Narrow-leaved wirelettuce
Aster
Cool-season grass
Common snowberry
Western snowberry
Snowberry
White prairie aster
Western aster**
Western meadow aster
Lindley's aster
Leafy aster
Smooth blue aster
American aster
Red-seeded dandelion*
Common dandelion*
Dandelion*
Western meadow-rue
Meadow-rue
Veiny meadow-rue
Western poison ivy
Foothill deathcamas
Meadow deathcamas
Yellow salsify*
Aster
Common mullein*
Hookedspur violet

Viola nephrophylla
Viola sp.

Northern bog violet
Violet

APPENDIX E: Bird and mammal species lists by date of visit to Columbia Lake Ecological Reserve.

CODE	Species	30-Apr	25-May	06-Jun	11-Jun	24-Jun	11-Jul	27-Jul	17-Aug	16-Sep	23-Oct	%
AMCR	American Crow						✓					10.0%
AMKE	American Kestrel											0.0%
AMRO	American Robin	✓	✓	✓	✓	✓	✓		✓			70.0%
BAEA	Bald Eagle		✓	✓			✓			✓		30.0%
BASW	Barn Swallow			✓								10.0%
BBMA	Black-billed Magpie			✓								10.0%
BCCH	Black-capped Chickadee			✓			✓				✓	20.0%
CAGA	Canada Goose		✓	✓								20.0%
CAVI	Cassin's Vireo			✓		✓	✓					30.0%
CEWA	Cedar Waxwing						✓	✓				20.0%
CHSP	Chipping Sparrow		✓	✓		✓	✓		✓			50.0%
CLNU	Clark's Nutcracker		✓			✓	✓		✓	✓	✓	40.0%
CORA	Common Raven	✓	✓	✓		✓	✓			✓	✓	50.0%
DEJU	Dark-eyed Junco	✓	✓	✓	✓	✓	✓		✓	✓		70.0%
DOWO	Downy Woodpecker						✓					10.0%
DUFL	Dusky Flycatcher		✓	✓	✓	✓	✓					50.0%
GCKI	Golden-crowned Kinglet			✓	✓	✓			✓			40.0%
HAWO	Hairy Woodpecker						✓					10.0%
HAFL	Hammond's Flycatcher		✓	✓	✓	✓	✓	✓				60.0%
HETR	Hermit Trush						✓					10.0%
LABU	Lazuli Bunting			✓								10.0%
MAWA	MacGillivray's Warbler			✓	✓		✓					30.0%
MERL	Merlin			✓								10.0%
MOCH	Mountain Chickadee	✓			✓		✓	✓	✓		✓	50.0%
NOFL	Northern Flicker	✓			✓	✓	✓			✓	✓	40.0%
PIGR	Pine Grosbeak			✓								10.0%
PISI	Pine Siskin			✓				✓				20.0%
PIWO	Pileated Woodpecker	✓		✓								20.0%
VGSW	Violet-green Swallow											0.0%
RBME	Red-breasted Merganser					✓						10.0%
RBNU	Red-breasted Nuthatch	✓	✓	✓			✓		✓	✓	✓	50.0%
REVI	Red-eyed Vireo			✓								10.0%
RNSA	Red-naped Sapsucker			✓			✓					20.0%
RTHA	Red-tailed Hawk								✓			10.0%
RCKI	Ruby-crowned Kinglet	✓	✓	✓		✓						40.0%
RUHU	Rufous Hummingbird											
RUGR	Ruffed Grouse	✓										10.0%
SPTO	Spotted Towhee		✓	✓		✓						30.0%
SWTH	Swainson's Thrush			✓	✓	✓	✓					40.0%
TOSO	Towson's Solitaire	✓								✓	✓	10.0%
TUVU	Turkey Vulture	✓	✓	✓	✓	✓	✓			✓		60.0%
VGSW	Violet-green Swallow			✓								10.0%
WAVI	Warbling Vireo		✓		✓	✓	✓					40.0%
WETA	Western Tanager		✓	✓	✓	✓	✓	✓				60.0%
WWPE	Western Wood Pewee			✓								10.0%
YRWA	Yellow-rumped Warbler	✓	✓	✓	✓	✓	✓		✓			70.0%
	TOTAL SPECIES	12	16	30	13	17	25	6	9	8	7	

