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Mourning Cloak butterfly (*Nymphalis antiopa*) on Wolf Willow (*Elaeagnus commutata*) in Bow Valley Wildlands Park on August 26, 2021. For more information on this beautiful insect in our area visit the [Friends of Kananaskis](#). P. Duck photo.

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Please click here to find contact information for those who are responsible for ecosystem protection and for reviewing projects that affect our ecosystems. This list will be updated following the recent municipal elections.

ECOSYSTEM EDUCATION & ADVOCACY

1967-2021

BOWVALLEYNATURALISTS.ORG

COMING PROGRAMS AND EVENTS

BVN's series of free public presentations resumes on October 26, 2021. Programs are free so mark your calendar for 7:30 pm on the fourth Tuesday of every month from October to April with the exception of December. You can find many of the past seasons' recordings on our [Public Programs](#) web page.

How Do Mountains Store Water? Dr. Masaki Hayashi and Sara Lilley, Department of Geoscience, University of Calgary Tuesday October 26, 2021 7:30 p.m. [**REGISTER HERE**](#)

This past summer's heat dome led to extreme glacier melt in the Rockies. Dr. John Pomeroy took a Global News crew up to the Peyto Glacier to [tell the story](#) and CBC interviewed Glaciologist Brian Menousos about [his research](#). How does this kind of extreme event impact lake and river levels for the rest of the year, and the years to follow? Once glaciers in the Rockies reach peak melt, where will the water come from to feed rivers like the Bow that millions of people downstream depend on? One of the pieces of the puzzle has to do with how alpine headwater basins store water, and some of the answers are surprising scientists.

Dr. Masaki Hayashi and University of Calgary graduate student Sara Lilley are studying the connections between groundwater, surface water, and atmospheric moisture in environments ranging from the prairies to the mountains. Lilley is investigating the sources and pathways of groundwater discharging at Watridge Karst Spring.



Hungabee Mountain and Horseshoe Glacier at the head of Paradise Valley in Banff national Park. P. Duck photo.

Join us online Tuesday, October 26th at 7:30 p.m. as we learn how mountains store, and then share, their water.

NEWS AND ISSUES

Membership and Donations Notice

BVN is establishing a new member commitment and sign-on process which will come into effect for the start of 2022. There is no need to renew memberships at this time. If you were a member prior to 2021 you are still considered a member of the Society to the end of this year.

National Park Planning

BVN submitted 16 pages of comments on the Draft Banff National Park Management Plan in early July. Included in the submission were comments on evolving management strategies for the Lake Louise area. Later in the summer BVN submitted a letter to Banff National Park in response to the request for comments on management strategies for the Bow Valley Parkway. In all of these submissions we emphasized the need for applying ecosystem science to the maintenance and restoration of ecological integrity as the first priority in park management decisions. If anyone is interested in more details of these submissions please contact us. Management planning information for the mountain national parks may be found at these sites:

Banff National Park
Jasper National Park
Kootenay National Park
Revelstoke and Glacier National Parks
Waterton Lakes National Park
Yoho National Park

The Fate of Our Mountain Water...And You Thought Coal Mining Was An Issue?

BVN has spent significant effort over the years to help protect the mountain and foothill ecosystems of Alberta. If we are going to protect our headwater ecosystems then we should be just as concerned about what happens to the water that flows from those systems. A lot of it goes to irrigating dryland farming in Alberta. In addition to headwater coal projects, there are large irrigation infrastructure programs currently under way that are getting millions of dollars of public funding. They are not getting public accountability.

The following letter, sent to some southern Alberta news outlets in advance of the municipal elections, was written by Cheryl Bradley of Lethbridge to shed some public light on this issue. The Alberta Wilderness Association also has posted some information.

“Candidates for election to municipal office in southern Alberta are well advised to consider the future of water use for the communities they represent and for the environment. A summer of rapidly melting glaciers, extreme heat, little to no rainfall, and low river flow resulted in water shortage advisories, declared states of agricultural emergency, cut-off of water to irrigators, and curtailed recreation experiences for canoeists and fishers. More drought stress is predicted as climate changes. Nonetheless work is proceeding on the “single largest irrigation expansion in Alberta’s history” in the absence of public consultation and environmental impact assessment.

