

Windows to *Wildlife*



Fisheries technician Matt Amick is ready to shed his 75-lb pack and sample fishing at Scree Lake © IDFG

Peak Experience: The Epic Summer of a High Mountain Lakes Fisheries Crew

Written by Beth Waterbury*

Salmon Region Wildlife Diversity Biologist, Idaho Department of Fish and Game

The job announcement for the Salmon Region's high mountain lakes fisheries crew pulled no punches—"This area features some of the most spectacular high mountain lake regions in the country, so while this work can be very strenuous, it is also very rewarding." After a hard-charging field season in Idaho's majestic backcountry, Idaho Fish and Game fisheries technician Matt Amick and fisheries bio-aides Conner Holbrook and Tyler Mann would offer no argument with that statement. "I'd only add that future applicants should be part mountain goat," said Mann.

Hired to survey dozens of high elevation lakes in the Boulder-White Cloud Mountains this past summer, the crew logged 20-mile days and thousands of vertical feet lost and gained, all while packing 60-80 pounds of field gear. Most trips lasted several days with the most epic being a 9-day stint covering 75 miles and 40,000 vertical feet. The reward for those grueling hikes was that first glimpse of sparkling blue water in the basin below; lakes with evocative names like Castleview, Lonesome, Feldspar, Noisy, Thunder, and Sliderock.

Regional Fisheries Biologist Jordan Messner oversees the management of the 1,000+ high mountain lakes dotting the Salmon Region. About 400 of these lakes currently support fish populations, whether naturally or with the aid of aerial stocking programs, and offer unique fishing experiences for anglers seeking breathtaking scenery, remoteness, and solitude. Messner and his crew are assessing the fishery potential of each of these lakes to determine how stocking programs could be modified to provide the most

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benefit for high mountain lake anglers. In addition to monitoring fish populations, the crew collects data on the occurrence and abundance of reptile and amphibian species, lake ecosystem productivity, and the level of recreational use at each lake. All of these pieces of the puzzle will help guide the high mountain lakes management program. Literal sweat equity is invested in collecting this valuable information.

High mountain lake surveys are plain rigorous with little down time to just soak in the scenery. Backpacks regurgitate unbelievable piles of gear: a few 6 ft. x 150 ft. gill nets, an inflatable raft, waders, fly rods, GPS units, monitoring instruments, not to mention tents, sleeping bags, food, and other camping gear. To collect a representative sample of the fish population from each lake, gill nets are set by raft and left overnight. In the morning, netted fish are processed, with species, sizes, and weights recorded, and otoliths (the small inner ear bone found inside a fish skull) are collected for aging. The next step is a tough job, but somebody's got to do it. Fly rods are rigged and cast to see which scrappy species of trout might hit a certain fly. These angling surveys yield data on catch rates used to evaluate angler satisfaction and harvest opportunity, but also hone the crew's insights on fish diets. "We found that trout in different high mountain lakes can be very fly-specific," said Tyler Mann. Added Conner Holbrook with a wry grin, "We're ridiculously good anglers now."

In addition to fish sampling, the crew conducts visual encounter surveys for amphibians. These entail walking around accessible areas of lakeshore searching for amphibian egg masses, tadpoles, juveniles, and adults. The surveys help fisheries managers assess the effects of fish on the distribution and abundance of amphibians in high mountain lake systems. The crew found amphibians in several of the lakes, including Long-toed Salamanders, Columbia Spotted Frogs, and Western Toads. These observations help to fill critical information gaps on the distribution and status of the Western Toad, an Idaho Species of Greatest Conservation Need experiencing dramatic population declines in certain ecoregions of the state.





Previous page: (top) High mountain lake surveys turned up several Western Toads, including this large adult female © IDFG (bottom) Fisheries bio-aide Conner Holbrook displays a vibrant cutthroat trout from Honey Lake in the Boulder-White Clouds © IDFG **Top Left:** The serenity of Castleview Lake gives way to majestic Castle Peak © IDFG **Top Middle:** Fisheries technician Matt Amick pulls in a gill net to sample the lake's fish population © IDFG **Top Right:** The steep trail to Swimm Lake takes the sure-footedness of a mountain goat © IDFG **Bottom Left:** A bat detector is poised to record the ultrasonic calls of foraging bats © IDFG **Bottom Middle:** Fisheries bio-aide Tyler Mann takes in the exhilarating view above Swimm Lake in the Boulder-White Clouds © Tyler Messner **Bottom Right:** The Long-toed Salamander is a secretive amphibian found near lakes, ponds, and bogs © IDFG

In a true spirit of agency teamwork, Messner and his crew coordinated with the Salmon Region's Wildlife Diversity Program to conduct bat surveys at high mountain lake survey sites. The crew was supplied with an Anabat Express bat detector, which records the ultrasonic echolocation calls of bats. "There were so many bats at some of the lakes," said Matt Amick, "We're not bat experts, but the Anabat allowed us to collect bat data from alpine lake environments, perhaps the first dataset of its kind for Idaho."

