



SUMMER  
2018

# Windows to *Wildlife*

Your support at work in Idaho's landscapes

## A New Attraction at Niagara Springs Wildlife Management Area

by Sean Schroff\*, Regional Habitat Biologist, Magic Valley Region, Idaho Department of Fish and Game

**N**iagara Springs WMA has a new attraction- a wildlife viewing/hunting blind was built this spring and is ready for use. This 5'x10' structure will provide visitors a viewing platform from which to observe a variety of wildlife species. It is centrally located between the two wild trout ponds in the middle of the WMA. At this location, a wildlife viewer may see a variety of songbirds, waterfowl, and furbearers. The combination of mild winter weather and open water draws waterfowl to the WMA. Over 5,000 ducks and several hundred Canada geese winter along this portion of the Snake River annually. Spring nesting waterfowl include Canada goose, green-winged and cinnamon teal, mallard, and wood duck. Nesting red-winged blackbirds occupy the edge of the pond and can easily be seen from the blind.

During hunting season the blind will provide a place for waterfowl hunters to conceal themselves in their attempts to lure in their quarry with calls and decoys. In addition, it makes an ideal location for waterfowl hunters to ambush ducks and geese as they migrate south along the Snake River. There is no reservation system for this blind. It is available on a first come first serve basis. During the upland gamebird season (9/15-1/31) it can be accessed by using the seasonal road that is open during that time for a 0.25 mile walk. Outside the upland gamebird season (2/1-9/14) it can be accessed from the main road for a 0.67 mile walk. ■

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Jennifer Witt



Ute ladies'-tresses



Typical habitats of Ute ladies'-tresses



Jennifer Miller, IDFG

## Yes, An Idaho Orchid!

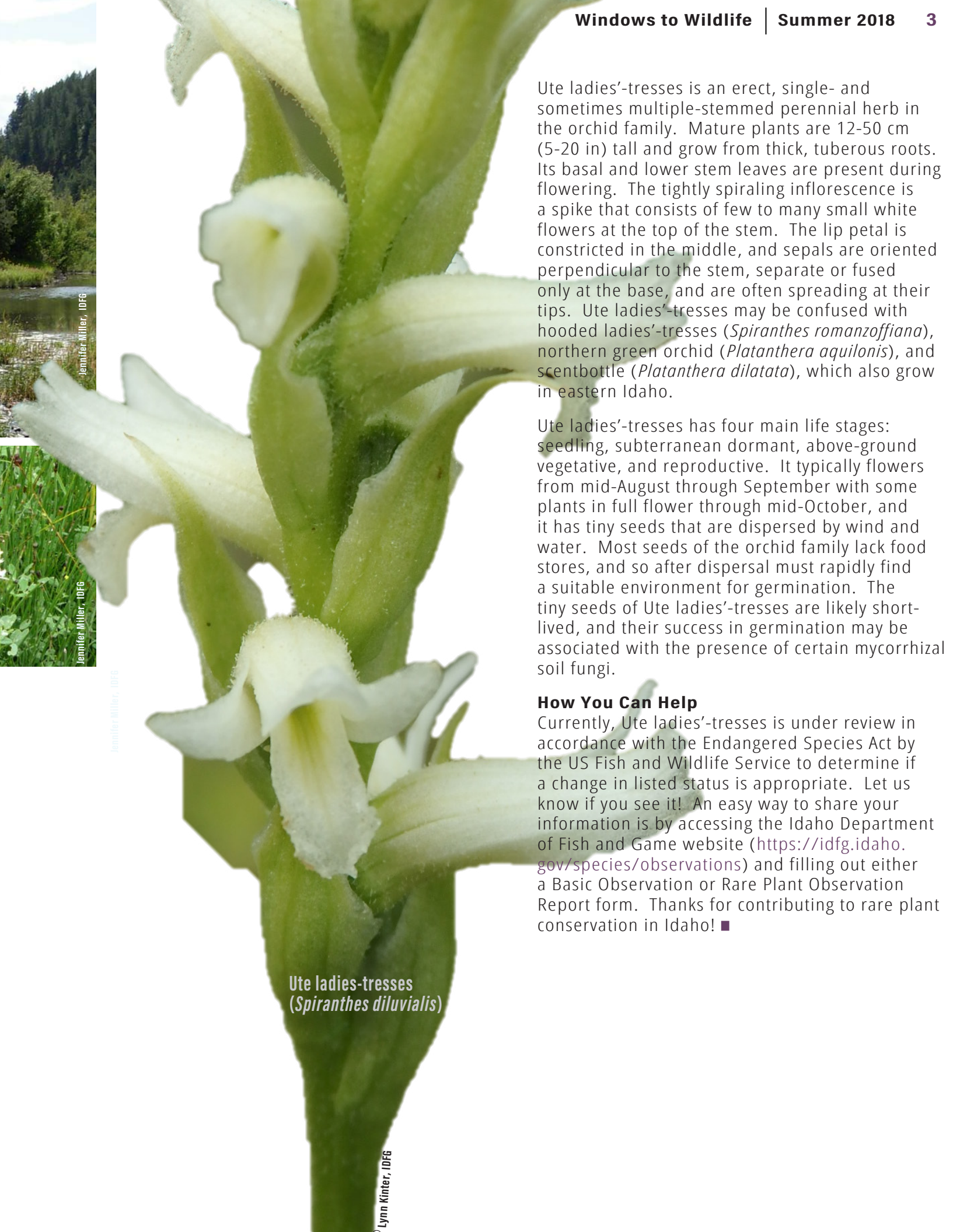
by Jennifer Miller\*, Plant Research Ecologist, Idaho Department of Fish and Game