Species	30-Apr	25-May	06-Jun	11-Jun	24-Jun	11-Jul	27-Jul	17-Aug	16-Sep	23-Oct
Yellow Pine Chipmunk	O									
Red Squirrel			O			O	O		O	
Rocky Mountain Elk	S	S	S	S	S				S	
Rocky Mountain Bighorn Sheep	S	S	S	S	S	S			S	S
Rocky Mountain Mule Deer*	O, S	S	S	S	S	O, S	S	S	S	S
Snowshoe Hare	S	S		S				S	S	
Total Mammal Species	5	4	4	4	3	3	2	2	5	2

S= Scat or tracks

O = Observed or Heard

* We have not seen any white-tailed deer, and assume all deer scat observed are from mule deer which are common in Columbia Lake ER

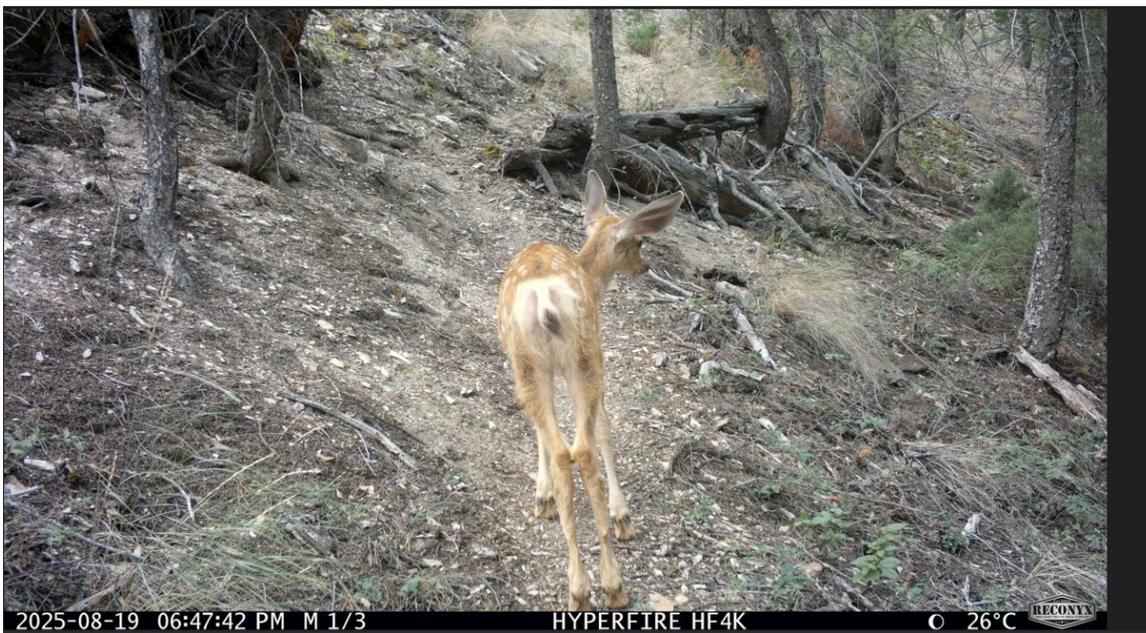
APPENDIX F: Wildlife photos from camera trap located inside the Columbia Lake Ecological Reserve.

See [Figure 10](#) for camera trap location.

a) Mule deer doe photographed on August 19, 2025 with summer coat.