The \$815 million agreement among eight irrigation districts, the UCP government and the Canadian Infrastructure Bank to expand irrigation agriculture by 15% in the Bow and Oldman river basins was announced in December 2020 as a done deal. The project will construct a few hundred kilometres of pipelines (mostly replacing existing canals) and four new or expanded reservoirs (one that is undisclosed), and add 206,000 acres of new irrigation, the location currently unknown. Construction of pipelines and land acquisition for reservoirs are already underway.

Water for the expansion is purported to come from water use efficiency improvements within existing licences. Even so, the project is an intensification of water use in basins that are already over allocated, closed to new water licences, and lack effective measures to protect the health of rivers.

Given that the irrigation sector holds licences to withdraw over half of mean natural annual flow and over three-quarters of licenced water allocation in the Bow and Oldman River basins, major



This dam on 40 Mile Creek was removed in 2014, in part, to restore fish habitat. Has this water been given its freedom only to have it diverted to unsustainable land uses downstream? H. Dempsey photo.

expansion has ramifications for current water users and for potential future uses of water as well as for accommodating Indigenous water rights. Environmental interests are asking for impact assessment including cumulative effects assessment and basin-wide instream flow modelling to understand the implications of the project for health of rivers as well as for native grasslands and species at risk, including lake sturgeon.

There are economic sustainability questions as well. Does it make sense for the economic future of southern Alberta to put all of our water resource eggs in one basket, that of irrigation agriculture? The prairies are a semi-arid environment and given predictions of climate change, how sustainable is expansion of an industry reliant on abundant water to grow crops and process food, the products of which are mostly for export? We do not want to repeat the experience of communities in the southwest United States currently subject to disruption from deep cuts in water supply because of prolonged drought that has diminished the Colorado River. It is important we learn from that experience and plan for resiliency in managing our precious and limited water resources.

Municipal elections provide opportunities for candidates to identify key issues and listen to the views of constituents about those issues in preparation for making informed choices once in office. The future of water management in southern Alberta is a key issue. Informed, collaborative conversations among a broad array of interests are needed now, before this major irrigation expansion project proceeds further and climate change forces a reckoning.”



Irrigation pivots in the Oldman River Basin. L. Fitch photo.

If you would like more details about this issue or to participate efforts to ensure sound planning for water that originates in our mountain ecosystems, [send us a note](#).

Mount Norquay Gondola Proposal – Thank you Parks Canada, syntax is important.

The Mount Norquay ski area wasted little time, after its site guidelines were established by Parks Canada, to make a proposal that contradicted those guidelines. We are accustomed to private interests finding ways to justify new development in the mountain national parks that require land beyond current lease boundaries. That is not new behaviour. But, in this recent case, discussions went so far as to consume the valuable time of Town of Banff Council and Administration.

Anyone who followed the municipal process on this topic is aware that the involvement of the Town of Banff over a proposal for expansion in a national park became a very messy bit of business during the summer. The gondola proposal has potential for significant negative environmental effects well beyond those addressed in a narrowly scoped review of environmental effects related to the Mount Norquay access road. BVN would like to thank Parks Canada for making it clear, again, that development proposals that do not respect established limits to growth will not be entertained. We hope the new Town of Banff



Heritage view of the Town of Banff and Spray Valley including the likely route of a proposed gondola and base station. The Forty Mile Creek wildlife corridor (foreground) including the remnant landforms of Glacial Lake Vermilion would be further impacted. P. Duck photo.

Council takes a moment to reflect that Banff is not simply a town in a national park. Banff is a national park town. The syntax is subtle but important.

Helicopters In Canmore

According to a recent [story](#) in the Rocky Mountain Outlook a study on whether to move forward with a search for a new heliport location will be considered during the 2022 Town of Canmore capital budget deliberations. This reporting suggests that Town administration is actually willing to consider whether to spend approximately \$75,000 to look for a new location for the heliport to avoid nuisances. BVN hopes the new Town Council will ask administration to reconsider priorities. With all the talk about lack of land for community needs like affordable housing and projects that promote environmental sustainability is it wise to spend money to look for land for a land use that will be controversial no matter where it is located?

