



SUMMER
2021

Windows to *Wildlife*

Your support at work in Idaho's landscapes

PHOTO BY: Greg Jacobs, CC BY-NC 3.0, Flickr

Wolverines in the Hidden Alpine of Southeast Idaho

by David Dressel*, Regional Wildlife Diversity Biologist
Southeast Region, Idaho Department of Fish and Game

It's late autumn and snow covers the peaks of southeast Idaho. Underestimating the snow depth, I post-hole through freshly fallen snow, making my way through the saddle of two mountains. It doesn't look like your typical alpine ecosystem with towering scree slopes and treeless mountain tops. It is deafly quiet as the snow muffles any sound that tries to escape. I'm standing in the middle of a Douglas-fir forest searching for a spot to deploy a camera that with some hope will capture one of the most elusive forest carnivores in the lower 48 — the wolverine (*Gulo gulo*).

Southeast Idaho is known for its large mule deer (*Odocoileus hemionus*), upland game hunting, stretches of aspen (*Populus tremuloides*) forests, and vast expanses of sagebrush (*Artemisia* spp.). However, what is not well known is the existence of an alpine ecosystem. In a classical definition, "alpine" refers to a mountainous area above the tree line where snow or ice may persist all year. Alpine systems are some of the most beautiful and rugged terrain in the northern Rocky Mountains. They can be home to many unique animals including the American pika (*Ochotona princeps*), hoary marmot (*Marmota caligata*), Black Rosy-Finch (*Leucosticte atrata*), alpine tiger beetle (*Cicindela plutonica*), mountain goat (*Oreamnos americanus*), and the wolverine.

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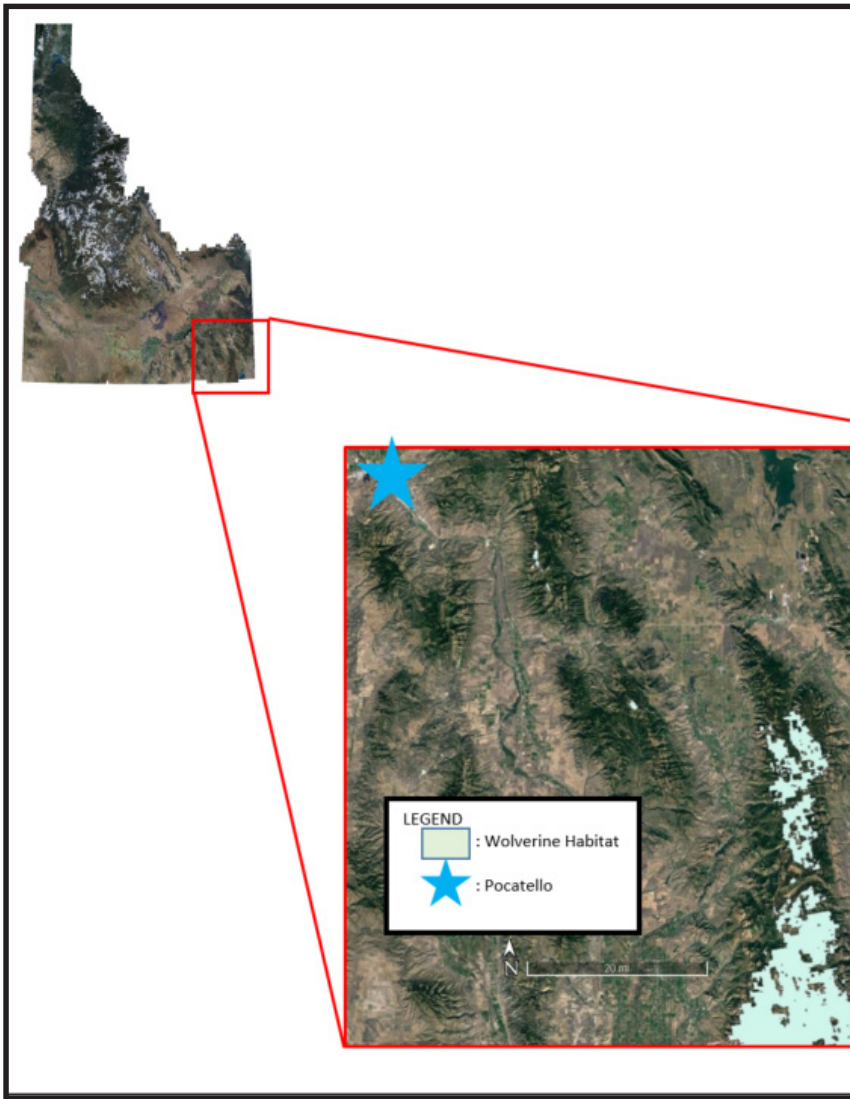
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Top: Trail cameras and scent stations were deployed in this area to capture the presence of wolverines and other alpine species. PHOTO: IDFG

