

THE CONFLUENCE

WINTER 2022



— SWAN VALLEY —
CONNECTIONS

FROM THE DIRECTOR

I love the quiet blanket of snow covering the mountains and valley floor that has fallen this winter. I start the day by building a fire in the woodstove, putting on the coffee, feeding the animals, reading a morning meditation with the first cup of coffee, taking a walk or ski after the second cup, writing a list of things I'm grateful for and a list of things I need to do, and having a hot breakfast and a hot shower before I head out the door. This is the winter routine I've created and come to love for decades. I'm so happy to have this old friend of a routine that allows for a couple of hours of quiet sanctuary to start the day, while the rest of the world seems to be operating in chaos.

2021 was a year that demanded more adaptability than any of us could have anticipated. It was a year filled with love and loss, passion and tension, division and unity (sometimes united around the division), and a questioning of everything we thought we knew. It was exhausting.

We at Swan Valley Connections (SVC) leaned into what we thought we knew best... the natural world. Each one of us on the board and staff at SVC is curious, never losing the child-like wonder and excitement over what's around the next bend, who's living in our big trees, or who's swimming in our waters. We teach from what we learn. Nature is who we always look to for inspiration, guidance, and the truth.

At the core of all the programs at SVC, we aim to connect people to the natural world. We do this by working closely with landowners, partner organizations, and state and federal agencies to improve habitat, create resilience in our natural resources, and to learn more about our natural world through research and monitoring. We also do this by providing meaningful educational opportunities for all ages online and out in the field. We do this by connecting ourselves, getting out into the wild, never ceasing to wonder and learn every day about this amazing place and its human, animal, and plant inhabitants.

In this winter issue of *The Confluence*, you'll have the opportunity to connect to the natural world through the words of our partners in the Swan Lands Coordination Network, as they provide highlights from their efforts in 2021; get the student perspective from an SVC tracking class; and get swept up in a tale of survival through interspecies kinship. We're all connecting in different ways to this special place.

As we look out at the horizon of this new year, SVC will provide opportunities to learn from, and in, the natural world with expanded educational programming. We'll be broadening our reach to have more residents of the watershed aware of and coexisting with wildlife, increasing habitat restoration efforts, and deepening our partnerships. More connection in 2022 to one another and to nature is our goal.

We appreciate your investment of time connecting with us in this issue, investing in this landscape, and your desire to be inspired by this wild, rare, resilient place. Together, we can look at 2022 with hope, curiosity, and gratitude... about whatever comes our way.

Onward,



Rebecca Ramsey, Executive Director



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SwanValleyConnections.org

Cover Image: Wolverine, Photo by Steven Gnam

Back Cover: Wolverine fur on a gun brush

from Rare Carnivore Monitoring 2021,

Photo by Andrea DiNino

WELCOME ELI!

ELI ESTEY, PROGRAM ASSISTANT

Eli was born and raised in New England, where he earned a B.S. in Wildlife Biology from the University of Vermont. He spent some of the most memorable times of his childhood exploring the southwestern portion of Montana, near Big Timber, with his family, and has been repeatedly drawn back to the state ever since. He was first introduced to the Swan Valley as a student of Wildlife in the West in 2017, after which he returned to serve as the program's Resident Education Assistant in 2019.

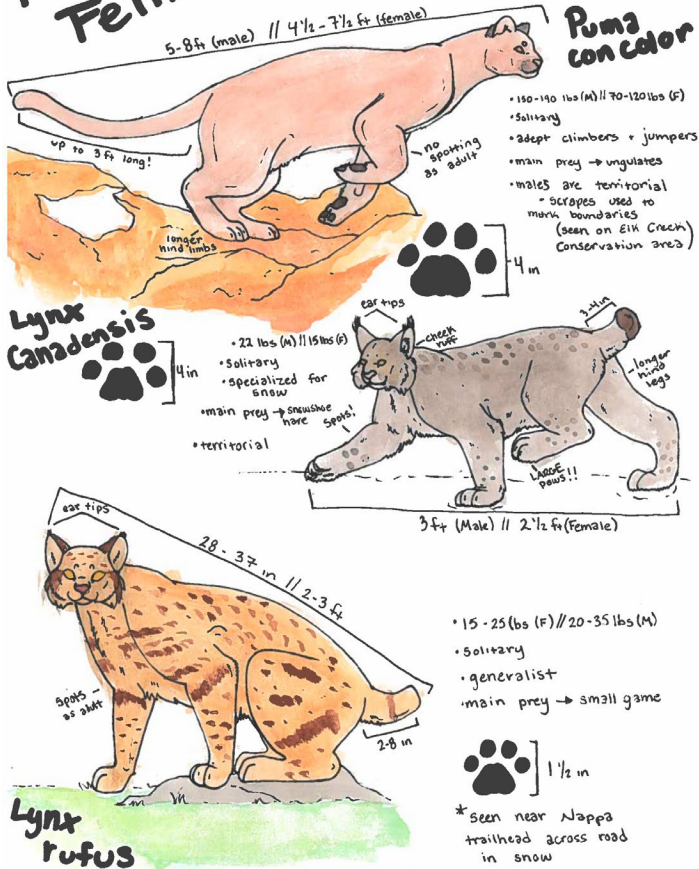
His professional career has been built around fostering connections between wildlife biology, forest ecology, and rural communities. Currently, Eli is working toward a Master's Degree in Environmental Science, studying the whitebark pine populations of Central Idaho. Eli is passionate about wildlife, their ecosystems, and the ways in which our communication and community-building are tied to their conservation. Eli spends his free time wandering the woods, fishing, tracking, and backpacking.

Eli holds a Level 3 wildlife track and sign certificate with CyberTracker North America, as well as a graduate certificate in Science Communication and Environmental Education from the University of Idaho.