Maybe, to address the climate emergency, the Town should simply remove the heliport with its nuisances, ecosystem impacts, and emissions footprint and then invest \$75,000 toward a solar park on the vacated land. Please send the Town of Canmore your ideas for what you would do with a large piece of available land in the Bow Valley if the Town found it for you.

Mentors Wanted

The Biosphere Institute is looking for mentors to join the [Canadian Rockies Youth Network](#). The CRYN is a youth-led environmental network aimed at educating youth on environmental issues affecting our shared mountain spaces. Mentoring will empower youth to be involved in action projects that positively impact these spaces. The Network is creating a bank of inspiring and knowledgeable mountain people who want to help. These mentors might be called upon as a speaker, swag provider, sponsor, to share initiatives with their communities, or even mentor a specific action project. If interested you can fill out a survey that will not commit you to anything, but will allow youth to access a resource of people they can draw upon for help in their initiatives. If you would like more information or are interested in inspiring youth to carry on the challenges of protecting ecosystems into the future, contact Mallory Kusterski, Youth Education Coordinator, Biosphere Institute of the Bow Valley 403-690-8155.

REMBRANCE

Carol Wilkie 1942 - 2021

Our condolences go out to long-time BVN member Gerry Wilkie and his family for their recent loss. Gerry was active in BVN from its creation in 1967 up until he and Carol retired to the Columbia Valley in 1995. Carol did her part pitching in wherever needed while Gerry served many years on the Board. BVN is grateful to Gerry and Carol for their years of support for BVN. To learn more about the interesting life Carol led and her connection to the community of Banff please follow [this link](#).

OF WILD THINGS

RECENT NATURAL NICETIES

As the sun angle mimics springtime light at this time of year it is not uncommon to hear birds offering a few notes that are more typical of their springtime songs. The adjacent photo (right) taken on October 1 in

the Yamnuska area of Bow Valley Wildlands Park shows a Prairie Crocus (*Anemone patens*) making a late curtain call long after the spring show.



Are Blue-eyed Grass always blue, or could they also be white? Indeed, our local species called Blue-eyed Grass (*Sisyrinchium montanum*) is described as having blue flowers, but the one in this photograph is a Northern Blue-eyed Grass (*Sisyrinchium septentrionalis*) that was found near Two O’Clock Creek east of Saskatchewan River Crossing. Apparently, this species can be “pale blue to whitish”.



Northern Blue-eyed Grass (*Sisyrinchium septentrionalis*).
H. Dempsey photo.

The photograph to the right may look like white Mountain Heather but it doesn’t have the regular bell- shaped flowers – they are more like a feather on the end of the stem. In fact, the “flower” is an imposter. It’s actually a fungus (*Exobasidium cassiopes*) that has tricked the plant into producing leaves that look like flowers - even very white ones. Not only do the fake flowers prevent the heather from



A fungus (*Exobasidium cassiopes*) that has tricked the plant into producing leaves that look like flowers. D. Volkers photo.

producing its own blossoms, they produce a very sweet nectar that attracts insects to them. This helps spread the fungus onto more plants. It’s not known if the fungus harms the plant but it’s worth keeping an eye out for it next summer.



It’s not a heather or crowberry - could it be a moss on steroids? The first time you find stiff club moss (*Lycopodium annotinum*) it can be confusing unless you see the distinctive cone, or club-shaped case on top. When it’s not present, like in this photo, it may be a little harder to identify. Without colourful wildflowers to distract us, this fall has been a great time to find club mosses beside the trail.

Club Moss (*Lycopodium annotinum*). A. Frey photo.