Physical and chemical characteristics of each lake are also collected to document how they influence fish growth and production. For his senior project, Salmon High School student Avery Stansberry joined the crew to collect "bathymetric" (lake depth profile) data using a sonar sounder. Stansberry's hands-on experience will help to generate lakebed contour maps useful for identifying how much depth is available for overwintering fish, identifying areas of fish habitat structure, and pointing anglers to productive fishing spots.

Reflecting on their season, the crew recounted many

memorable experiences, some harrowing and some awe-inspiring. There was the "Curse Trip" of multiple mishaps, like forgetting equipment, losing water filter components, losing a GPS unit, and Mann's brutal 9-mile uphill hike without water. At a lake in Little Boulder Basin, Holbrook and Stansberry set gill nets in early evening as per custom. When they pulled nets the next morning, they had 300+ fish in the nets. "You hope for a good sample, but your heart just drops when it's that many," recalled Holbrook. By the time they processed the fish, packed up, hiked to the next lake, and set gill nets, it was near midnight.

On the awe-inspiring spectrum, they encountered stunning landscapes of wildflowers and snowfields, riotous geology, whirring hummingbirds, the whiff of bedded elk, the shadow of moose in timber, and herds of bighorn sheep and mountain goats on distant crags. They experienced phenomenal fishing for fat, deep-bodied cutthroat trout and brilliant golden trout in crystal-clear lakes a short bushwhack off the beaten trail.

Yes, the work was indeed very strenuous, but it is often the things worked hardest for that reward the most.

Going Local with Native Plants

by Jennifer Miller*,
Plant Research Ecologist, Idaho Department of Fish and Game

Revegetating the landscape is often necessary after disturbance, especially when natural recolonization of native plant species is not likely to occur. Using native plant material in restoration projects has many benefits. Native plants not only help stabilize soils, reduce the spread of invasive species, and protect watershed values they also show genetic diversity among species, contribute to the biodiversity and the processes of an ecosystem, maintain a critical connection to pollinators, and provide food and shelter for all wildlife!

What is native plant material? It is any species that originates in a particular region and exists in a plant community across the landscape in which it has co-evolved without direct or indirect human involvement (Office of the Federal Environmental Executive, EPA. 1995). Using local native plant material is even better because it has evolved and adapted to the environmental conditions of the area or region of interest, and should have a higher rate of successful establishment.

Thanks to the partnership between the Boise National Forest and the Idaho Department of Fish and Game since 2002, native plant materials have been and are still being collected to support the Forest's natural restoration practices. By doing so, this helps sustain Idaho's fish and wildlife and the habitats upon which they depend.

Listed below are a few of the species we're collecting:

Sagebrush (*Artemisia tridentata*): Important shrub in the Intermountain West. It provides cover and food for mule deer, elk, jackrabbits, sage grouse, and pronghorn antelope.

Description: tiny yellow to cream colored flowers that bloom in the fall; seed is very small and brownish in color

Collection: late October through mid-December

Bitterbrush (*Purshia tridentata*): Important shrub that occurs in sagebrush and forested communities. It provides spring and winter browse for pronghorn antelope, mule deer, and elk and is a food source for small animals. It also provides cover for many animals.

Description: small yellow to whitish colored flowers that bloom in late spring to early summer; seed color is brownish and considered large

Collection: late June through mid- to late July

Bluebunch wheatgrass (*Pseudoroegneria spicata*): A perennial bunchgrass that helps stabilize soils and provides forage for elk, mule deer, and pronghorn antelope at various times throughout the year.

Description: leaves are green; seeds may or may not have awns

Collection: late July through mid-August





Previous page: Bluebunch wheatgrass © Jennifer Miller, IDFG **Left:** Beardtongue's tubular flower attract a variety of pollinators. These penstemon species are called "beard tongues" because the sterile stamen has a tuft of small hairs © Jennifer Miller, IDFG **Middle:** Sagebrush: one of the most important shrubs in the Intermountain West © Jennifer Miller, IDFG **Right:** Volunteers set forth to collect seed © Jennifer Miller, IDFG.

Idaho fescue (*Festuca idahoensis*): A perennial bunchgrass that helps with erosion control and provides forage for elk and mule deer at various times throughout a year.

Description: fine narrow leaves that are bluish green in color; seeds have awns

Collection: mid to late July

Parsnip-flower buckwheat (*Eriogonum heracleoides*): Perennial forb or sub-shrub that attracts pollinators and other insects that then in turn provides forage for wildlife such as sage grouse.