Field Journal Highlights

Fine Felines



BLUE GROUSE

Dendragapus obscurus
(also known as dusky Grouse)

Habitat:

Forested areas (Mostly Hemlock, Ponderosa pine, and Douglas fir forests) along with surrounding shrubby, subalpine areas.

Size:

Male - 17 to 19 inches

Female - 18 to 22 inches

Male Blue Grouse's mating call can be so deep, only a fraction of it can be heard by the human ear.



SEPTEMBER 24TH, 2021
72°F Sunny, some wind
Beaver Creek restoration project
T12N R2W

FOLLOWING WILD NATURE WHEREVER IT LEADS

By Ben Long

In Montana, if you wait for perfect weather, you may never stop waiting.

So it was in December, 2021, when about a dozen Montana residents from between Missoula and Kalispell met at the Swan Valley Connections office in Condon to take part in a daylong class on tracking wildlife.

A winter wonderland it was not. We all wore rain gear and stood under the eaves or a spruce tree to avoid the cold drizzle. Glops of ice fell down our necks. The inch or two of fresh snow was already turned to slush and promised to melt entirely before long.

SVC Conservation Director Luke Lamar and Education Director Sara Lamar had their hands full. The class members had paid \$80 for a field day of tracking in one of the richest habitats in the Rocky Mountain West. Then Mother Nature threw a screwball.

The fresh snow buried any tracks that might have been fresh a day ago, while not allowing enough time for animals to lay down any new tracks for us to encounter. Luke and Sara scrambled to make the most of these less-than-ideal conditions.

Tracking wildlife is like a never-ending detective novel – piecing clues on the forest for and mixing in one's imagination to build a coherent narrative of what happened when, and to whom.

There are few places better to read the drama of the natural world than in the Swan Valley. Here, like few other places, we have a full theater of natural wildlife species, large and small, predator and prey. Literal life-and-death dramas play out all around us, usually sight unseen. We are rarely lucky to ever see a wolverine or a lynx in the flesh, but here we can find their tracks. We might never see a mountain lion or wolf pursue an elk or a moose, but in the Swan Valley, the evidence is there for the trained eye to find.

My wife, Karen, and I soon realized that I had a lot to learn – and Luke and Sara were experts to learn from.

Most tracking texts and classes start, logically enough, with tracks themselves. Hoof prints for elk, deer, moose and the like. Paw prints for bears, wild dogs, and weasels, etc.

Luke takes a different tact, starting with the macro working to the micro. Instead of starting with tracks themselves, he asked us students to consider the habitat those tracks are

found in. Near a riverbank? Consider mink and otter. Deep snow in forested mountains? That's the range of wolverine and lynx. Second, Luke taught us to look not just at the individual tracks themselves, but at the patterns those tracks made in aggregate. Consider how fast the animal seems to be moving. If it's walking, how long is the stride?

All of these factors help the tracker winnow out the wheat and the chaff, to identify animal sign by a kind of process of elimination.

Only then does Luke peer down and study the tracks themselves. We see dog and cat tracks in the snow in town all the time.

But how many of us have every really studied them enough to describe the differences?

Is the track round or more diamond shape? What shape is the pad?

How are the toes arranged? Do the claws show? Then, how big are they?

By asking such questions, wild canid tracks – foxes, coyotes, and wolves – can be parsed from the wild felids – bobcats, lynx, and mountain lion.

And, because we are in the Swan, not just in pictures in books and slideshows. The real animals making the real footprints!

Well, that's the theory. If tracking conditions allow. Which, today, looked like they didn't. It seemed a toss-up. What would happen first? Would we find fresh tracks of real wild animals, or would we begin showing the signs of hypothermia?

Turns out Sara and Luke had already cased the joint. They had gotten up early and cruised the woods for some interesting sign. We drove to the Seeley-Swan Divide.

The first example was the spoor of a large animal that zipped across a snowy logging road, then disappeared into a patch of second growth Douglas fir and lodgepole pine. First, Luke led us through a process of elimination to determine what this creature was. In this case, a mountain lion. Then, we followed the trail to determine what it was up to.

Chief Detective Luke interpreted the story as we traced the cat's morning work routine. First, it appeared to be a young cat. We found where the cat had stalked – or perhaps blundered



“There are few places better to read the drama of the natural world than in the Swan Valley.”

into – a scattering of whitetail deer. The puma made a few clumsy-looking leaps, but appeared not to secure breakfast. By this time, we too were hungry and wet, so we retreated back to the trucks, where we ate sandwiches while we fogged up the windows.

A short drive led us back to the highway and down another logging road. By this time, the rain had turned the surface snow (what Luke called the “substrate”) into grey mush. But along the road shoulder was another set of rapidly melting tracks Sara had found earlier in the day.

We huddled around the tracks and ran through Luke’s checklist. The process of elimination again led to a unanimous conclusion: a wolf had trotted down this road this very morning.

Sara then led us down the road – backtracking the wolf trail. Soon we found a second set of tracks. Then a third and a fourth and more. We found where a pack of wolves had spilled out of the forest to run the road – sniffing an old gut pile left over from hunting season.

Next, Luke and Sara took us to the Elk Creek Conservation Area (ECCA), a section of land co-managed by Swan Valley Connections and the Confederated Salish and Kootenai Tribes (CSKT). They told the story of how, decades before, Plum Creek Timber had announced plans to sell this section and others like it. That development plan would have transformed the Swan Valley from a paradise of forest habitat to a checkerboard of fences, no-trespassing signs, trophy homes, and subdivisions.

After working with the CSKT to purchase the ECCA, Swan Valley Connections then joined with other partners like Trust for Public Lands and The Nature Conservancy, to work out a multi-million dollar deal between the state, the feds, and Plum Creek to conserve not just Elk Creek, but all the checkerboard of the Swan and beyond. It was a monumental undertaking that required years of vision, courage, and dedication.