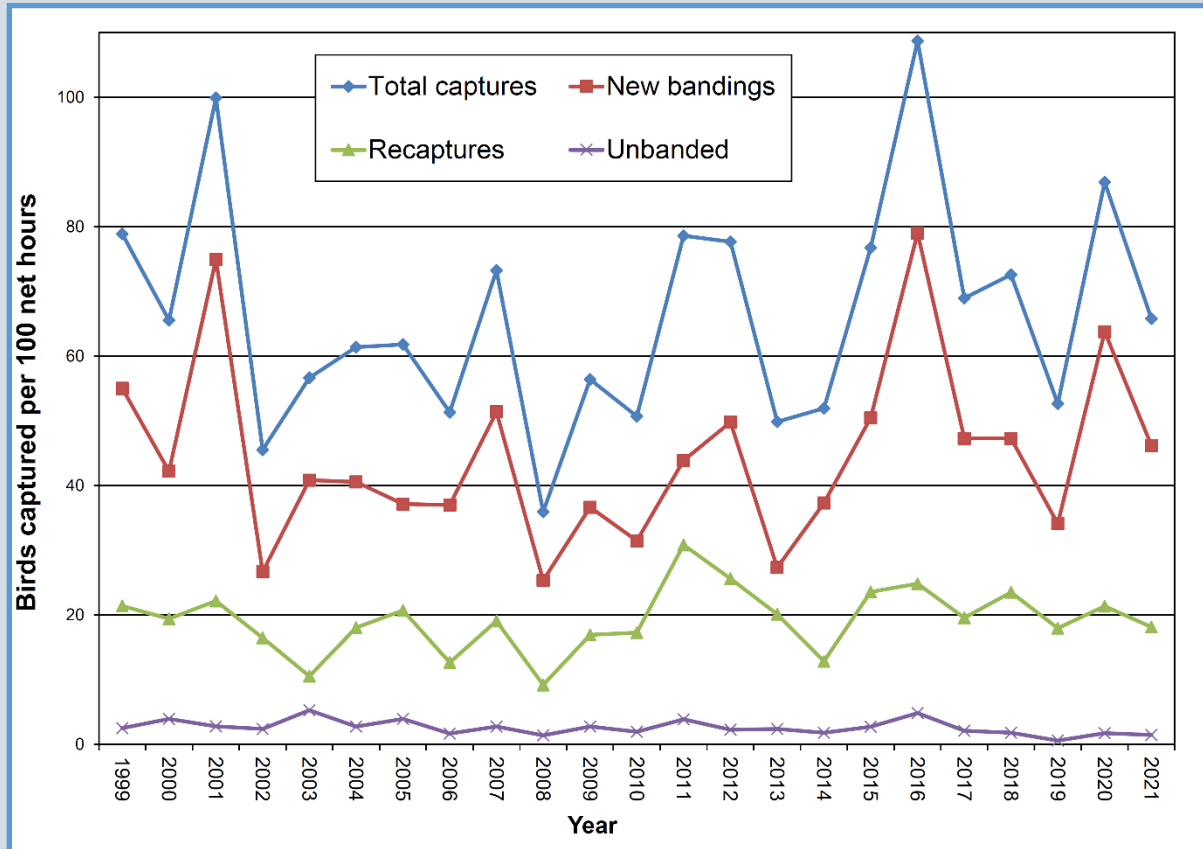
46th Annual Christmas Bird Count

This year’s Banff-Canmore Christmas Bird Count will be held on Saturday, December 18. Details will be posted on our website and through our updates as we get closer to the date.

Monitoring Avian Productivity And Survivorship (MAPS)

BVN once again thanks Cyndi Smith and Peter Achuff for taking on the hard work and commitment it takes to operate the Ranger Creek MAPS station. Through damp of morn, heat domes and the mozzly swarm, they have been there for this project. A few volunteers were able to break through the Covid

curtain this year and give them a hand. Their support is also appreciated. As the chart below demonstrates, this monitoring program has now been going continuously for 23 years producing a valuable set of data that permits trends in songbird productivity and survivorship to be established. Long term trends in all parameters presented appear stable with a slight, long-term upward trend. Let's hope this is an indication that protected areas like Banff National Park are playing a valuable role in songbird conservation when there are so many worrisome survival stories elsewhere.



"After hatch year" MacGillivray's Warbler (*Geothlypis tolmiei*).
C. Smith photo.