The wolverine is a member of the weasel family (Mustelidae) and once ranged from Alaska all the way down to New Mexico in the Rockies and through the Sierras in California. However, the wolverine's range has contracted and become somewhat fragmented. In Idaho, wolverines are recognized as a tier 1 Species of Greatest Conservation Need (SGCN). These tier 1 species are Idaho's highest priority SGCN and have the most critical conservation needs. Other tier 1 species include white sturgeon (*Acipenser transmontanus*), Greater Sage-Grouse (*Centrocercus urophasianus*) and Columbia spotted frog (*Rana luteiventris*) to name a few. Wolverine were assigned a tier 1 status because of their decreasing available range, genetic isolation, and lack of information, the latter of which in particular has prompted the need to collect additional information on this species.

In 2015-2017 a multi-state effort was conducted to survey the occupancy of wolverines in Idaho, Montana, Wyoming, and Washington with the use of trail cameras. These targeted surveys occurred throughout Idaho in predicted habitats for wolverines such as the White Cloud and Sawtooth mountains. By identifying areas currently occupied, this survey provided a baseline of information that will enable wildlife managers to make inferences about if/how that baseline changes in the future.

The multi-state survey was a great start to monitoring wolverines in their predicted habitat. However, information is still needed to help managers understand the role marginal habitat may play with wolverine distribution. Because wolverines can disperse and travel up to 300 km in a single year, do these marginal habitats serve as vital travel corridors? Can they support resident populations? Or are they merely sink habitats? As a part of a three-year project, the Idaho Department of Fish and Game (IDFG) set out to attempt to answer some of these questions.

Beginning in 2019, IDFG deployed trail cameras in areas not surveyed during the multi-state survey. This effort was an attempt to better understand wolverine distribution at the very edge of their range in the lower 48 and in marginal habitat. Regional IDFG wildlife biologists David Dressel and Eric Freeman deployed five trail cameras and scent stations across different mountain ranges in southeast Idaho in an attempt to detect wolverines. What they discovered was a unique look at the characteristics of an unknown alpine system and the presence of a wolverine.

Where to Put the Cameras?

Because southeast Idaho does not contain classic alpine ecosystems with rock scree, year round snow, and ice cold lakes, a model was created to predict possible wolverine habitat. By analyzing ecological attributes such as elevation, vegetation, geomorphology and possible migration corridors throughout the Intermountain West, researchers developed a model to determine likely areas where wolverines and other forest carnivores may be more likely to occur and where to possibly put trail cameras.

Next, this model was groundtruthed using local expertise to eliminate areas that were either inaccessible or lacked realistic wolverine habitat. The next piece of the puzzle was to look to the public. For several years now, IDFG has received reports from skiers, hikers and snowshoers about possible wolverine sightings across southeast Idaho. This is where some of the best leads occurred as we looked at recent sightings and overlaid that with the habitat model. Bam! The overlap between these two sources of information provided a great starting point for camera locations.

Bait Station Set-up

Once a location had been selected, the real work began. Biologists set out on snowmobiles, ATVs, snowshoes and good ole' fashion boots to deploy the trail cameras and scent stations that would secrete a scent lure to peak the curiosity of any nearby wolverines. When looking for the perfect setup we had to find two tall standing trees roughly 6-7 meters apart. On one tree a scent pump was drilled into the tree high enough where it wouldn't be covered by snow. A bone was then attached below the scent pump. Every 24 hours the scent pump was programmed to dispense 2ml of scent lure on the bone, saturating it. In the second tree a motion-triggered camera was placed and pointed at the scent station. Next we wait.