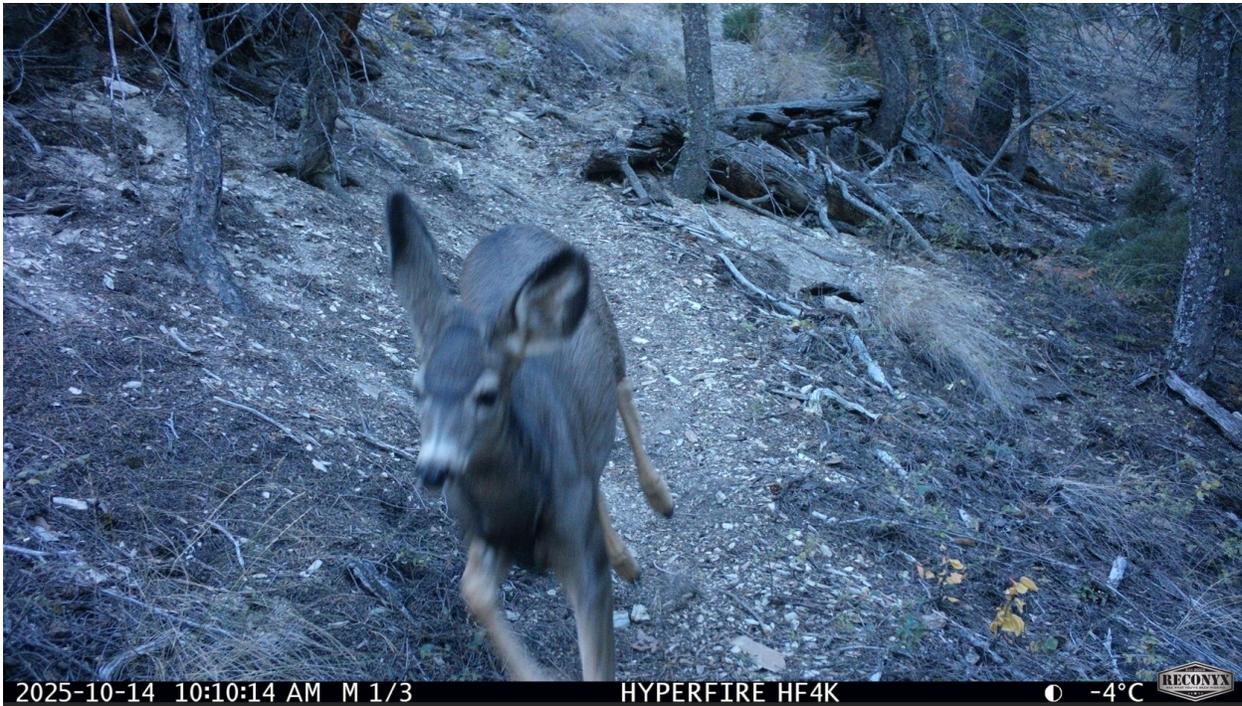
b) Mule deer fawn photographed on August 19, 2025 with summer coat.



c) Mule deer doe photographed on October 14, 2025 with winter coat.



d) Mule deer fawn photographed on October 14, 2025 with winter coat.



e) Bighorn sheep ewe photographed on October 10, 2025.



f) Bighorn sheep yearling ram photographed on October 10, 2025.



APPENDIX G: Warden Activities in 2025

Figure 14: Status of Tasks Identified in the 2024 ER Warden Report Planned for 2025

Task	Done	In Progress	Comments
Obtain generic BC Parks Ecological Reserve signs and clearly mark the upper boundary of the CLER		✓	Signs have still not been received from BC Parks or placed by BC Parks to mark upper boundary. Thus, trail bikers and other visitors do not know if they are in the ER on its northeastern side.
Contact BC Parks Regional staff about site visit in 2025, boundary signs and marking		✓	No warden meeting held in 2025. Periodic and helpful communication with Navaranda Smith once she started work in March 2025, but no site visit or discussion about signage.
Move the sign that is in the wrong place on the northern side of the ER	✓		Sign was removed and placed in appropriate location (we assume by BC Parks).
Apply for PEF grant to purchase and install a wildlife camera in Columbia Lake ER.	✓		Application completed, submitted on time & was successful. Camera trap was installed on August 17, 2025, checked on September 16 and removed on October 23, 2025. Photos obtained of mule deer and bighorn sheep travelling within the ER.
Make natural history observations, especially in areas of the ER not yet visited. Post observations to iNaturalist and eBird.	✓		See Appendices B, C D & E. Also see https://www.inaturalist.org/projects/columbia-lake-ecological-reserve for iNaturalist observations. Bird observations are posted on eBird under Columbia Lake Ecological Reserve, and are summarized in Appendix E (including both birds and mammals). Visited hilltop on N side of ER for 1 st time.
Inventory Indigenous cultural & archaeological resources (location and significance) in collaboration with the Ktunaxa First Nation		✓	The ER Wardens received no information on whether or not this idea was pursued by BC Parks.