I had followed this work over the decades, first as a journalist, and later as a fellow conservationist and supporter of Swan Valley Connections. But standing on the ground near the prime bull trout spawning stream of Elk Creek, I had to think, “Wow, the good guys really won a big one this time.”

I felt warm inside, even though the rain had thoroughly soaked my pants and parka. In spite of the weather, Karen and I drove home feeling entertained, informed, and inspired.

Who can ask for more from a rainy day in the woods?

Opposite page: Mountain lion track of hind and front paws, looking at the differences in size in an overstep walk.

Above: Looking at two sets of wolf tracks, found by Sara Lamar

Both photos by Helene Michaels



BLIZZARD BONDS TRAPPER TO WILD ALLY

By Duncan Adams, Montana Standard



Mike Stevenson dropped to his knees in the dark. He searched beneath the deepening, drifting snow for the trough of snowshoe tracks marking his passage from camp earlier that day. He detected nary a trace.

The storm blocked every glint of starlight. The night was blacker than a raven's eye.

Stevenson had moved cautiously in the direction he believed would take him back to his winter camp. He held his arms straight out in front to avoid being struck in the face or eyes by tree limbs.

He felt a penetrating chill. Growing fatigue began to signal hypothermia's seductive pull. Fear started to rise. He was lost.

For the second winter in a row, Stevenson had stayed behind alone in the Bob Marshall Wilderness after fellow members of the outfitter's crew had readied mules and horses and set out for home before the big snows stranded them in the backcountry.

Stevenson, a Montana native and son of a Forest Service ranger, was 20 years old that December.

From his base camp, he traveled to set traps for pine marten, beaver and other furbearing animals. He established three spike camps about a snowshoe's day apart to provide refuge when checking traps. The wilderness solitude suited him.

"I loved being there. I wasn't afraid of the silence. That was what I was looking for," said Stevenson, now 64 and

varying time between Missoula and Kalispell.

After graduating in 1975 from Hellgate High School, Stevenson felt no attraction to higher education.

"I always had a passion to get into the woods," he said. "I wanted to get into the wildest country I could." And so he did.

Earlier that fall, while the outfitter clients hunted elk, bear and deer in the Bob, Stevenson and other packers had made camp in the Big Salmon Creek drainage about 20 miles from the trailhead.

The pay was low and the work demanding. But Stevenson was precisely where he wanted to be, doing exactly what he wanted to do.

The fall camp included a wall tent set up to shelter hay and grain for the horses and mules. The hay tent's ridge pole was attached to a tall snag. The hay and grain attracted mice.

"This owl showed up at camp," Stevenson said. "The owl decided to set up camp right at our camp because the mice hunting was good.

"The owl would sit up there at the top of that snag and watch for a mouse. The owl was pretty vocal. It would hoot all night."

At the time, Stevenson could not identify the owl's species. He later determined it was a barred owl by identifying its hoot: "Who-who who whoowaaa."

When the packers, guides and stock departed in November, so did the feed and the owl. The outfitter agreed to



*Mike Stevenson, longtime Swan Valley resident
and former SVC board of directors advisor.
Photo by Duncan Adams*

leave behind for Stevenson's use the wall tent that had stored the feed.

The day the snowstorm hit Stevenson had snowshoed three or four miles down to Big Salmon Lake to check some beaver traps. He discovered that he'd trapped two beaver, one large and one smaller.

One beaver had wrapped the trap wire around a submerged log. Stevenson realized the dead animal's retrieval would require a wintry skinny dip.

"I built a big bonfire before I went in," he said. "It was no big deal just to build a fire and jump in the lake."

Stevenson decided to keep the beaver carcasses as well as the pelts to use the animals' meat to bait other traps. He put the smaller beaver in his pack and dragged the larger animal behind him with a rope.

"It was a lot of weight going back," he said. "It got to be late in the day when I was headed back to camp. The storm had dropped over a foot of fresh snow. About a half mile to a quarter mile from camp it got too dark to see."

The snow started blowing.

"I still wasn't worried. I knew I was close to camp. I dug down in my pack for my flashlight but it wasn't working. It was only my second winter back there and I was still a rookie. I didn't have an extra bulb with me.

"I kept going and going and I could not find that camp. I got completely mixed up. Completely lost. And it was so discouraging because I knew the camp was so close.

"I was getting so cold. I thought, 'Ok, I'll just build a fire.'"

Stevenson decided a fire could take him into the dawn, when the morning light would reveal the way to his camp. From his backpack he removed the damp carcass of the smaller beaver. He reached down for the fire starting materials he'd used earlier that day to build a bonfire. They were wet, soaked by lake water coming off the beaver carcass.

"I wandered around a little more. I knew I had to keep moving to keep my body temperature up. I found a little sapling. I thought, 'I'm just going to go around and around this trunk as long as I can.' But I wasn't moving fast enough to keep my body temperature up. I sat down in the snow and almost went to sleep.

"But I'd get back up and go around the tree some more. I thought I was going to die. I was getting scared. I was shaking, and I wanted to go to sleep.

"I wasn't religious and didn't know how to pray but figured this might be a good time to give it a try. I prayed, 'God, please, if you're real, please help me!'

"Just before I was going to sleep I heard an owl hoot. It sounded like the same owl that had been hanging around our hunting camp. I had not heard or seen it for weeks."

Stevenson thought there might be some small chance the owl was hooting from the site of the former hunting camp, now his winter camp. Out of desperation, he decided to follow the sound as best he could. He said the owl hooted about every 10 minutes.

***"Just before I was going
to sleep, I heard an owl hoot.
It sounded like the same owl
that had been hanging around our
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or seen it for weeks"***

"It was my only hope. I knew it was a big risk because my strength was almost gone. But I was out of options." He continued to snowshoe with his arms outstretched in the dark.