Description: small cream color flowers and linear leaves that appear light green to blue-gray in color because of dense white hairs; seed is small and brown

Collection: mid-July

Sulphur-flower buckwheat (*Eriogonum umbellatum*): Perennial forb or sub-shrub that provides forage for birds, small mammals, and mule deer. It also attracts pollinators and other insects that then in turn provides forage for wildlife such as sage grouse.

Description: small yellow to orange or reddish flowers with dark shiny green leaves that are wooly underneath; seed is small and brown

Collection: early to mid-August

Beardtongue (*Penstemon* spp.): Perennial forbs or sub-shrubs that provide forage for mule deer, pronghorn antelope, and birds, and attracts pollinators and other insects that then in turn provides forage for wildlife such as sage grouse.

Description: small to large flowers that range in color from bluish to purplish; seed is dark in color and ranges in size depending on species

Collection: mid-July through mid-August

Biscuitroot (*Lomatium dissectum*, *L. nudicaule*, *L. triternatum*): Perennial forbs that provides early spring and summer forage for mule deer, elk, pronghorn antelope, and sage grouse. It is also important to early spring pollinators and other insects.

Description: small yellowish flowers that grow in an umbel; seed is brownish in color and ranges in size depending on species

Collection: June

Native plant material is needed. Over the past few years, numerous large-scale fires have occurred on the Boise National Forest. So if you would like to help, become a volunteer! Contact Michael Young, Idaho Department of Fish and Game Southwest Regional Volunteer Coordinator at <https://idfg.idaho.gov/volunteer> or Jennifer Miller at jennifer.miller@idfg.idaho.gov

Together, we can make a difference!

Fall Wildlife Events

Boise WaterShed

11818 West Joplin Rd., Boise; (208) 489-1284

<http://bee.cityofboise.org/watershed/events/calendar-of-events/>

October 15- WaterShed Weekend: Fall Festival

From 10:00 – 1:00 p.m., come celebrate the beautiful Fall colors in the City of Trees at the Boise WaterShed! Our slithery, slimy friends are coming back! Come meet some live reptiles in the theater with Reptile Adventures! Create festive Fall-themed arts and crafts, like Pumpkin painting, try to catch an apple on string with your teeth, explore the exhibit hall and take a silly harvest photo! Finally, take a fun hay ride tour on the outskirts of the wastewater treatment plant to learn what happens when you flush at 10:30, 11:15 and 12:00! Tours limited to first 25 people, weather-permitting. The tour is not recommended for children under the age of four; closed-toe shoes required. Free. No registration required.

November 19- WaterShed Weekend: Map Mania

From 10:00 – 1:00 p.m. navigate your way to the Boise WaterShed for a day of mapping to celebrate GIS Day! This year's event will sport a pirate theme! From 10:00-1:00 in the exhibit hall 'arr-tistically' create treasure maps of your neighborhood, play map games for cool prizes, and decorate and eat your own treasure map cookie. Landlubbers and sea dogs will enjoy the Augmented Reality Sandbox - see contours come to life! Visit the 'Young Geographer' station, or take a photo with your "matey" in the interactive photo station. At 11:30 take a wastewater treatment plant tour and walk the plank if you dare – closed toe shoes required. The tour is not recommended for children under the age of four. Brought to you by the Southwest Idaho GIS Users Group. Free. No registration is required.

December 17- WaterShed Weekend: Singing and Santa

Sing in the holiday season from 10:00 a.m. to 1.00 p.m. at this month's WaterShed Weekend. Our popular "Fa-la-la day" at the Boise WaterShed is back! Snap a picture with Santa, sing along with carolers and make some fun holiday crafts to take home at our festive day! Learn about holiday traditions around the world! No wastewater tour today. Free. No registration is required.

Jim Hall Foothills Learning Center

3188 Sunset Peak Rd., Boise; (208) 493-2530

<http://bee.cityofboise.org/foothills/events/calendar-of-events/>

October 8- Second Saturday Series: Star Party

6 p.m. Free. It's our sixth year hosting an evening star party. Join Dr. Paul Verhage, Chemistry and Engineering instructor with the Treasurer Valley Math and Science Center and Street Astronomer, for an evening filled with star gazing tips and a presentation about planets, autumn constellations and information about the latest celestial discoveries. There will be fun hands on astronomy activities and of course the opportunity to stargaze. Bring your binoculars and a flashlight with a red filter (we'll have some spares if you need them!) Family friendly, drop in/no pre-registration needed. Please- no pets.