Figure 15: Status of Other Action Items Identified in Previous Warden Reports (2022, 2023 & 2024)

Task (Proponent)	Done	In Progress	Comments
Explore use of wildlife camera for monitoring wildlife in Columbia Lake ER (ER Wardens/BC Parks)	✓		Encouraged to submit application to PEF in May 2025. Application was successful and camera trap installed. See Figure 14.
Explore use of permitted drone for monitoring white pine blister rust in Columbia Lake ER (ER Wardens/BC Parks)		✓	It is impossible for us to access most of the limber pine trees up close due to rugged terrain. The issue was discussed at the March 4, 2024 East Kootenay ER Warden AGM and BC Parks did not support the use of drones for monitoring in ERs. An option is to hire Randy Moody who previously surveyed the ER for the rust ~ten years ago and who told us in Oct 2025 that it should be done again.
Determine jurisdiction of Camp One Access Road (Darin Welch, BC Parks)		✓	No update provided by BC Parks (sign at start of road refers to the Village of Canal Flats)
Monitor biodiversity inside the ER (ER Wardens, Ian Hatter & Jenny Feick)		✓	Instead of setting up formal Biodiversity Plots inside the ER, wardens try to visit different parts of the ER on each visit. Areas that currently remain unvisited are primarily due to ruggedness of terrain (i.e. steep limestone cliffs).
Mark the Upper Boundary of Columbia Lake ER (BC Parks)		✓	No update provided by BC Parks (See Figure 14).
Discuss feasibility of boundary adjustments to CLER to include additional values (ER Wardens & BC Parks). A slight expansion of existing boundary would allow protection of additional tufa springs and species at risk.		✓	No opportunity to discuss as no ER Warden meeting was held in 2025. Last one was March 4, 2024.

APPENDIX H: Plans for the 2026 Field Season

In 2026, the ER Wardens plan to:

1. Communicate with Navaranda Smith in BC Parks about status of action items and issues identified in this and previous warden reports for the Columbia Lake Ecological Reserve.
2. Request permission to install the wildlife camera used in 2025 in a different location in the ER and through the winter season (2026-27).
3. Contact iNaturalist identifiers to encourage them to assist with identifications of observations made in the BC Parks iNaturalist Columbia Lake Ecological Reserve Project.
4. Continue to make natural history observations, especially in areas of the ecological reserve not yet visited, where safe to do so (See [Figure 54](#)), keeping in mind iNaturalist Identifier guidelines and BC Parks protocols. Post observations to iNaturalist and eBird.
5. Focus iNaturalist observations on species difficult to identify from quick reconnaissance surveys. See Appendix G in the Mt. Sabine ER 2025 annual report for tips on photographing hard to identify organisms, as well as comments from Identifiers on observations in the BC Parks iNaturalist Project for Columbia Lake Ecological Reserve.
6. Continue to remove litter found within the Columbia Lake Ecological Reserve.
7. Continue to remove alien invasive plant species when found (e.g. Common mullein, Dandelions) in the Columbia Lake Ecological Reserve.
8. Investigate the geology of the limestone cliffs with geologist Kevin Root, and request permission for him to use a drone operated by Kevin Root to inspect cliffs.
9. Accompany Paintbrush specialist, Mark Egger from Seattle, Washington, when he investigates and identifies Paintbrush hybrids in mid-July 2026. His analysis of iNaturalist records suggests the area surrounding the tufa springs contains hybrids and potentially an as yet undescribed species of Paintbrush.
10. Set up a field trip with naturalist, Bryan Kelly-McArthur, who lives in Golden BC. Bryan is an excellent naturalist and photographer, and a member of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). He expressed an interest in visiting the reserve to study arachnids, fungi and vascular plants that live there.
11. Set up another site visit with Mike Fenger, member and former president of the Friends of Ecological Reserves in early May, 2026.
12. Make iNaturalist observations of flora associated with the karst spring and tufa formations just outside the reserve and compare species assemblage with tufa formations within the reserve (See [Figure 55](#)).

APPENDIX I: Information About Potential Bat Monitoring in Columbia Lake Ecological Reserve from Biologist Ian Adams in Cranbrook

Ian Adams sent us the following email detailing information about monitoring bats on March 3, 2024, followed by another on March 2, 2026.