"I would stumble and fall because I was weak."

Stevenson sensed that the owl was perched above him. And then it quit hooting altogether.

"When it did start up again, it was from a completely different direction."

Stevenson's heart sank. Maybe the owl was simply flying around in the woods hunting. Barred owls, like many owls, are active at night.

He faced another decision. Should he continue following the sound of the hooting owl even though it had changed course? Again, he decided to risk it even though doing so seemed more rooted in desperation than reason.

Stevenson plodded through the trees, his arms outstretched, following the intermittent hoots.

"I don't know how long it took. All of the sudden my hands hit the woodpile next to my tent. I could hardly believe it. I got a fire going. I thought, 'I'm going to make it.'"

The next day, Stevenson decided to retrace his steps

The barred owl shown in these article photos is Spencer, an education ambassador at Montana Wild Wings Recovery Center (MWWRC) in Kalispell, MT. Spencer was found in 2014 along Highway 83 outside of Seeley Lake; he suffered a fracture of the left carpus, an injury that prevents him from being able to survive in the wild. To learn more about the work of MWWRC, please visit www.wildwingsrecovery.org



to discover how he'd gotten lost. He discovered that the owl's abrupt change of direction had saved him from plunging in the dark down a dangerous drop near Big Salmon Creek.

"The owl took me around it," Stevenson said.

Today, more than 40 years later, awe and wonder resonate in Stevenson's voice when he describes the events of that night.

"At the time in my life when it happened, I knew something had happened that I couldn't explain. Something mysterious."

Years passed.

Stevenson has family ties to the Blackfeet Nation. They include cousins who live in Browning. In recent years he has been invited to Blackfeet ceremonies.

"A few years back I was transferred the right to keep a Blackfeet pipe. Through the pipe, through ceremony and talking with elders, I'm learning a little about the unseen in the natural world around us. I've learned that Creator will sometimes send us help in unusual ways.

"That night it came in the form of a medicine owl."

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SWAN LANDS COORDINATING NETWORK 2021 UPDATES

The purpose of the SLCN is to provide agencies, organizations and civic groups working in the Swan Valley a venue for coordinating with one another, and to provide a flow of information with interested members of the community.

Here's a look at what some of our partners have been up to in the past year.

MONTANA DEPARTMENT OF NATURAL RESOURCES and CONSERVATION - SWAN UNIT

The 2021 fire season on the Swan Unit was fairly slow in the beginning of the summer, allowing most of our engine crews to assist in other areas of the state with the fire-fighting load. The Whitetail fire quickly changed that, starting from a lightning strike in early August. It grew to 320 acres overnight and thanks to work from local DNRC resources, Forest Service firefighters and volunteer fire department personnel, the fire was contained at 340 acres. Much of the rest of the summer, our fire crew worked on rehabbing fire line including grass seeding. We are currently salvaging portions of the burn and next spring we will start planting western larch and western white pine.

Our timber program laid out and received a bid on the Soup Canyon Timber Sale, the first in the Lost Napa Multiple Timber Sale Project. This timber sale sold approximately 6.1 MMBF of sawlogs to benefit the Common Schools Trust. Forest improvement work was also completed throughout the state forest, including planting roughly 75,000 seedlings, 100 acres of pre-commercial thinning and completion of two broadcast burns. Several sediment reduction projects were completed, including the removal of a bridge on South Woodward Creek.

2021 was a year of change for the Swan Unit. From new seasonal employees on the fire crew, a new trust lands forester and service forester and finally a new Unit Manager. Clay Stephenson and Rob Millspaugh, both Condon residents, became the Unit Manager and trust lands forester respectively. Jack White is the new service forester and is the point of contact for landowners interested in fire home inspections and forest stewardship questions.

Jack White, Service Forester
DNRC Swan River State Forest
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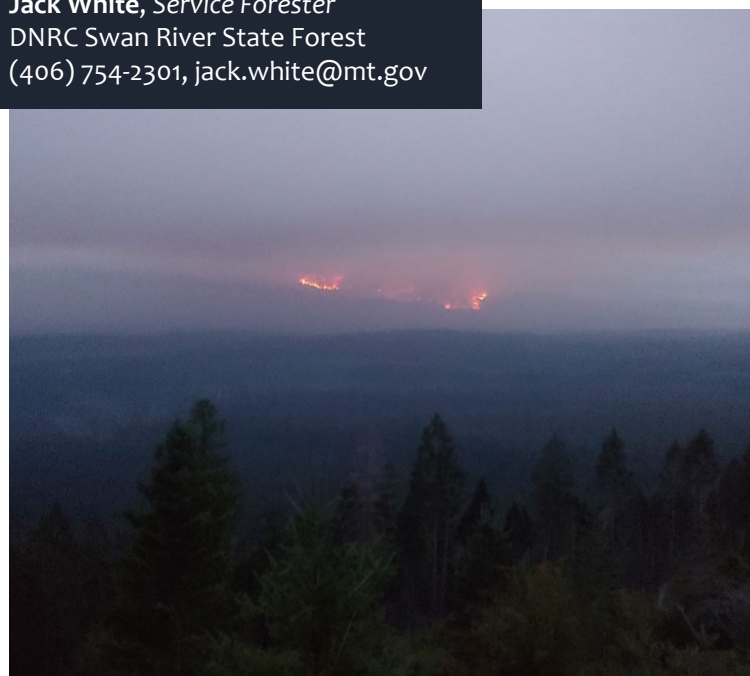


SVC FOREST STEWARSHIP

SVC completed 10 wildfire risk reduction projects on private land in 2021. These projects reduced fuels on 163.5 acres, improving defensible space around structures, improving firefighter access routes to properties, and improving forest health and fire preparedness. SVC assisted landowners with cost-share grant funds to help pay for the projects through Western States Wildland Urban Interface (WSF) grant funds, sub-awarded by the US Forest Service and Montana Department of Natural Resources and Conservation. SVC helps private landowners with forest management questions and helps direct landowners to resources that might meet their forest stewardship needs.