The following spring, cameras were picked up and brought back into the office. The first four cameras captured a variety of wildlife species including mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), black bear (*Ursus americanus*), Pacific marten (*Martes caurina*), and coyotes (*Canis latrans*), but no wolverines. It was on the final camera, the toughest one to retrieve, where we finally got a wolverine detection. A wolverine or wolverines visited this particular scent station on three separate occasions. The first visit occurred in December 2019 followed by a visit in February 2020 and again in April 2020.

The wolverine detection prompted several questions: 1) was this a single resident wolverine that inhabits this mountain range, 2) are these three individual wolverines using this avenue as a travel corridor, and 3) is it a combination of dispersing individuals and a resident wolverine? All these questions sparked even more questions as we try to understand the presence of these elusive creatures in the southeast region of the state. Because of the location of the detection(s), we suspect there are other areas occupied or used by wolverines in southeast Idaho but such speculation will need to be confirmed with additional monitoring.

Next Steps

After last year's detection of wolverine(s) in southeast Idaho, the decision was made to continue to monitor for wolverine presence in this part of the state. Five more cameras were deployed in the autumn of 2020 and are currently being retrieved and their data analyzed by



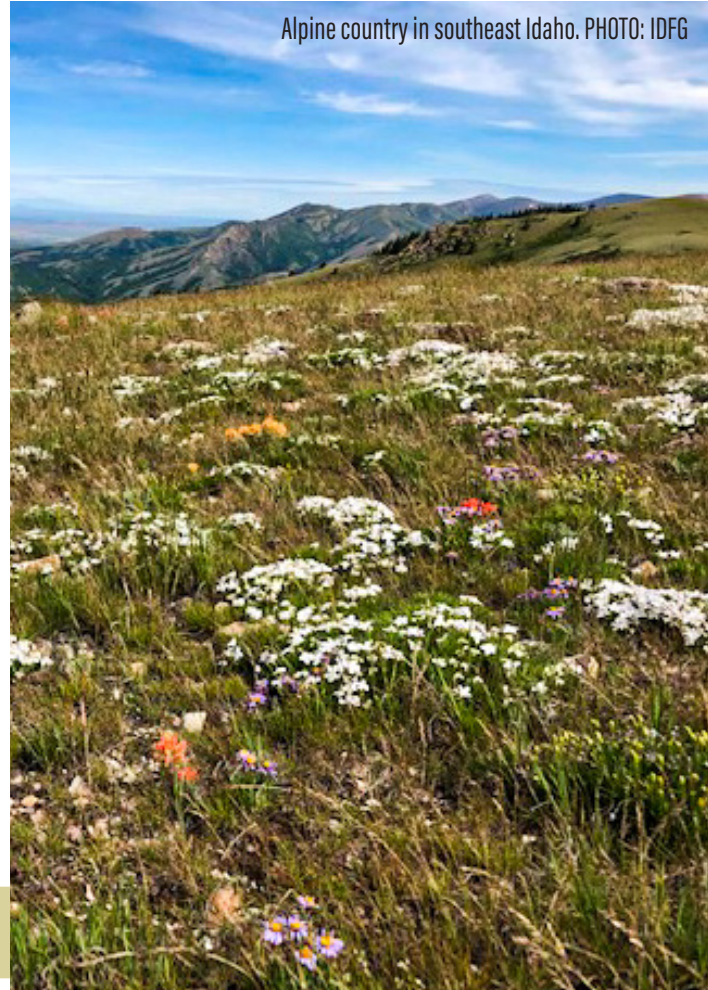
Top: IDFG biologist hangs a trail camera and scent station to help photograph and document different animals in southeast Idaho. PHOTO: IDFG

Bottom: A wolverine investigates the scent station. Wolverines spend a majority of their time on the ground searching for food, however, they are able to climb trees. PHOTO: IDFG