“Hi Jenny & Ian

The detector units I've been using are Anabat Swifts by Titley. They may now be called Rangers (not sure) <https://www.titley-scientific.com/review/product/list/id/294/>

They are enclosed in a Pelican case-like protective case with ports for various plug-ins, especially the microphone.

The weblink above shows the microphone attached directly to the unit. I've always used a cord to mount the mic on top of a pole. I use a 16' painter's pole attached to something reasonably secure - fence post or metal t-post banged into the ground with guy-lines for stability.

Here's a deployed station at Tobacco Plains. The mic is at the top of the pole, the recorder unit is at the base on the ground.

It's best to be deployed in a fairly open environment as bat calls are most accurately identified to species when there's no clutter for them to navigate around. In open situations, their echolocation calls are most species specific.

The units are georeferenced to the deployed location and programmed to be active from 30 min before sunset to 30 min after sunrise. They can record either full spectrum bat calls or zero-cross format. Full spectrum calls allow a more accurate identification but take up a lot more space on the SD card. I've learned lots about bat acoustic recording and analysis in the last few years! For a week or two at Columbia Lake, you'd probably be fine with full spectrum.

I have been renting the units from Susan Dulc, who just completed her masters on bats at Creston. However, **I do not have plans to rent them in 2024**. I will be renting them from her in 2025 when we'll be doing recordings again at Tobacco Plains.

There may be other recorders available via WCS and the NA Bat program in 2024. There's also Nicole Bessler, a bio in Kimberley who works with bats (and may be doing grad work, I'm not sure) who does acoustic work as well. We could ask her if she's be interested in a week or to at CLER.

The other issue is analysis. I do not analyze the calls - that's a whole other skill set!! Brian Paterson seems to be the go-to guy for that work. He has done all the analysis for the recording sessions I've done in the last 5 years or so. Analysis of a week's worth of bat data is likely in the \$750 range for his services. Depends entirely on how many calls are recorded. Might be worth asking BC Parks if there'd be some \$\$ available for analysis. Good opportunity for some Parks license plate money! I wouldn't be much but there's no point in recording bats if there isn't someone available to analyze the calls.

Alternatively, I have an Echo Meter Touch 2 recorder that plugs into my phone or tablet (tablet works better). This little gizmo:

<https://www.wildlifeacoustics.com/products/echo-meter-touch-2-android-2>

It records full spectrum bat calls and the associated app does offer auto-id for species. (sort of a Merlin for bats) That's fraught with large opportunities for false i.d.'s (Merlin is much more accurate) but doesn't seem too bad for our local bats. We could do a few evenings of "listening" for bats in a few locations. Problem is you have to be close to the bat and present. e.g. of that output: <https://inaturalist.ca/observations/197767458>

Yes, you can upload the recording to iNat (it's a sound recording like any other, we just can't hear it) and, if you're lucky, someone else will run it through some bat call software and weigh in on it like this: <https://inaturalist.ca/observations/133163646>

I'll also find out where the nearest NA Bat station(s) are to CLER. That should provide some general info on who's in the neighbourhood.

Hope this helps and isn't too overwhelming!

-i."

“Hi both

I've sent a request to Jason Rae who (I think) heads up the NA Bat work in the area with WCS Canada. If not, he'll know who does. I've asked where the nearest NA Bat station is to Canal. I think Biodiversity Pathways is taking up the NA Bat work, so you may end up with people there.

Funding wise, you'd need to \$\$ to cover recording unit rental (including any shipping fees, etc.), your time to deploy and take down (if volunteer, this would be an in kind contribution) and fees for someone to analyze the recordings. You'd want each site to record for at least 7 nights, that seems to be the accepted length of time for species richness to reach some level of asymptote.

But best to wait on that to find out more about any possible station nearby.

cheers!

-i."

APPENDIX J: Some of the Pictures Taken in 2025 Field Season

For pictures of the fauna, fungi and flora in Columbia Lake Ecological Reserve, see <https://www.inaturalist.org/projects/columbia-lake-ecological-reserve> .



Figure 16: Ian Hatter photographing plants on limestone cliffs in the Columbia Lake Ecological Reserve, June 6, 2025.