SVC also completed a 16-acre forest thinning project on the SVC-owned, 160-acre Swan Legacy Forest (SLF), which is located across from the Swan Valley Community Hall. This project, and future projects on the property, will be utilized for demonstration of sustainable forest management practices and various forest stewardship activities that students, private landowners, and community members can learn from. SVC has also started coordination with Montana Fish, Wildlife & Parks (MT FWP) to improve forest health and reduce wildfire risk on MT FWP Fishing Access Sites in the Ferndale area. We are looking forward to more wildfire preparedness and wildfire risk reduction projects in the Swan Valley in 2022.

Mike Mayernik, Conservation and Stewardship Associate
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DEQ & DNRC staff members touring the completed Whitetail slump rehabilitation

WATER QUALITY TECHNICAL ADVISORY GROUP

The end of 2021 marked the end of a long project on the Montana Department of Natural Resources (DNRC) State Forest. The Lower Swan Valley Road Sediment Reduction Project was a water quality improvement project done in partnership with the DNRC-Swan Unit, Swan Valley Connections (SVC), the Swan Lakers, and the Montana Department of Environmental Quality.

The purpose of the project was to reduce sediment delivery to streams and Swan Lake from roads in the lower Swan Valley watershed. The projects included restoration activities on Goat and Squeezer Creeks, rehabilitation of the Whitetail Creek slump, and Upper South Woodward Road reconditioning.

The project required extensive development and coordination, planning, design, permitting, public tours, and immense work on the ground. Aging log abutments were removed from a crossing over Goat Creek. Numerous road reconditioning activities were completed. Old culverts were removed, and new culverts were installed. Native vegetation was planted for road, slope, and streambank stabilization. Improved road management practices were put in place. Roads were reshaped and rehabilitated.

In addition to modeling sediment reduction in streams, the Swan Lakers volunteered to do water quality testing to see if activities upstream may have a positive impact on Swan Lake. Initial monitoring efforts look promising with some reduction in turbidity.

The project has also been a learning opportunity for the college students of SVC's field programs, and for the members of the Technical Advisory Group (TAG). Tours were held annually during the five years needed to complete this multifaceted project, with one final tour of all the project sites with the 2021 Landscape & Livelihood class, partner organizations, and members of the TAG.

Rebecca Ramsey, Executive Director

Swan Valley Connections

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U.S. FISH AND WILDLIFE SERVICE

This year the Fish & Wildlife Service completed all preparations for the Swan River National Wildlife Refuge Wetland Restoration Project. This was done with continued support from River Design Group, Inc., Swan Valley Connections and other agency and local partners. This year's accomplishments include public scoping for the project, secured funding for the construction work, completed engineering design plans, completed permitting, and selecting a contractor to do the earth work this coming year. The work is scheduled to begin in July of 2022 and should be completed by late fall.

Amy Coffman will be taking over as the Manager for Swan River National Wildlife Refuge.

Amy Coffman, District Manager-NW MT Wetland
Management District
U.S. Fish and Wildlife Service
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MONTANA LAND RELIANCE

At year's end, The Montana Land Reliance (MLR) remains on track to conserve more than 50,000 acres of private land in Montana. This couldn't come at a more critical time as the state experiences unprecedented real estate development activity, precipitated by the population migration spurred by both the recent pandemic and climate change. In the Swan Valley this land rush is readily apparent, where in 2021, seven existing MLR conservation easements sold to new landowners.

MLR continues to identify the Swan Valley as a conservation priority and is hopeful that the current land rush in the Swan will provide new conservation opportunities. Many of the new landowners moving to the Swan have both the resources and conservation ethic to protect more land. MLR was recently invited to sit in on the Montana Tree Farm Steering Committee to represent conservation interests for forest landowners. The long term, often multigenerational, timber management philosophy exemplified by Montana Tree Farm System members complements the perpetual benefits of conservation easements, and MLR looks forward to educating both existing forest landowners and new members of the community, about the everlasting benefits of land conservation.

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SOUTHWEST CROWN COLLABORATIVE

The Southwestern Crown Collaborative (SWCC) is a group of local partners that work closely with the Swan Lake District of the Flathead National Forest, Seeley Lake District of the Lolo National Forest, and the Lincoln District of the Helena-Lewis & Clark National Forest. Our primary interests are in Forest Restoration, Fire Management, and Monitoring. The SWCC was a little less active this past year due to the pandemic, but we were able to gather in person a few times in the past six months. Our monitoring program has continued and several new reports have been produced.

Recent products and activities:

- Partners completed a thorough report describing our accomplishments and experiences working under the Collaborative Forest Landscape Restoration Program. It contains many lessons learned that may be of value to other collaborative groups, especially those considering applying for the CFLRP.
- The SWCC has been very involved in the Mid-Swan Landscape Restoration Project since its inception and we provided comments on the draft EIS released this past fall.
- Recently recorded adaptive management presentations have been posted to our monitoring website (www.swcrown.org) for most of our monitoring projects. These provide overviews of what we learned from our monitoring projects across the CFLRP period.
- Meso-carnivore monitoring will be occurring for its final year (with CFLRP funding) throughout the SW Crown January-March 2022.
- **Other new monitoring reports:**
 - Monitoring Social Outcomes of Forest Management in the SW Crown
 - Status of Swan Valley River Cutthroat Populations and Conservation Recommendations
 - Assessment of Wildlife Habitat for the SW Crown
 - Recommendations for Road Restoration BMPs for Weeds
 - Water Quality Monitoring in the Clearwater Basin: Continuing Citizen Science
 - Water Quality and Stream Flow Monitoring in the Blackfoot River Watershed
 - Bull Trout of the Blackfoot River Watershed Genetic Assignment Report
 - Meadow Smith Old-Growth Monitoring Report 2021

Cory Davis, Coordinator
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Research Associate, Franke College of Forestry and Conservation, University of Montana
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Collecting genetic samples and replenishing a bait station during the 2021 Rare Carnivore Monitoring project.