WHAT MEMBERS READ, WATCH, AND LISTEN TO

The following books, blogs, and pods were submitted to us from BVN members Heather Dempsey, Tony Clevenger, Leanne Allison, Joel Hagen, Colleen Campbell, Karen McDiarmid and Naia Noyes-West. Send us your reader suggestions for our next newsletter.

BOOKS

Diary Of A Young Naturalist *Dara McAnulty 2021*

Diary of a Young Naturalist is exactly what the title implies. Dara McAnulty is an Irish teen whose passions are his family, learning, and especially nature. He is an extraordinary teenager and I will leave it to the reader to discover more about him. The opening paragraph was my gateway into a thin volume of immensely pleasurable reading this summer.

"This diary chronicles the turning of my world, from spring to winter, at home, in the wild, in my head. It travels from the west of Northern Ireland in County Fermanagh to the east in County Down. It records the uprooting of a home, a change of country and landscape, and at times the re-rooting of my senses and my mind. I'm Dara, a boy, an acorn... I have the heart of a naturalist, the head of a would-be scientist, and bones of someone who is already wearied by the apathy and destruction wielded against the natural world. The outpourings on these pages express my connection to wildlife, try to explain the way I see the world, and describe how we weather the storms as a family."

This book has already gained praise from Robert Macfarlane, David Suzuki and Temple Grandin. It is a recipient of the Wainwright Prize for nature writing.

A World On The Wing: The Global Odyssey Of Migratory Birds *Scott Weidensaul, 2021*

Scott Weidensaul's latest look into bird migration and the researchers who study it is a beauty of a read that is well-researched, clearly, poetically written, and full of jaw-dropping stories about the way that birds move around the globe. A teaser: Arctic terns fitted with geolocators in Holland in 2011 flew over 90,000 km in just one year, twice as far as anyone had ever guessed. Follow many species, and Scott himself, on a crusade to understand and save migratory birds. His earlier book, *Living on the Wind*, now twenty years old, is also an excellent "read".

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, And The Teachings of Plants

Robin Wall Kimmerer, 2020

Kimmerer, a university-educated plant biologist, asks questions using the tools of science. And, as a member of the Citizen Potawatomi Nation, she also embraces the notion that plants and animals are our oldest teachers. *Braiding Sweetgrass* combines these lines of knowledge to show that the awakening of a wider ecological consciousness requires acknowledging and celebrating our reciprocal relationship with nature. Kimmerer's beautiful and compelling prose provides deep thought for our walks and our intimate relationships with all in the natural world.

Finding The Mother Tree *Suzanne Simard, 2021*

Born in the Monashee Mountains to a family of small-scale loggers, Suzanne Simard describes her personal journey to research forest networks and show that trees are more than a source of timber or pulp. She summarizes: *"In mapping the fungal network, our research showed that the biggest and oldest trees are the most connected nodes in the forest. These highly-connected hub trees, also known as Mother Trees, share their excess carbon and nitrogen through the mycorrhizal network with the understory seedlings, which can increase seedling survival. These Mother Trees in this way act as central hubs, communicating with the young seedlings around them. In a single forest, a Mother Tree can be connected to hundreds of other trees"*. Suzanne Simard's memoir enlightens and inspires. Simard hopes her lifelong research results will change the way the male-dominated forest industry "sees" trees and forest ecosystems.

The Bird Way: A New Look At How Birds Talk, Work, Play, Parent and Think

Jennifer Ackerman. 2020

This book is “crazy-full” of astounding information about birds, all drawn from recent research. The content is thrilling and will forever change how you respond to all feathered creatures.

The Peregrine *J.A. Baker, 1967*

Robert Macfarlane wrote that this classic book “*once read, will never release its grip on you.*” The gorgeous prose is all about the lives of peregrines in Britain which were endangered due to pesticide use in the 60s and have since made a stunning comeback.

The Soul Of An Octopus: A Surprising Exploration Into The Wonder of Consciousness

Sy Montgomery, 2016

Scientists are now taking the intelligence and consciousness of other species seriously. Sy Montgomery turns her curiosity about octopus into serious investigation. A series of stories reveal the curious and unique qualities of intelligence, consciousness and charm of this short-living species.