October 12- Sunset Series: Avian Adventures Abroad

From 7-8:30 p.m., fun, free, adult education. Since its establishment in 2005, the Foothills Learning Center has offered a number of programs on birds for both youth, families and adults. For almost two years now, Terry Rich, a well-known local ornithologist, has been offering an engaging and popular Wednesday morning monthly birding series for adults covering topics such as identification, feeding, conservation, behavior, and evolution. All of these sessions have focused on Idaho birds, and even more so, on Boise-area birds. We'd like to take you farther afield! Terry has done a lot of international bird watching and he's come up with a terrific new theme for our evening lecture series focusing on three international birding destinations that he's experienced. These presentations will not only cover the birds, but also the people, food, roads, landscapes, and other aspects that make world travel the exciting adventure that it is! In Colombia, the Andes split into three distinct mountain ranges, resulting in a spectacular evolution of bird species over a relatively small area.

November 3- Birding Series with Terry Rich

From 9:00 – 10:00 a.m., bird books and binoculars are available to borrow. Free. No pre-registration required. Interested in strategies as to how to support winter resident birds? Join us for this session where you will get recommendations about the best bird seed and feeder choices for the birds in your backyard. Having difficulty figuring out who is who at the feeder? Terry will provide helpful identification tips.

November 9- Sunset Series: Avian Adventures Abroad

From 7-8:30 p.m., fun, free, adult education. We'd like to take you farther afield! Terry has done a lot of international bird watching and he's come up with a terrific new theme for our evening lecture series focusing on three international birding destinations that he's experienced. These presentations will not only cover the birds, but also the people, food, roads, landscapes, and other aspects that make world travel the exciting adventure that it is! The fascinating birds of Ethiopia are equaled by the friendly people, diverse landscapes, and distinctive culture.

November 12- Second Saturday Series: Predators of the Foothills

10 a.m. Free, family friendly, drop in/no pre-registration needed. Mountain Lions, Coyotes, and Bears, oh my! The Boise Foothills have plenty of predators both large and small that wander the gulches and ridges. Come and learn from a Fish and Game specialist who will talk about the movements and importance of these fascinating creatures. The relationship between predators and prey is key in any ecosystem and we think it's worth a deeper look.

December 7- Birding Series with Terry Rich

From 9:00 – 10:00 a.m., bird books and binoculars are available to borrow. Free. No pre-registration required. So how are bird populations doing? This session will provide information about bird population monitoring and population trends. Who collects data? How is data collected? Where is it kept? What does it tell us? How can you contribute? You'll learn about ways to participate in data collection events like the Christmas Bird Count, Big Backyard Bird Count, Breeding Bird Survey and eBird

December 10- Second Saturday Series: Green Christmas

10 a.m. - 1 p.m. Free, family friendly, drop in/no pre-registration needed. The elves are back, and FLC's holiday workshop will be up and running again this year at our ever-popular Green Christmas event. Join us for a day of crafting and creating. See what you can make out of recycled and repurposed materials. Surprise yourself with the amazing ornaments and gifts that you will create. This is a wonderful way to unplug from the holiday buzz and green up your celebrations with some old-fashioned fun.

Kootenai National Wildlife Management Area

Bonnars Ferry; (208) 267-3888

<https://www.fws.gov/refuge/kootenai/>

October 15: Bird Walk at Kootenai National Wildlife Refuge

Meet by the Refuge office at 9:00 a.m. (287 Westside Rd., Bonners Ferry) rain or shine and dress for the weather. Bring binoculars or scope, field guide if you have one, snacks and good hiking shoes. Public restroom & water on site. Bird walks last 1-2 hours. Come on out and see some of the unique birds that frequent the refuge. See updates on the Friends of KNWR Facebook page.



Species Spotlight

Pikas

by Regan Berkley*,
Regional Wildlife Manager, McCall, Idaho Department of Fish and Game



American Pika © Regan Berkley, IDFG

Wildlife staff have been conducting surveys in alpine areas around McCall. One animal we hear frequently on these visits is the American Pika. Pikas occupy talus slopes in alpine areas throughout the Western United States and Canada. It's more common to hear pikas than to see them, due to their loud, peeping calls. Here are some other fun facts about pikas:

- Though they look a bit like guinea pigs, they're actually more closely related to rabbits and hares.
- They are active year-round, but collect massive amounts of vegetation to store and eat during winter months. These piles, stored under talus slopes, can be up to 3 feet wide and hold up to 50 pounds of grasses and forbs!
- Pikas, like other members of the rabbit family, exhibit coprophagy. This means they consume their own feces to extract additional nutrients.
- They have hair on their feet to give them traction while scurrying over rocks.
- Pikas can live for 5-7 years.

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Northern Flicker © Mike Morrison

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Windows to Wildlife

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Forwarding Service Requested

Windows to Wildlife is a quarterly publication of the Idaho Watchable Wildlife Committee and IDFG Wildlife Diversity Program.

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