**T**he Orchid family is very diverse with more than 25,000 species worldwide. Idaho has 28—all terrestrial! That is, instead of growing as epiphytes hanging from trees like most orchids, Idaho orchids grow in the soil! So you have to look down if you want to see one!

One of Idaho's orchids is Ute ladies'-tresses (*Spiranthes diluvialis*)—diluvialis meaning 'of the flood'. It is a white-flowered orchid that was first described as a new species by C.J. Sheviak in 1984. In 1992, the US Fish and Wildlife Service listed Ute ladies'-tresses as Threatened under the Endangered Species Act because of its geographic rarity, small occurrence sizes, habitat loss and modification of riparian habitats, and low reproductive rate.

Ute ladies'-tresses occurs in eight western states, from Nebraska to Washington, and in British Columbia. In Idaho, it is known from the eastern part of the state where it was first discovered in 1996 along the South Fork of the Snake River by Idaho Department of Fish and Game employee Mabel Jankovsky-Jones. The 11 known occurrences in Idaho account for <10% of the occurrences known range-wide.

In eastern Idaho, Ute ladies'-tresses occurs in riparian and wet meadow habitats on alluvial substrates and cobble deposits mainly along the South Fork of the Snake River, and at Chester Wetlands, which is near but not immediately adjacent to the Henrys Fork. Although Ute ladies'-tresses is typically not an early colonizer, it is adapted to growing in open to partially shaded habitats that sustain frequent flooding.

Ute ladies'-tresses  
(*Spiranthes diluvialis*)

Lynn Kinter, IDFG

Ute ladies'-tresses is an erect, single- and sometimes multiple-stemmed perennial herb in the orchid family. Mature plants are 12-50 cm (5-20 in) tall and grow from thick, tuberous roots. Its basal and lower stem leaves are present during flowering. The tightly spiraling inflorescence is a spike that consists of few to many small white flowers at the top of the stem. The lip petal is constricted in the middle, and sepals are oriented perpendicular to the stem, separate or fused only at the base, and are often spreading at their tips. Ute ladies'-tresses may be confused with hooded ladies'-tresses (*Spiranthes romanzoffiana*), northern green orchid (*Platanthera aquilonis*), and scentbottle (*Platanthera dilatata*), which also grow in eastern Idaho.

Ute ladies'-tresses has four main life stages: seedling, subterranean dormant, above-ground vegetative, and reproductive. It typically flowers from mid-August through September with some plants in full flower through mid-October, and it has tiny seeds that are dispersed by wind and water. Most seeds of the orchid family lack food stores, and so after dispersal must rapidly find a suitable environment for germination. The tiny seeds of Ute ladies'-tresses are likely short-lived, and their success in germination may be associated with the presence of certain mycorrhizal soil fungi.

### How You Can Help

Currently, Ute ladies'-tresses is under review in accordance with the Endangered Species Act by the US Fish and Wildlife Service to determine if a change in listed status is appropriate. Let us know if you see it! An easy way to share your information is by accessing the Idaho Department of Fish and Game website (<https://idfg.idaho.gov/species/observations>) and filling out either a Basic Observation or Rare Plant Observation Report form. Thanks for contributing to rare plant conservation in Idaho! ■

## Conservation

# People Keep Shooting Long-billed Curlews in Southwest Idaho

by Joshua Zaffos\*, Correspondent High Country News  
Originally published on [www.audubon.org](http://www.audubon.org)

## A shot mother is the latest in a string of poaching deaths, now considered the greatest threat on what was once the species' densest nesting grounds.

With their distinctive curved, slender beaks and clear, whistling alarm call, [Long-billed Curlews](#) are popular among birdwatchers during spring and early summer in Idaho. The largest shorebird in the United States, curlews migrate from coastal wintering grounds to nest and hatch their young among the state's short grasses. And though they spend most of their time methodically foraging for food on the ground, they aren't shy about taking wing to fend off threats.

"I love seeing how aggressive they are, to defend their nests with their chicks against predators—dive-bombing a badger, or even hitting a Golden Eagle or raven or Red-tailed Hawk that is coming through their territory," says Jay Carlisle, research director of the [Intermountain Bird Observatory](#) at Boise State University. "They will get up and above a raptor and steeply dive, and their flight can be almost falcon-like. It's awe-inspiring."