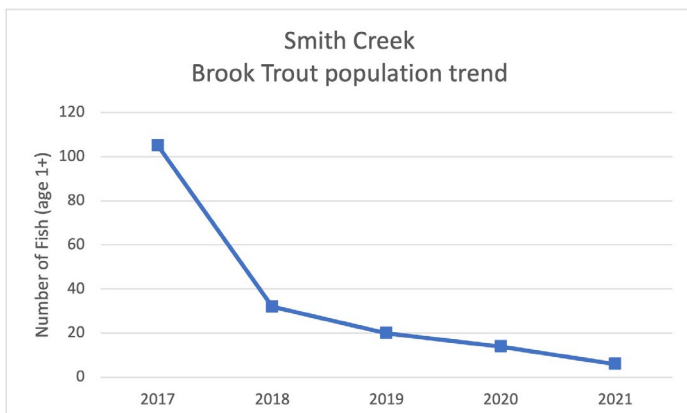
Westslope cutthroat trout from Cedar Creek

Beth Gardner, Fisheries Biologist
U.S. Forest Service
(406) 837-7508, beth.gardner@usda.gov

U.S. FOREST SERVICE - FISHERIES

The Flathead National Forest is proud to be a partner for native fish conservation. We had a great year in 2021. We sampled multiple cutthroat trout populations in streams to determine their status. Specifically, we are interested in the population size, spatial distribution, genetic introgression (“purity”), and whether they are under pressure from brook trout. The field work is done and results are pending. This was a team effort, far more than what the Forest Service could have done otherwise. This summer we also continued fish habitat and water quality monitoring that has been going on since 1997. A rigorous monitoring program like this is truly uncommon throughout the nation. It gives us confidence that the Swan River Valley is in excellent condition.

I’d like to highlight one particular restoration project. Smith Creek has a valuable cutthroat trout population, but it was at risk from expanding numbers of brook trout. Brook trout are not native and can out-compete cutthroat trout. We installed an intentional barrier in 2016 to block any further invasion. Starting in 2017, we electrofished the stream to gather up all the remaining brook trout above this barrier (and place below). Here is a graph of the population trend. Brook trout are getting hard to find. This is great news for the cutthroat trout. We hope to return to Smith Creek again next summer to finish this.



VITAL GROUND

The Vital Ground Foundation expanded its conservation footprint in Montana’s Swan Valley last year, purchasing 20 acres in the Condon area that help connect existing open lands.

The newly-protected acres lie in the Simmons Meadow wetland complex, adjacent to public lands and a Vital Ground conservation easement donated by a conservation-minded landowner in the area. By connecting large blocks of public land to the east and west, these conserved properties form a key portion of the Upper Swan’s habitat corridor, an established linkage zone for wildlife moving between the Mission and Swan mountain ranges.

The conserved land includes rich wetland habitat that extends onto the neighboring public and protected private land. Keeping Simmons Meadow intact and undeveloped maintains an important spring habitat option for grizzlies, with low-lying wet areas typically the first places in the area to see plant growth each year. That also makes the project site prime habitat for far more than bears.

Beyond wildlife, conserving open space maintains the Swan’s scenic and rural character during the current wave of subdivision and development. Protecting wetlands like Simmons Meadow also maintains water quality and quantity in the area, important factors in providing resilience to climate change for fish, wildlife and people alike.

The project builds on Vital Ground’s strong conservation legacy in the Swan, where the Missoula-based land trust has protected more than 1,000 acres through conservation easements and land purchases over the past two decades.

Mitch Doherty, Conservation Program Manager
The Vital Ground Foundation
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Simmons Meadow

SWAN LAKERS

The Swan Lakers continues its mission of protecting the water quality of Swan Lake and the Swan River watershed in general. In 2021 we have a total of 210 members. The organization regularly monitors the water quality of Swan Lake through testing that utilizes a 'Hydro-Lab' instrument, and by collecting water samples that are analyzed at the Flathead Lake Biological Station.

Additionally, Swan Lakers works with the U.S. Forest Service (USFS) to collect water samples that are analyzed for the presence of environmental DNA that may indicate that Aquatic Invasive Species (AIS) are present. Throughout the summer boating season, Swan Lakers carry on a program of inspecting boats being put into the water at the USFS Swan Lake launch ramp. This purpose of this effort is to detect the presence of AIS before they are introduced to Swan Lake from a contaminated boat. Swan Lakers carries out an annual cleanup of the Swan River, downstream from the outlet of the lake. This effort has really paid off. The amount of debris is now much less than in earlier years. Swan Lakers continues to inform its membership, and the public, as to best practices for the preservation of water quality. One such example is disseminating information about septic tank maintenance. These efforts, and more, will continue well into the future.

Jeff Kemp, Board President
Swan Lakers
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MONTANA FISH, WILDLIFE & PARKS - FISHERIES

We continue to monitor fish populations in the Swan drainage. Bull trout redd counts were completed this October. This year marks 40 years of redd count data for the Swan Lake bull trout population. Basin-wide redd count surveys (all 10 streams) have been done annually since 1995. The 2021 basin-

wide count of 219 redds is tied for the lowest on record. Surveys in 2019 also revealed 219 redds, with a slight increase in 2020. Bull trout redd counts have been declining since 2007, and reductions are likely due to an increasing population of non-native lake trout in Swan Lake. While eradication of lake trout is unlikely, FWP and the US Fish and Wildlife Service are working collaboratively to halt further declines of bull trout.