PODCASTS

Checks and Balances "The Western Paradox" *The Economist, July 2021*

More Americans are moving to western states in search of beautiful landscapes, cheaper housing and lower taxes. At the same time, wildfires, soaring temperatures and water shortages are making the West less hospitable. Although [this podcast](#) is focused on the western United States, there are many commonalities with our situation in western Canada and the Bow Valley that the listener will find interesting, possibly even frightening.

Stories From The Land by Indian & Cowboy

A great way to increase your awareness and consideration for indigenous perspectives and issues when you're out on the land hiking or enjoying nature, is just by [listening to indigenous voices and stories](#). These are personal stories shared for us by indigenous folks across Turtle Island (Canada). They are diverse, memorable, heartwarming, humorous, insightful, natural, and down to earth. Listening to them as I prep my lunch and head out to the trailhead is humbling and changes the way I interact with our environment. There are so many great podcasts that provide this perspective and leaving us no excuse not to hear their voices.

Future Ecologies

We listen to a lot of podcasts but Naia thinks [Future Ecologies](#) does the best at telling interesting and important stories, with good audio quality, of how science, local and indigenous knowledge, policy and sometimes art can be used to produce sustainable human-ecology relationships. Their most recent season followed the story of American naturalist Jim Corbet on his quest to follow and teach a way of living in harmony with desert ecology while also aiding in the sanctuary movement of Mexican and South American asylum seekers. Episode 472 “*This is Your Brain on Pollution*” asks the question “What kills three times as many people as covid-19 but gets way less attention, funding, or action?” Freakonomics Radio also does a great job of explaining the data behind recent behavioural economic research, which is often the crux of sustainability and environmental issues, that is, how do we get people to change the way they use resources and act in the environment?

Life In The Soil

Naia also likes the [Life in the Soil](#) podcast from the Rillig Lab at Freie Universität Berlin. For example, as we know in Bow Valley, grizzly bears are an important keystone species because of how large they are and the scope of their needs. If you accommodate grizzly bears, you are likely to accommodate most other species in the process. However, there is another bear, much less talked about, and also very important because of how small they are. These are the water bears, *aka* tardigrades! This podcast highlights the fascinating work of soil scientists who look at tardigrades and other micro soil organisms, how important they are to all life, and how our actions affect them.

INTERESTING LINKS

Citizen Science Opportunity – Report Covid Litter That Is Impacting Wildlife

Covid-related litter is a new global problem for wildlife and the environment. Project researchers invite citizen reports of situations that include some aspect of wildlife/environment compromise due to discarded protective equipment. [The website](#) shares illustrations and clear details about how to document and communicate discoveries. The researchers also accept observations of on-line content. It is an easy way for individuals to support important research.

In the Guardian (*You may have to complete a free registration to see full articles*): [Re-Wilding the Scottish Highlands](#), [Impacting the deep Oceans](#), [Nature in The City](#), [Fat Bears](#)

A Feather Atlas can be found [here](#).

BVN cautions all readers to not use publicly accessible social media style applications to post the locations of sensitive natural features, plants or wildlife that will attract people to that location. It's good to know nature is out there but in these days of social media such sharing of sensitive information will put the nature we love at risk of being loved too much.

WHO DO YOU CALL?

You may come across situations or observations that you want to tell the authorities about. We recommend you have these phone numbers handy. Remember, cell phone coverage is spotty in the mountains so take notes if you need to move on to make a call.

For Emergencies such as Ambulance, Fire Department, Police (RCMP): 911

Banff Dispatch: 403-762-4506 for Park-related emergency only (avalanche, forest fire, mountain rescue, etc.)

Banff Park Non-emergency: 403-762-1470, (bear or large carnivore sightings, human-wildlife conflicts, injured animal, illegal park activities such as fire, feeding wildlife, camping, drones etc.)

Kananaskis: Call 310-5263 for bear, cougar and problem wildlife sightings, illegal activities or to help report damage to public land, noise complaints and general land-related inquiries and information requests. To report a poacher call 1-800-642-3800 or fill out an [on-line report](#). If you wish to remain anonymous while reporting a crime, phone 1-800-222-TIPS (8477).