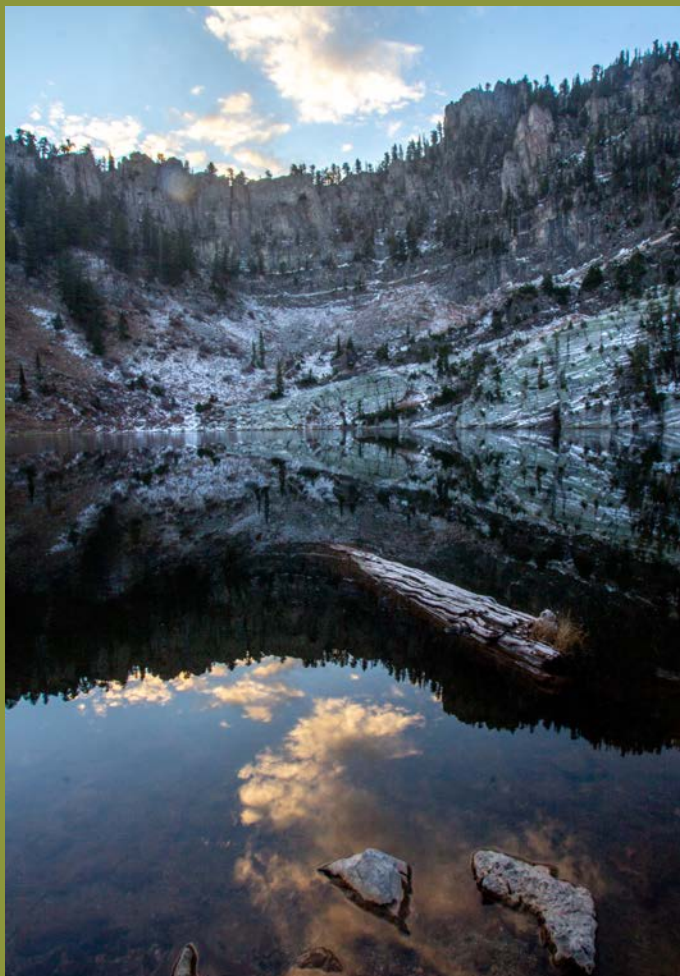
IDFG biologists. “I really want to answer the question of whether or not we have a resident wolverine in this area or if it’s part of a travel corridor. Both of these scenarios emphasize the importance of maintaining intact landscapes for wolverines and other alpine species,” says biologist David Dressel. With the most recent effort, IDFG biologists have already detected a wolverine on the same mountain range as last year’s detection. However, on this occasion, two cameras had wolverine detections. Are these from a resident wolverine(s) or from multiple wolverines traveling through the region? Unfortunately, attempts to determine the number of wolverines in the area by photographing the unique chest markings of the animals have so far been unsuccessful.

It is crucial that we understand the important role southeast Idaho and other potential wolverine habitats play in the conservation of this species, and how this and other wildlife inhabitants of alpine ecosystems might respond to a changing climate. These efforts will help IDFG continue to manage wolverines consistent with the mission to “preserve, protect, perpetuate, and manage all wildlife for the benefit of Idahoans.”



Did You Know? The wolverine is the largest terrestrial member of the mustelidae (weasel) family. It has a reputation for ferocity and strength out of proportion to its size, with the documented ability to kill prey many times its size.

WHY ARE ALPINE SYSTEMS IMPORTANT?



Alpine systems do not make up a large portion of the world’s natural areas so why do we care what happens to these systems and the creatures that live there? Alpine systems have a relatively low diversity of flora and fauna as only hardy and specially adapted organisms can live in such harsh environments. However, what happens in the alpine country has outsized effects on the lowland country. This is especially true when discussing hydrological cycles, snowmelt and the amount of water we see in our rivers and streams.

Alpine ecosystems are also some of the first habitats we see affected by climate change. We have all seen the photographs of receding glaciers across the globe, however, what is more difficult to see is the changes in species distribution and the shift in snowpack. With increasing temperatures, alpine plants must respond by shifting upwards to higher elevations. We can see this same shift in wildlife species that must follow the foliage and other food supplies. Overall, this may increase competition for space and resources from some of our sensitive alpine species.

In 2020 and 2021, IDFG initiated wildlife surveys in alpine systems across the state in an effort to better understand the presence and distribution of alpine species in Idaho.