But curlews' spectacular aerial displays are growing rarer in southwest Idaho, once the densest nesting ground for Long-billed Curlews in the United States. Surveys suggest overall Long-billed Curlew numbers have dropped by 92 percent in the region over the last 40 years. And based on available data, the biggest threat is poaching: recreational shooters who are illegally killing the birds at an alarming rate, particularly around Boise and the surrounding Treasure Valley region.

Beginning in 2013, Carlisle has equipped 70 curlews across the Northern Rockies and British Columbia with satellite transmitters to [discover](#) what's behind the species' decline, including 16 curlews on public lands in southwest Idaho overseen by the Bureau of Land Management (BLM). He and his research team soon learned that, in Idaho, a static transmitter signal often means a poached bird. Just three weeks into the program, a tracked bird was illegally shot and killed. Overall, since 2013, seven of the 16 satellite-tagged curlews have been found dead, shot by poachers—nearly half of the representative sample.

Additionally, Carlisle's team regularly stumbles upon other poached birds in the field beyond those in their study. On June 1, they found an untagged mother shot through her wing and body, the third confirmed poaching death in 2018. These preliminary figures are alarming, and warrant improved educational outreach efforts to help reduce illegal kills. However, the sample size of these satellite-tagged birds, and those being illegally shot, is relatively small in number, and a rigorous scientific analysis of the data has yet to be completed. So it is unknown how illegal shootings are affecting the birds at the population level.

Scientists first documented Idaho's significant curlew populations in the 1970s, identifying roughly 1,000 nesting pairs across 66,000 acres of BLM public lands.

This female long-billed curlew was found shot on Idaho's Morley Nelson Snake River Birds of Prey National Conservation Area in June. Photo: Stephanie Coates



### By the Numbers: Long-billed Curlews, ACEC\*, Boise

#### Curlew Population Estimates

1977-1979: >2,000 birds  
2010: 285-305 birds  
2017: 130-160 birds

#### Curlew Nest Hatch Rates

1977-1979: 39.7 percent  
2009-2017: 25 percent average by year (17-33 percent annually)

"A high proportion of adults are being shot, and a lower proportion of nests are hatching," Carlisle says. "Bad news."

\*Area of Critical Environmental Concern

Recognized as the densest nesting grounds for the birds in North America, the core area was eventually designated the [Long-Billed Curlew Area of Critical Environmental Concern \(ACEC\)](#) and managed by BLM to limit human disturbances to nesting birds.

In recent years, urban development in and around Boise has presented new threats. Suburban homes have paved over irrigated farmlands that served as important feeding grounds for curlews. And population growth—[Boise is now the fastest-growing area in the country](#), according to Forbes—has meant a rise in visitors to curlew habitat on BLM lands, including the Curlew ACEC and the [Morley Nelson Snake River Birds of Prey National Conservation Area](#).

"There has been a huge increase in recreational pressures," says BLM's Matt McCoy, particularly target and recreational shooting and off-highway vehicle use. Shooters flock to BLM lands where there's space for target shooting and it's legal to shoot and kill ground squirrels and prairie dogs, which many view as varmints.

Curlews, on the other hand, are not game birds and are protected under the federal [Migratory Bird Treaty Act](#). But while most shooting enthusiasts are responsible and law-abiding, those who aren't can find illicit "easy targets" in curlews nesting on the ground or boldly diving to defend their broods, McCoy says.

Brian Flatter, a conservation officer with Idaho Department of Fish and Game, says shooting incidents of curlews, Burrowing Owls, and raptors are all on the rise in addition to other illegal shooting. "We're documenting a lot of violations, but it's always after the fact," Flatter says. While Carlisle's study with satellite-tagged birds has a small sample size, it's still better than the data officials have on other species at risk of poaching.

"[Carlisle's] research has exposed the indiscriminate killing of curlews, but there are many other species on their study area, throughout Idaho, and across the West that are illegally shot," says Sean Finn, past president and current board member of Golden Eagle Audubon Society in Boise. "In that sense, Long-billed Curlews are a 'poster child' of a broader problem that can be difficult and expensive to quantify."



Borah, one of the long-billed curlews studied with a transmitter, just before release. Photo: Heidi Ware

## News from the Field

### Keeping a Watchful Eye

by Emma Doden \*, Wildlife Diversity Technician, Upper Snake Region, Idaho Department of Fish and Game

**P**eregrine falcons could be considered the “hot rod racers” of the raptor world as they are one of the fastest birds on Earth, stooping (diving) for prey at speeds of up to 200 miles per hour. They are one of the most widely distributed bird species world-wide, occurring on all continents but Antarctica in a variety of climates, elevations, and habitats. Peregrines are crow-sized with a distinctive dark helmet and “malar markings” like a mustache on their head and sickle-shaped wings with a light underside. In Idaho, peregrines primarily nest in the eastern portion of the state, with pockets in central and western Idaho, but they can be seen during migration in any part of the state.