We also started sampling cutthroat trout populations in Mission Mountain lakes in 2021. This year we sampled Cedar, Piper, and Lower Ducharme Lakes. All three lakes were stocked decades ago, and we are interested in the size, structure, and genetic makeup of the fish.

This year marked the 5th year of lake trout monitoring in Swan Lake. The data is still being analyzed, but numbers look similar to last year. This survey was initiated in 2017 to monitor lake trout abundance, and will be used to evaluate the effectiveness of any future lake trout suppression efforts.

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Montana Fish, Wildlife & Parks
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USFS MID-SWAN LANDSCAPE RESTORATION AND WILDLAND URBAN INTERFACE PROJECT

The USFS Landscape Restoration Planning Team has marked another busy year and reached a significant milestone. On September 10, we released the Final Environmental Impact Statement (FEIS) and Draft Record of Decision (DROD) for the Mid-Swan Project. We thank the many individuals and organizations who participated and helped refine this project to where it stands today.

The selected alternative in the draft decision reduces the mileage of roads needed to access vegetation treatments; reduces the vegetation treatment areas, including the areas proposed for prescribed fire; and refines the estimated implementation schedule to include spatially specific information related to where and when activities are expected to occur across the project area. While the FEIS analyzes actions across a 15-year period, the DROD proposes to authorize actions across a shorter timeframe. This approach responds to public input requesting more involvement opportunities throughout implementation.

Vegetation treatments will require up to 10.7 miles of permanent and 6 miles of temporary road construction, and 23.5 miles of roads are proposed for decommissioning in addition to hundreds-more miles of road improvements and culvert removals. Additionally, the selected alternative includes whitebark pine restoration in the Mission Mountains Wilderness and Swan Front Recommended Wilderness. Commercial timber harvest is proposed on 17,858 acres.

As we head into the new year, the planning team is busy addressing the objection letters received from eighteen individuals. Objection resolution meetings are scheduled in early January and formal responses will be published shortly after. The final record of decision is expected in Spring 2022.

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CONFEDERATED SALISH & KOOTENAI TRIBES

The Confederated Salish & Kootenai Tribes (CSKT) own three separate parcels in the Swan Valley, which were purchased to mitigate for native fish habitat impacts from Hungry Horse Dam. The first of these parcels is the east half of Section 35, west of Condon, containing the confluence of Elk Creek and the Swan River. Since 2007, CSKT and Swan Valley Connections (SVC), who owns the west half of Section 35, have co-managed the section as the Elk Creek Conservation Area (ECCA). Throughout 2021, the CSKT Fisheries Program worked closely with our partners at SVC and in the Elk Flats Road community on projects within the ECCA. In May, we entered into a Landowner Agreement through the USFWS Partners for Fish and Wildlife Program with SVC and the Elk Flats Road Maintenance Co-op to secure additional funding for the placement of culverts and additional road fill on Elk Flats Road near Elk Creek. These culverts were installed by Missoula County in the fall of 2021 and will serve to convey future high water flows underneath Elk Flats Road. Also, we coordinated and cost-shared with SVC to have noxious weed populations treated in July along Elk Flats Road and other spur roads throughout the ECCA.

Finally, CSKT also owns two contiguous parcels along Woodward Creek, south of Swan Lake. One of these parcels has several buildings located on it, which are slated for removal. Rusty Sydnor with the CSKT Fisheries Program worked with the Swan Lake and the Swan Valley (Condon) fire departments to have local firefighters burn the structures down as a training exercise. We were able to only burn one of the structures, but this was done successfully in November 2021. Additional clean-up and structure removal work will continue at this site in 2022.

Rusty Sydnor, Restoration Botanist
Confederated Salish & Kootenai Tribes
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SVC WETLANDS

SVC partners with the U.S. Fish and Wildlife Service's (USFWS) Partners for Fish and Wildlife Program and private landowners to implement wetland, stream, and riparian restoration projects as well as grizzly bear conflict mitigation efforts such as electric fencing. Projects in the Swan Valley are targeting towards the recovery of focal species bull trout, trumpeter swans, and grizzly bears. In 2021, SVC and USFWS partnered with the Confederated Salish and Kootenai Tribes, Missoula County, and the Elk Flats Road Coop to upgrade undersized culverts in the floodplain along Elk Creek on the Elk Creek Conservation Area. The previous undersized culverts were unable to handle the high flows during spring runoff events and had resulted in large quantities of sediment from Elk Flats Road washing into Elk Creek, negatively impacting bull trout spawning and rearing habitat as well as water quality.

The U.S. Forest Service (USFS) and National Forest Foundation, in partnership with SVC, continue to work on the design and implementation of the Cold Ponds Wetland Restoration Project that will restore the hydrology of approximately 30 acres of ditched and drained wetlands in the Cold Creek area on USFS lands. The project implementation is anticipated to take place in the summer/fall of 2022.

Targeted projects in the Swan Valley of previously ditched and drained wetlands have helped restore nesting and foraging habitat for trumpeter swans. In 2019, SVC and partners documented the first successful nesting pair of trumpeter swans in the upper Swan Valley in over 100 years! In 2021, recovery efforts continued with a promising future, as two successful nesting pairs of trumpeter swans were documented in the upper Swan Valley, with each pair producing one cygnet that survived until the fall migration.



SVC, CSKT, Missoula County, and Elk Flats Road Coop assessing the floodplain along Elk Creek and Elk Flats Road back in 2020.