On The Idaho Birding Trail

Carey Lake Wildlife Management Area

(208) 324-4359
idfg.idaho.gov/wma/carey-lake

eBird ebird.org/hotspot/L894293

LAT/LONG: 43.3350423,-113.9218283

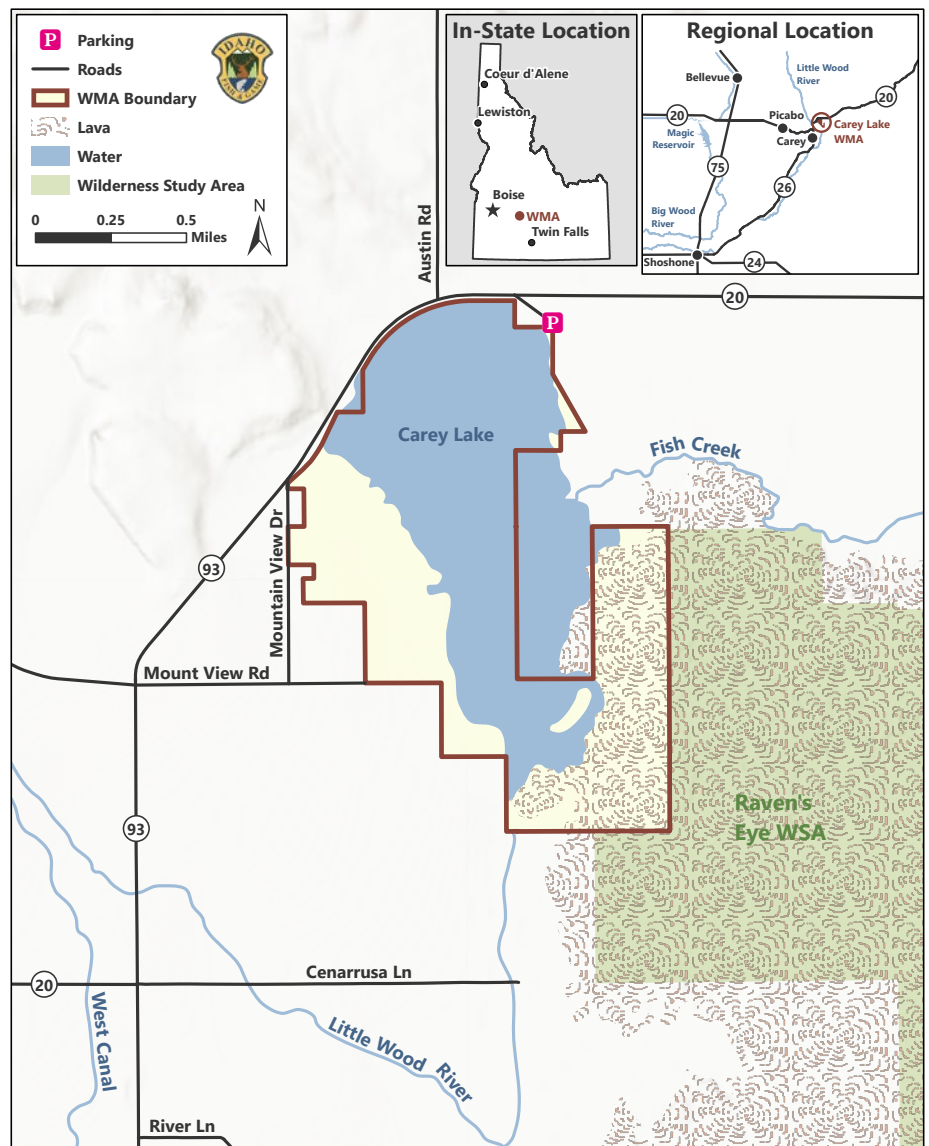


IDAHO BIRDING TRAIL
Site# SW34

Carey Lake Wildlife Management Area (WMA) is less than one mile east of the town of Carey. The WMA has a parking area and few amenities. The shallow lake and surrounding wetlands attract a variety of waterfowl and shorebirds, which is a draw for bird watchers.

DIRECTIONS: From the junction of US 20/ID 75, E on US 20 for 18.5 mi to Carey; L (N) on US 93/26; go for ~3 mi; look for sign; R at mp 207.3 onto gravel rd that leads to parking lot.

Carey Lake WMA provides an important stopover for migrating waterfowl as well as breeding and rearing habitat for resident birds. Primarily waterfowl present, with dense spring populations of Mallard, Northern Pintail, and Green-winged and Cinnamon Teal. Other waterbirds (Sandhill Crane, American Bittern, Virginia Rail, Sora, Pied-billed Grebe) and shorebirds (American Avocet, Black-necked Stilt, Semipalmated Plover, Long-billed Curlew, Willet, Lesser and Greater Yellowlegs) are observed regularly at this location, while American White Pelican, Hooded Merganser, and American Pipit are seen occasionally. Songbirds are present throughout the spring and early summer; most common are Red-winged and Yellow-headed Blackbirds, Marsh Wren, and Western Meadowlark; very good place for Common Yellowthroats in spring and summer months. In winter especially, look for Gray Partridge along the roadsides.