Though peregrine falcons are now considered a Species of Least Concern, they were listed as an Endangered Species from 1970-1999. The use of pesticides such as DDT across the U.S. in the 1940s-1970s caused the eggs of birds to have thinner shells, including peregrine falcon eggs, resulting in extremely low hatch-rates and a population crash. Fortunately, through intensive captive breeding and release programs and the banning of DDT in 1972, peregrine falcon numbers have rebounded, representing one of the Endangered Species Act’s greatest successes. Peregrines have even adapted to inhabit urban areas, using skyscrapers as surrogate cliffs to nest on and hunt from. Downtown Boise has a breeding pair of peregrines that use one of the tall buildings as a nest site location!



Spotting scopes and binoculars are useful tools for observing peregrine eyries.

Photo: Emma Doden, IDFG



© Jerry Liguori

Monitoring peregrines provides a valuable way to track general population trends over time. In Idaho, peregrines are monitored to keep track of breeding pairs and nest success, which helps inform take of birds for falconry purposes. Monitoring occurs every three years, typically at the same eyries since peregrines (which mate for life unless one does not survive) use the same cliff to nest on year after year.

The first step of monitoring an eyrie (nest) is to determine if the eyrie is occupied with a breeding pair, in late March through April, when peregrines migrate back from their wintering grounds. Tandem flight, aerial displays, and copulation are indicators of a breeding pair. The birds are the most vocal and aggressive during this period of territory establishment, with only one breeding pair using a given cliff face. The birds create a “scrape” for laying their eggs in, a shallow indent on the floor of a cavity on the cliff. Egg-laying usually occurs from late April through May, with incubation lasting approximately 32-35 days. The female primarily incubates the eggs with the male supplying her food. Occasionally a nest exchange occurs, and the male will sit on the nest while the female eats, preens, or stretches her wings. Chicks hatch in late May through June and after a couple weeks the chicks no longer need continuous brooding and the parents will only visit the nest several times a day. About 40 days after hatching in July and August, the chicks have grown in their flight feathers and are able to fly from the nest, or fledge. The number of eggs, chicks, and fledglings are ideal to record when monitoring, but often it is impossible to see into the nest cavity and so only fledged chicks perching outside the cavity can be counted.

Peregrine falcons are a charismatic, feisty bird of prey. Whether you are in the breeding or migration range for peregrines in Idaho, keep an ear out for their characteristic “wailing” or “ee-chupping” vocalizations and keep an eye out for a flash of silver darting across the sky, and you might get a look at one of these iconic raptors. ■

In response, conservation partners are pushing a mix of education and enforcement to reverse the trends. The Intermountain Bird Observatory has launched a [Curlews in the Classroom](#) school program to teach students about curlews, the observatory’s research, and the birds’ local decline. Carlisle says the program aims to build pride towards Idaho’s curlew populations and raise awareness of the impacts of illegal shooting. The observatory has begun extending its outreach to hunter-education courses this year, too.

Catching poachers, however, is notoriously difficult, and even more so across vast public lands: BLM’s Boise District, where McCoy works,

encompasses more than 4 million acres, yet only three full-time federal law-enforcement officers patrol the region. Idaho Fish and Game is also stepping up enforcement of shooting rules and poaching on public lands, even placing decoys on nests, but has yet to catch any scofflaws.

“It all points toward a big problem, if we don’t act quickly,” McCoy says. “We’re looking at an area that went from the highest density [of curlews] in the western United States down to a [nearly] 95 percent reduction. That’s a key indication we’re not doing a good job managing the lands out there, and if we continue on this track we’re going to lose the birds in southwest Idaho.”

It’s another troubling sign for the world’s curlews. Several species are declining or endangered, but so far the Long-billed Curlew population has held steady. If such wanton killing continues, though, it could go the way of the [Eskimo Curlew](#), once among the most common shorebirds in North America and now functionally extinct. ■



### ASK THE CONSERVATION OFFICER

**Q:** If a person suspects a violation and decides to call CAP, what type of information should they give to the dispatcher on the phone?

**A:** The best CAP calls are timely, with as much descriptive info as possible. Location, vehicle description with license plate number, and suspect description (clothing, height, weight, hair color, facial hair, etc). Photos are very helpful.

“With the knowledge of curlews being shot in the Morley Nelson NCA we have prioritized patrols south of Boise to increase law enforcement presence with marked vehicles and public contacts as well as dedicated efforts to detect poaching activity.”  
- Charlie Justus, SW Region Conservation Officer

The fallout is particularly severe for curlews, Carlisle says. The species is long-lived, but the birds reproduce just once a year, have relatively small clutch sizes of 3-5 eggs, and must fend off predators for more than a month until their young can take flight. Those factors account for curlews’ aggressive and showy defense behavior—which is no match for a rifle or shotgun. They also mean that poaching of breeding-age birds could account for the cascading drop in curlew numbers in southwestern Idaho.