Figure 17: View south from north hilltop in Columbia Lake Ecological Reserve, July 11, 2025.



Figure 18: The Columbia Lake Ecological Reserve contains many inaccessible cliffs, September 16, 2025.



*Figure 19: This slender crab spider can only be identified to genus (*Tibellus* sp.) unless we photograph its underside, May 25, 2025.*



Figure 20: Identifying this *Aedes* mosquito to species requires a picture showing the top of its abdomen, June 24, 2025.



Figure 21: To determine what species of brittlegill this is, one needs a picture of the underside of its gills, July 27, 2025.



Figure 22: Pixie cup and reindeer lichens (Genus *Cladonia*) need close examination and chemical tests to identify, June 24, 2025.



Figure 23: Without microscopic examination of a specimen, this moss can only be named to the Family level (*Bryaceae*), April 30, 2025.



Figure 24: An iNaturalist Identifier said of this member of the Family *Asteraceae*, "No leaves, no ID.", June 6, 2025.



Figure 25: Rocky Mountain bighorn sheep, like this ewe just outside the reserve, are listed as "Vulnerable" in B.C., June 16, 2025.



Figure 26: Gastony's cliffbrake, a fern, is listed as "Vulnerable" in Canada, July 11, 2025.



Figure 27: Limber pines are classified as 'Imperiled' in Canada, April 30, 2025.



Figure 28: Stream orchids are listed as "Special Concern" in Canada, July 11, 2025.



Figure 29: NatureServe deems white bog orchids as "Vulnerable", July 13, 2024 (Photo by brettmccull7).



Figure 30: Cat-faced orbweaver, new on September 16, 2025 (Photo by Ian Hatter).



Figure 31: Northern cinnabar polypore, new on July 27, 2025.



Figure 32: Effervescent Tarpaper Lichen, new on September 16, 2025.



Figure 33: Range extension for Foothill deathcamas, June 6, 2025.



Figure 34: One of our sagebrush mariposa lily observations July 9, 2023 was identified in 2025 as the Green-band Mariposa Lily.



Figure 35: One of the many curious hybrid paintbrush Mark Egger identified this year, July 27, 2025.



Figure 36: The Camp One Access Road and hydro line beside the reserve (note: eco-reserve sign), June 6, 2025.



Figure 37: This eco-reserve sign is 200 m from the site of previous illegal tree-cutting in the reserve, June 24, 2025.



Figure 38: Remnants of illegal tree-cutting in the reserve carried out in the winter of 2023/24, April 30, 2025.



Figure 39: Our Subaru travelling up the Camp One Access Road to access the reserve, April 30, 2025.



Figure 40: Our Subaru dodging water on the Camp One Access Road, September 16, 2025.



Figure 41: Trail biker on the Camp One Access Road, June 27, 2025.



Figure 42: Trail runners passing by the reserve en route to Fairmont, June 6, 2025.



Figure 43: Mike Fenger from FER and Joy Kruger visiting the reserve, June 16, 2025.



Figure 44: Western poison ivy (left) and wild sarsaparilla (right), July 27, 2025.



Figure 45: Ian Hatter removing dead common mullein from the reserve, October 23, 2025.



Figure 46: The BC Parks wildlife camera deployed in the reserve from August 17 to October 23, September 16, 2025.



Figure 47: Ian Hatter installing and checking the wildlife camera along a game trail in the reserve, August 17, 2025.



Figure 48: Ian Hatter checking pictures in the wildlife camera, September 16, 2025.



Figure 49: Most of the reserve is arid in the summer and fall, October 23, 2025.



Figure 50: Bighorn sheep leave scads of scat during the winter months all over the rugged terrain of the reserve, September 16, 2025.



Figure 51: The East Side Columbia Lake Wildlife Management Area, designated Ungulate Winter Range (beige on map) surrounds the reserve, September 16, 2025.



Figure 52: Bighorn rams in the East Side Columbia Lake WMA near the reserve, May 25, 2025.



Figure 53: Ian Hatter counting stream orchid plants in bloom, July 27, 2025.



Figure 54: Ian Hatter making field notes in the reserve, October 23, 2025.



Figure 55: Karst spring just outside the reserve below the access road, April 30, 2025.