U:\FWSDATA\Projects\WMA\Maps\ArcPro\Temp

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Spotlight Species of Greatest Conservation Need



Mountain Goat

Adapted from the *Idaho State Wildlife Action Plan*

The mountain goat is an iconic watchable wildlife species that occurs in the rugged mountain ranges of northwestern North America, from southeastern Alaska south to Washington, Idaho, and Montana. In Idaho, populations are small and fragmented, with animals scattered throughout the central Idaho Wilderness as well as in the Panhandle, Hells Canyon and the Snake River Range, and the Salmon River mountains.

As an alpine specialist, mountain goats inhabit rugged landscapes characterized by steep, rocky cliffs, talus slopes, grassy ledges, and alpine meadows. They are generalists with a diet that includes grasses, sedges, rushes, forbs, shrubs, conifers, mosses, and lichens depending on the season. Winter ranges are typically on lower elevation cliff complexes with south and west aspects where snow is less abundant and persistent. Migration to these wintering areas occurs along well-traveled corridors with the first heavy snowfall.

Cliff Dwellers

Built for a rugged lifestyle, mountain goats have thick, woolly coats that protect them from cold temperatures, but can also make them vulnerable during hot summers. Mountain goats can be recognized by their white coats, beards, and slender black horns. The males are slightly larger in size and their horns are a bit larger. The females' horns have a slight bend to them that is missing on the males' horns. Their horns grow continuously, and the tips can be worn down until they are quite sharp. Every winter, a new growth ring forms on each horn, so it's possible to tell the age of a mountain goat by its horns.

Into the Future

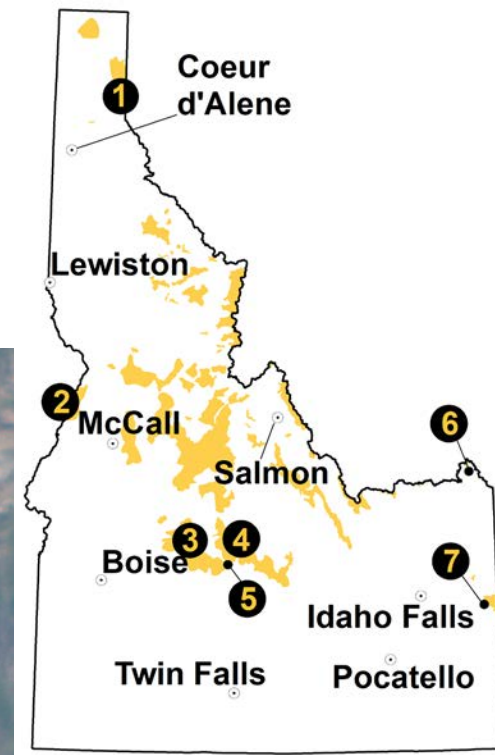
Human encroachment into mountain goat habitat is a threat, particularly from road development, backcountry recreation, and aircraft. Protection of inaccessible, isolated habitat is recommended to minimize disturbance impacts to goats. Mountain goats are especially vulnerable to changes in their habitat caused by climate change. They rely on cool temperatures and alpine habitat with high quality forage, both of which are prone to change in the future.

Best Places to View

Spotting a mountain goat while out in the backcountry is possible. Please be aware of and follow trail recommendations to help keep mountain goats and people safe. Herds can be small and fragmented, with animals scattered.

Look for them at:

1. Scotchman Peak
2. Hells Canyon dam
3. Sawtooth Mountains
4. Yankee Fork
5. Billy's Bridge on Hwy 75
6. Targhee Creek
7. The Palisades



Did You Know?

Mountain goats would make any rock climber jealous. They can pull themselves up from ledge to ledge with just their front feet; have been known to leap 10 feet from one rock ledge to another; and can turn around on a platform that is only inches wide!

Thank You for Your Support!



American Pika
PHOTO BY: Ceredig Roberts

Thank you to those who made direct donations, purchased or renewed a wildlife license plate, or let us know of a tax check-off donation between April 1 – June 30, 2021.

Your contribution provides important funding for wildlife and habitat conservation in Idaho.



Windows to Wildlife

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