Long-billed curlew chick and nest. Photo: Liz Urban

Through monitoring, Carlisle and others are examining how threats besides poaching—such as declines in wintering habitat in California’s Central Valley—also contribute to regional curlew losses. Overall, nesting populations elsewhere across the Northern Rockies are mostly holding steady, and not a single satellite-tagged bird from another region has been poached. But that doesn’t mean losses in southwestern Idaho are no big deal; conservation managers note that the loss of a major population weakens the entire species.

“When you have widely distributed birds, that is how they make it,” Flatter says. “You need these populations to provide the birds an ability to absorb local impacts, whether it’s drought, fire, disease, or illegal shooting.”

## Idaho’s Wildlife Belongs to YOU!

Poaching is stealing wildlife from Idaho’s citizens.

Idaho Department of Fish and Game officers patrol the state to protect and preserve fish and wildlife as well as people. Idaho is rich in natural resources and provides a great place to recreate. Keeping Idaho a safe place is everyone’s responsibility.



**CAP** (Citizens Against Poaching) is a concerned citizen group that offers money to people for information leading to a citation or warrant to be issued. CAP calls are answered 24 hours a day by Idaho State Police dispatch and forwarded to IDFG officers. Callers can remain anonymous.

**Make the call if you suspect a fish, wildlife or environmental law violation.**

**1-800-632-5999**

# Summer Wildlife Events

## Boise WaterShed

11818 West Joplin Rd., Boise; (208) 489-1284  
www.cityofboise.org/Bee/WaterShed/Home/index.aspx

### July 23, 30 and August 4, 11, and 18- Summer Saturdays

10am-3pm; Let the Boise WaterShed Environmental Education Center introduce you to your watershed through hands-on exhibits, public art and the most unique water feature in town – a simulated Boise River! Individuals and families may drop in to explore the free exhibit hall and exterior River Campus during business hours without reservation. The River Campus located on the 2-acres surrounding the education center tells the story of the Boise River Watershed from source water to the Snake River. Visitors will be amazed at the Public Art – from the 10' tall sculpture signifying the Headwaters, to the face of Lucky Peak dam and the colorful trout and macroinvertebrates depicted in the rivers' edge. Children will experience being a water manager and releasing water from the dam, splashing in the open river channel and setting siphon tubes in the agricultural exhibit. A sewer pipe play area and interactive trail with nature play stations make the River Campus a repeat destination for your family!

### July 24 and 31 and August 7, 14- Tour Tuesdays

FREE public tours of the West Boise Water Renewal Facility on Tuesday evenings this summer. Learn how the City of Boise is turning used water from our homes and local businesses into valuable resources and clean water for the Boise River. Tour is limited to 40 people, no strollers or children under 4 and closed-toe shoes required. Hard hats are required and will be provided. Minimum of 5 registered participants required by 8:00 am the day prior to the tour or tour will be cancelled. Register by email: BW@cityofboise.org or phone 208-608-7300.

### July 18, 25 and August 1- WaterShed Wednesdays

Join us on Wednesdays this summer for free all-ages activities, arts and crafts, and scientific demonstrations inside and outside! The outdoor River Campus will teach kids about our watershed through art, nature play and water features, while allowing kids to get wet in a shallow simulated river! At 11:00, take an outdoor tour of the water renewal facility. Closed-toe shoes required for tour, ages four and up please, no strollers. No pre-registration required for individuals and families; groups of ten or more please call at least 2 weeks in advance. Check our web site for weekly themes!

## Foothills Learning Center

3188 Sunset Peak Rd., Boise; (208) 514-3755  
www.cityofboise.org/Bee/Foothills/index.aspx

### August 1 - Boise Birding Series with Terry Rich

8-9am. No pre-registration; please leave pets at home. Bird books and binoculars are available to borrow. Our free birding program is great for experienced and novice birders alike. Terry Rich, our local ornithologist, provides information and tips on birds in the Boise area and beyond! Come to one or all sessions. We're migrating to Bogus Basin to enjoy the cooler temperatures just like the birds. Meet at the Foothills Learning Center at 6 AM to arrange carpools.

### September 5 - Boise Birding Series with Terry Rich

6-7:30am. No pre-registration; please leave pets at home. Bird books and binoculars are available to borrow. Our free birding program is great for experienced and novice birders alike. Terry Rich, our local ornithologist, provides information and tips on birds in the Boise area and beyond! Come to one or all sessions. We're migrating to Bogus Basin to enjoy the cooler temperatures just like the birds. Meet at the Foothills Learning Center at 6 AM to arrange carpools.