NATIVE FISH COMMITTEE

This past summer SVC, USFS, and many volunteers continued native fish monitoring on some of the Swan Valley's Westslope Cutthroat Conservation Population streams, which are certain headwater creeks that still hold mostly genetically pure strains of westslope cutthroats that haven't hybridized with rainbow trout or Yellowstone cutthroats. The group of partners teamed up to electro-shock portions of Kraft, Bond, Cat, Dog, Cedar, Piper, Owl, Sixmile, Hemlock, and South Fork of Cold Creeks. The goals of the long-term monitoring project are to determine distribution of genetically pure westslope cutthroats as well as non-native fish like brook trout and rainbows, and how that changes over time, genetic introgression (purity) changes over time, population estimates, and more. Volunteers contributed a whopping 258 hours of time to help with the project!

FWP also began surveying certain headwater lakes in the Mission Mountains (see Leo Rosenthal's update) and the Flathead Lake Biological Station monitored Herrick Run as part of a research project to monitor an isolated population of genetically pure westslope cutthroats that were transplanted into that creek.

SWAN VALLEY BEAR RESOURCES

2021 was a poor huckleberry crop in the Swan Valley and the lack of this and other natural bear foods led to an increase of hungry bears seeking out alternative sources, which can often lead bears to follow their noses to near people's homes, where they can discover unsecured unnatural attractants such as chickens, garbage, livestock grain, bird seed, orchard fruit, dog food, and more. As previously documented in other recent years of poor natural bear food availability such as 2004 and 2011, there was an increase in documented bear conflicts by FWP bear management specialists in 2021. Not surprisingly, SVBR staff, in coordination with FWP personnel, also helped respond to an increased volume of reported conflicts as well.

To help mitigate bear conflicts before they occur, SVBR's Bear-Resistant Garbage Container Loaner Program allows community members to check out bear-resistant garbage containers for free and on an indefinite basis, with a suggested donation. In 2021, SVBR distributed 43 bear-resistant garbage containers to local residents. Currently, 346 containers and 28 dumpsters have been distributed to community members or businesses as part of the program throughout the Swan Valley. In addition, SVBR assisted the Hungry Bear Steakhouse to replace their two broken bear-resistant dumpsters. During the fall of 2021 SVC placed an order for 25 bear-resistant Kodiak garbage cans to replenish its supply for the loaner program.

SVBR also offers an Electric Fencing Program that assists landowners with the entire fence building process including site identification, fence design, technical specifications, help to secure funding sources, purchase of materials, and final hands-on fence construction. Fencing projects are done opportunistically with interested landowners as needs and opportunities arise. SVBR has seen an increase in residents raising small livestock in the Swan Valley, and this has led to an increasing need for electric fencing projects to minimize bear conflicts. In 2021, SVBR assisted three residents with construction of permanent electric fences. For two of the resident locations, SVBR built

electric fences that had experienced previous bear conflicts due to chickens, small livestock, livestock grain, and orchard fruit, while the other location included a resident eager to take proactive preventative measures. SVBR also helped two residents completely rebuild their electric fences that had been severely damaged by windthrow or had neglected to properly maintain them.

SVBR also offered advice on specifications and materials needed to a landowner who then built an electric fence themselves. SVBR has now built 34 permanent electric fences that have secured everything from chickens to goats to bees, to livestock grain, compost bins, and more. SVBR also offers temporary fencing to secure attractants after a bear conflict until a more permanent solution can be attained.

Every year SVBR partners with various agencies, organizations, and businesses to provide educational events aimed at promoting human-bear coexistence. Unfortunately, COVID-19 interrupted our plans for public events once again in 2021. In April, in lieu of our annual Spring Bear Wake-Up Social, SVBR hosted an educational virtual presentation by graduate student Erik Peterson's research on grizzly bears and army cutworm moths in Glacier National Park. The presentation also reminded residents of SVBR's services and encouraged efforts to contain their bear attractants as bears emerged from hibernation. The presentation was recorded and is posted on SVC's website and was shared on our social media platforms. 127 people tuned in for the live presentation and 377 people have watched the recorded presentation. The presentation can be viewed at: <https://www.swanvalleyconnections.org/presentations>.

Another key component of SVBR is the Swan Valley Bear Ranger, who, in partnership with the Living with Wildlife Foundation and USFS, provides bear-related education to campers and garbage clean-up at local dispersed and developed campsites. The Bear Ranger is a seasonal position and performs these services from Memorial Day weekend through the end of big-game rifle season in November. The ranger visits with campers and recreationists about storing their food and bear attractants in a bear-resistant manner, bear safety, recreating in bear country, bear pepper spray use and effectiveness, bear behavior and ecology, and other bear-related topics. In 2021, the Bear Ranger provided education to over 600 people and showed 62 people how to properly use bear pepper spray.



Luke Lamar, Conservation Director
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— SWAN VALLEY —
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UPCOMING EVENTS

Please check our website or call our office at 406-754-3137 for the most up-to-date information, including COVID-19 protocols. Thank you!

JANUARY 24 - MARCH 21

Bubble Cap Orders Open

FEBRUARY 2

Roadside Geology of Montana
Zoom Presentation with Dr. Rob Thomas (UM Western)

FEBRUARY 5

Wildlife Tracks & Sign (FULL)

FEBRUARY 12

Wildlife Tracks & Sign

FEBRUARY 19-20

Weekend Warrior Master Naturalist Begins

FEBRUARY 26

Wildlife Tracks & Sign

MARCH 2

Owls of Montana
Zoom Presentation with Beth Mendelsohn
(Owl Research Institute)

MARCH 5

Master Gardener Level 1 Certification
Course Begins

MARCH 19-20

Wildlife Tracks & Sign Weeklong Course
and Certification

APRIL 6

Spring Bear Wake-Up Social
Zoom Presentation

APRIL 7-8 AND 9-10

Wildlife Tracking Certification
With David Moskowitz (FULL)

APRIL 12-13

Wildlife Trailing Certification
With David Moskowitz (FULL)

MAY 4

Zoom Presentation TBD

MAY 7

Forest Bathing Workshop
with Ellen Horowitz

WWW.SWANVALLEYCONNECTIONS.ORG