## Kootenai National Wildlife Refuge

287 West Side Rd., Bonners Ferry; (208) 267-3888  
www.fws.gov/refuge/kootenai

### July 13- Ospreys of Northern Idaho

7-8:30pm; Wayne Melquist, Wildlife Biologist, will give a Power Point presentation and talk on the status and habits of the ospreys found in Northern Idaho. This informative and interesting program will be held at the Education Barn beginning at 7pm. No live birds will be on display. A suggested donation of \$3 is requested.

### July 15- Pacific Northwest Bumble Bee Atlas Training

10am-3pm; Learn about bumble bees, their conservation status, and how to participate in the Pacific Northwest Bumble Bee Atlas during this full-day training. Please join this project and help collect critical information on Pacific Northwest bumble bees. With your help, we can create an army of trained volunteers equipped with cameras and vials, and collect bumble bee data throughout our region. Your participation will allow us to quickly and efficiently cover all three states, collect scientific quality data, and contribute to the local, regional, and global understanding of bumble bee distributions. Space is limited; click [here](#) to register.

### July 21, August 18 - Bird Walk on the Refuge

6-7:30am. Get ready for "BIRD WALK" season! Meet by the Refuge office at 9am 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](#).

### July 27- Family-Friendly Citizen Science Day at the Boundary-Smith Creek WMA

10am-1:30pm; Pack up the family and join Selkirk Outdoor Leadership & Education (SOLE) and our friends at Idaho Fish & Game (IDFG) for a day of citizen-science on Boundary Creek Wildlife Management Area. Participants will have the opportunity to: Work with local experts to identify native flora and fauna, participate in age-appropriate experiential learning activities, participate in age-appropriate service-learning and citizen-science projects. Transportation available. Lunch provided! Space is limited; click [here](#) to register.

## MK Nature Center

600 Walnut Street, Boise; (208) 334-2225  
idfg.idaho.gov/site/mk-nature-center

### July 18- A Flutter in the Night

8-9:30pm; Back by popular demand, this program will introduce you to the fascinating world of bats. Bat biologists Dr. Rita Dixon (IDFG) and Bill Doering will share their passion and knowledge about bats, introducing you to the bat species that call Idaho and the nature center, home. This program begins indoors and moves outside after dark where we will survey for bats using state-of-the-art technology to "hear" their echolocation calls. Don't miss this opportunity to learn about and observe these shy, but ecologically vital creatures.



## Species Spotlight

# Idaho's Largest Primary Excavator

by Sara Focht\*, Wildlife Educator, Idaho Department of Fish and Game

**P**ileated woodpeckers are North America's largest woodpecker species. Well adapted to climb up tree trunks and excavate cavities in dead and living trees, they use the cavities for nesting and resting. When finished with their nesting cavities, these holes are used by over 50 species of birds and mammals including mountain bluebirds, wood ducks, screech owls, squirrels, bats, pine martin, and insects!

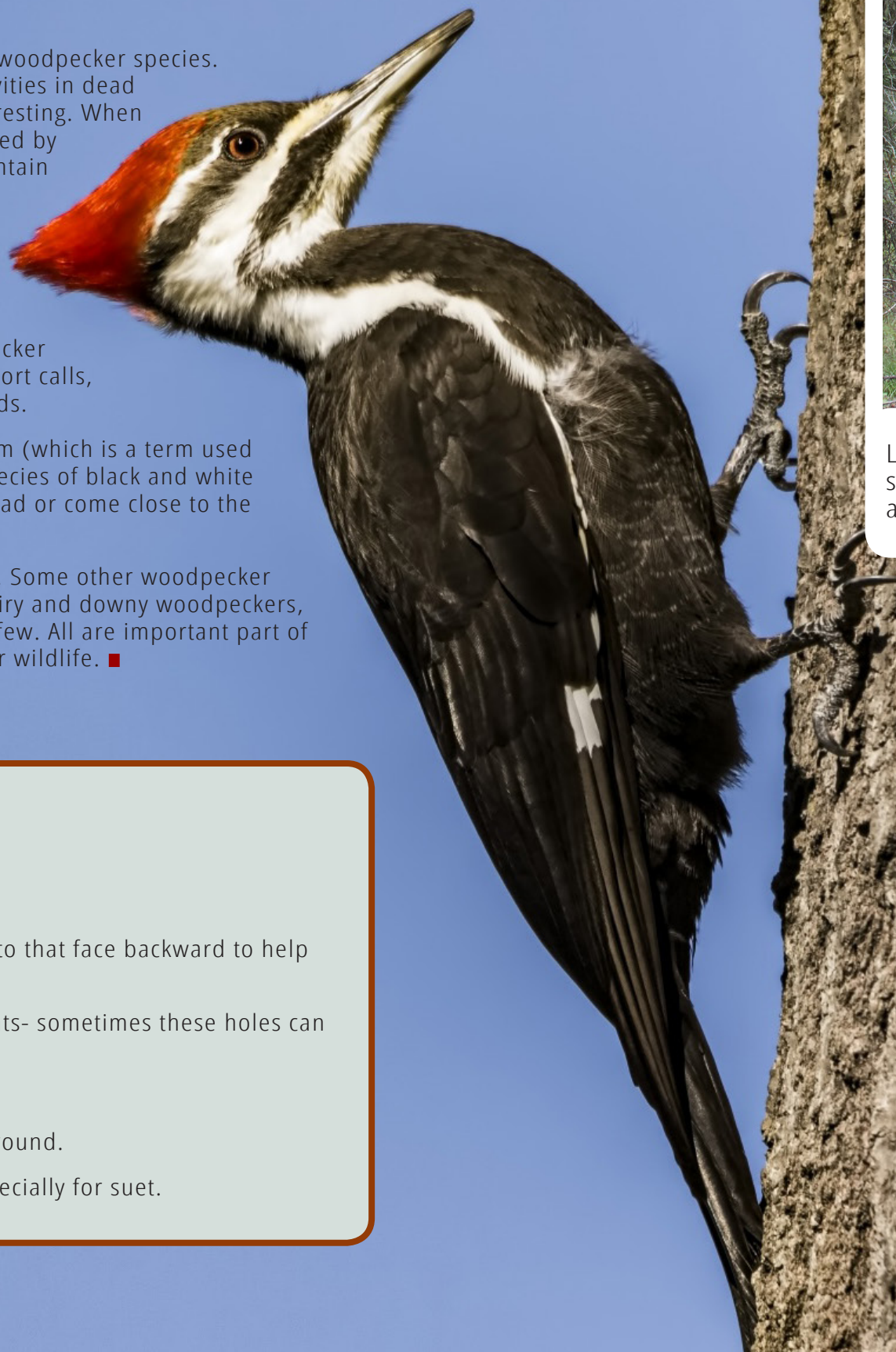
Pileated woodpeckers can be found in Idaho all year long. They prefer older forests as far south as McCall and all the way up to the Canadian border. From my experience, you can usually hear the pileated woodpecker before you see it, as it has a loud, distinct series of short calls, much like a series of high pitched single, "WUK" sounds.

The word Pileated means "crest" or to cover the pileum (which is a term used to describe a bird's head). Idaho has several other species of black and white woodpecker species but none have a crest on their head or come close to the crow-like size of the pileated.

Idaho is home to nine additional woodpecker species. Some other woodpecker species you may know are the northern flicker, the hairy and downy woodpeckers, red-naped and Williamson's sapsucker, to mention a few. All are important part of forest ecology and provide important cavities for other wildlife. ■

## Fun Facts

- Pileated woodpeckers are about the size of a crow.
- Woodpeckers have two toes that face forward and two that face backward to help them grasp and climb.
- They chisel out rectangular holes in trees to find ants- sometimes these holes can cause small trees to break in half!
- Favorite food: carpenter ants.
- Pileated pairs stay together on their territory year-round.
- Sometime they will visit backyard bird feeders, especially for suet.



Large oval/rectangular cavities are a sure sign that pileated woodpeckers are working in the area.

Photo: Sara Focht, IDFG



A typical pileated woodpecker excavation. Woodpeckers are adapted to handle the physical stresses of drilling- like a thick, spongy skull and strong neck muscles to withstand the shock of pecking.

Photo: USFWSmidwest CC BY 2.0 on Flickr



Look for piles of wood chips on the ground below a cavity, like shavings on the floor under a woodworker's workspace.

Photo: Sara Focht, IDFG

# Citizen Science Opportunities



Citizen science is real science done by everyday people like you! By getting involved you are contributing to real research.

You don't need any qualifications and you can do it on your own time. Your data will be used to inform conservation actions, helping to protect species in Idaho!

Here are three great projects that could use your help:



## WANT *to be* a goat tracker?

TAKE PART IN A CITIZEN SCIENCE PHOTOGRAPHY PROJECT!

### WHO WE ARE

A transdisciplinary team comprised of research scientists, web developers and photographers.

### WHAT WE DO

We are relating the timing of hair shedding in mountain goats to thermal change.

WE CAN USE YOUR PHOTOS TO EVALUATE GOAT MOLT:



Photo by Alison Sheehey, iNaturalist; Jul 26, 2012 · 1:52 PM PDT  
Logan Pass, Glacier NP, MT; Lat: 48.688807, Long: -113.732786

### SUBMISSION GUIDELINES\*

- ✓ Shedding is visible in photo
- ✓ Known date of photo
- ✓ Location where photo was taken is known or can be well-approximated (for lat/long & elevation)
- ✓ Resolution is good, ideally 300 dpi  
Photos scanned from film are welcome as we wish to look back in time as far as possible

Please avoid taking photos of goats during their kidding period and maintain an appropriate distance as specified by an area's relevant authorities.

\*Photos will be under a creative commons license if shared through our citizen science portal. Alternatively, you may e-mail your photos to Dr. Kate Nowak: knowak02@gmail.com

HOW WE WILL USE YOUR PHOTOS FOR OUR PROJECT:



Submit your Rocky Mountain goat photos via [bit.ly/GoatMoltProject](https://bit.ly/GoatMoltProject)

In collaboration with/ support from:



## PACIFIC NORTHWEST BUMBLE BEE ATLAS



PACIFIC NORTHWEST BUMBLE BEE ATLAS

Conservation partners in Oregon, Washington and Idaho have joined forces to support bumble bee conservation through a region-wide project to collect information on bumble bee species distribution. The missing partner is you - become a citizen scientist and join us!

Visit [pnwbumblebeeatlas.org](http://pnwbumblebeeatlas.org) and...



Adopt a grid cell



Survey for bumble bees



Submit your data

Project Partners:



[pnwbumblebeeatlas.org](http://pnwbumblebeeatlas.org)

## Help us track monarchs and milkweed across the west

Monarch populations across North America are in serious decline. To preserve and protect populations in western states, we need to better understand where monarchs and their milkweed host plants occur in the landscape.

Your help is critical in collecting data to better inform conservation efforts in the Western U.S.

[Learn More](#)



# Citizen Science

## Bears to Bees

by Kristina Boyd\*, Citizen Science Coordinator- Bears to Bees Climate Adaptation Project, Idaho Department of Fish and Game

In this year's Spring issue of Windows to Wildlife, you read about a large collaborative project on the Idaho Panhandle that will help six native species beat the odds of climate change. Idaho Fish and Game and its partners have dubbed it the Bees to Bears Climate Adaptation Project, because the habitat work benefits an array of animals from our indispensable bumblebees to our remarkable slugs, frogs and toads, right up to our majestic grizzly bears. And all of these animals depend on North Idaho's forested lowlands identified in Idaho's State Wildlife Action Plan.

Earth's atmosphere is warming, but it is not a uniform change. According to data compiled by [Oregon State University](#), the average temperatures of North Idaho's forested lowlands have remained stable over the last 50 years while all around, at higher elevations, they have risen between one and four degrees. Habitat work on the lowland forests of the Boundary-Smith Creek Wildlife Management Area will restore undulations to its previously farmed ground, returning cool air microrefugia to the terrain. These areas, with their persistent cool moist air, are vital in a warming climate: as habitat for localized species, as travel corridors for wide-ranging species, and as connectivity corridors for wildlife and plant populations that are shifting their ranges north.

You can help us reestablish these valuable cool air microrefugia. Idaho Fish and Game is launching a citizen science program aimed at collecting wildflower seeds from local North Idaho sources, which will be planted in our restoration areas. Why local seeds? Plant populations become adapted to local conditions, affecting the timing of their seed germination and determining whether they live... or die. And the abundance and diversity of our local wildflowers are the roots of existence for our indispensable bumblebees.



Beardtongue plantain  
(*Penstemon humilis*)

© Andrey Zharkikh CC BY 2.0 on Flickr



Sweetvetch pea  
(*Hedysarum boreale*)

This program is spreading its wings with the help of many local experts from North Idaho's native plant societies, native plant nurseries, natural resource agencies, and non-profit organizations. There are various ways to participate:

- Join a group flower/bee monitoring or seed collection event.
- Adopt a pre-selected site for flower/bee monitoring and seed collection.
- Adopt a self-selected site on your property for flower/bee monitoring and seed collection.

The flowers targeted for seed collection in this program are generally wetland, riparian, or lowland forest species, and include:

Western Yarrow	<i>Achillea millefolium</i>
Canada Goldenrod	<i>Solidago Canadensis</i>
Aster Sunflower	<i>Symphoricarpos spp.</i>
Fleabane Daisy	<i>Erigeron spp.</i>
Beggartick	<i>Bidens spp.</i>
False Solomon's Seal Lily	<i>Maianthemum spp.</i>
Arrowhead	<i>Sagittaria spp.</i>
Avens Rose	<i>Geum spp.</i>
Cinquefoil Rose	<i>Potentilla spp.</i>
Fringed Willowherb	<i>Epilobium ciliatum</i>
Fireweed	<i>Chamerion angustifolium</i>
Lupine	<i>Lupinus spp.</i>
Sweetvetch Pea	<i>Hedysarum spp.</i>
Violet	<i>Viola spp.</i>
Bluebell	<i>Mertensia spp.</i>
Beebalm	<i>Monarda fistulosa</i>
Wintergreen	<i>Pyrola spp.</i>
Beardtongue Plantain	<i>Penstemon spp.</i>
Milkweed	<i>Asclepias spp.</i>

If you know of any plant populations of these species that you would like to monitor and collect from, and if you would like to learn more about collection protocols or existing volunteer opportunities please contact the program coordinator, Kristina Boyd, at [kristina.boyd@idfg.idaho.gov](mailto:kristina.boyd@idfg.idaho.gov) or (406) 890-4353. ■





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## Windows to Wildlife

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