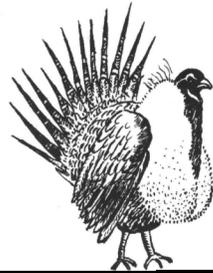


PLAINS & PEAKS



Vol. 49—Is. 8 NOV./DEC. 2015

MURIE AUDUBON

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WOLVERINES IN WYOMING

Wolverines (*Gulo gulo*) have long been popular in mythology, as sports mascots, and recently as the well-known star of a popular Marvel comic. However, despite their popularity, wolverines are rarely seen and little is known about their status and distribution in Wyoming, which lies at the southern edge of their continental range. Join Wyoming Game and Fish Department Nongame Mammal Biologist Nichole Bjornlie to learn about wolverine ecology and history in Wyoming, and the current work being conducted by the Department to learn more about this popular, but secretive species. Nichole will also touch on some of the work being done on other nongame mammals in Wyoming.

Nichole has been working in conservation and management of nongame and sensitive mammals since 2006. An Iowa native, Nichole received her BS in Animal Ecology from Iowa State University in 2006 and her MS in Natural Resources from the University of Arizona in 2009, studying the ecology and space utilized by the endemic Arizona gray squirrel. Since joining the Wyoming Game and Fish Department in 2010, she has worked with species rang-



CALENDAR

- Nov. 13—MAS Bd. Mtg.—6:00PM—OGCC Bldg., 2211 King Blvd. followed by General Meeting at 7:00PM
- Nov. 14—Field Trip—see pg. 2
- Nov. 14—Dr. Oliver Scott inducted—see pg. 4
- NO GENERAL MEETING IN DECEMBER—JOIN THE CBC'S!**
- Dec. 17—Pre-count Mtg.—see pg. 4
- Dec. 19—Casper's CBC—see pg. 4
- Dec. 21—January articles due!
- Jan. 1, 2016—Bates Hole CBC—see pg. 4
- Feb. 6—Annual Banquet and Fund raiser, see pg. 2

SAVE TREES—Get your newsletter at murieaudubon.org! Contact Rose-Mary at kingchick3547@live.com or 262-4861.

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November

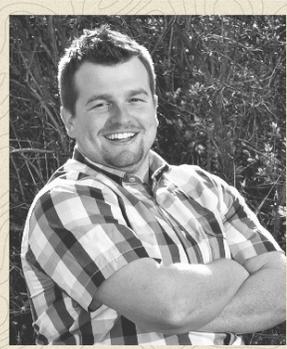


ing from prairie dogs, pygmy rabbits, and Preble's meadow jumping mice, to swift fox, black-footed ferrets, and bats. In March of 2015, Nichole started as the Nongame Mammal Biologist where she focuses on management and research needs for nongame mammals for the State of Wyoming.

Come and hear more about this ongoing study on Friday, November 13, 2015, at 7 PM at the Oil & Gas Conservation Commission Building at 2211 King Blvd. As always, the program is free and open to the public!!

PROGRAM CHAIR—BRUCE WALGREN

FROM THE PRESIDENT'S FIELD NOTES



November is here! The holiday season and Christmas Bird Counts are right around the corner. Get your feeders cleaned, stock up on seed, and prepare for a new variety of birds! Check-out the Bird Notes for updates on birds being seen in our area. Bruce & Donna do a great job putting that list together.

We are continuing to look for opportunities that will allow for more social and educational programming for our members and potential members. As these opportunities come up, invite family, friends, or persons who might have an interest. We want to continue to strive for growth within our organization and working within our Mission: "Education through Conservation."

The Murie Banquet Committee is continuing its preparation for the Banquet. We still need donations for silent auctions, raffles, and live auctions. Karen Anfang has graciously said she will help store these donations and organize them. If you know of any local organization who might have a donation to give, or wish to give a donation yourself, contact me at zhutchinson@audubon.org. The MAS Board has voted to use the funds raised to support the Community Naturalist Program and to provide students with take home items branded by MAS and Audubon Rockies. Books, pictures, bird feed, native flower mix, gift cards, or anything else of that nature will be accepted.

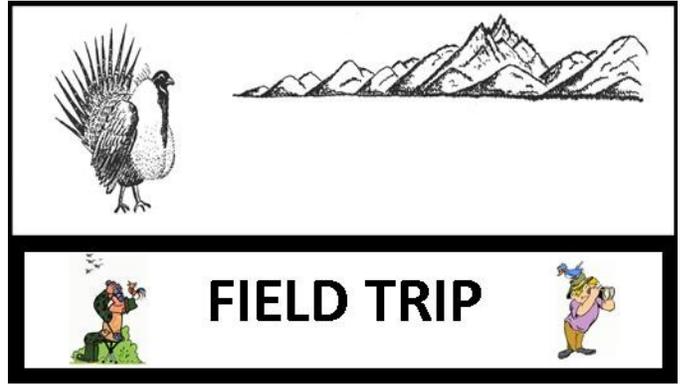
There will be no newsletter in December, so mark all important dates down onto your calendar now! Have a Happy Thanksgiving and a Merry Christmas!

MAS November Field Trip

There will be a field trip to Gray Reef on November 14th.

We will meet at Game & Fish at 8 AM and continue out to look for unusual ducks. This is also a great month to spend some time at Goldeneye Reservoir. Scope the large rafts of birds for scoters, unusual dabbling ducks, or a late loon!

PRESIDENT—ZACH HUTCHINSON



MAS October Field Trip Report

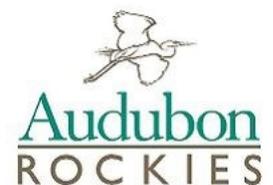
The October field trip had 6 participants. We scoped the reservoir for water birds, and we walked around the edges looking for passerines. There was a duck hunter at the reservoir which limited where we could walk and also kept the ducks uneasy. We did have a few good sightings. A Prairie Falcon was eyeing the raft of American Coots. We even found the leftover pieces from one unlucky coot! A Common Loon dropped in on us while we walked one of the edges, and a raft of Western Grebe was highly visible on the far side of the lake. Look for a report in January from the Story Field Trip!

Community Naturalist Update

I have been running all over for workshops, Discover Days, field trips and more! It has kept me very busy and busy means children are being reached! For the month of October, the Casper Community Naturalist Program provided programs for 652 people, with 554 being children.

Since the start of the school year, 904 people have been provided with education programming. Things are heating up, and with new opportunities on the horizon, we will only see more and more people excited to get involved!

For those of you who don't know, I do a fun, educational segment called Goin' WYld on KTWO TV every Thursday morning between 6 and 7 AM. It is a fun way to get Audubon's name out to the TV universe, and all of its



viewers. Every Thursday about 10,000 people across the entire state see this segment and see Audubon branded upon it. If you have ideas or connections for a great segment, please feel free to contact me at zhutchinson@audubon.org.

ZACH HUTCHINSON

BIRD NOTES



The seasons they are a -changing!! Day length has shortened, nights are cooler. Here in Wyoming there have been frosts and some snow. And the bird population is changing – fall warblers and sparrows are moving through; Mourning Doves

are gone, as are most of the blackbirds and grackles at this writing. Geese and Sandhill Cranes are heading southward. Bob Hargis in Riverton reported that they had their last Mourning Dove on Oct. 2 and the last Mountain Bluebirds on Oct. 1. Among the interesting sightings in October: a Yellow-bellied Sapsucker at Edness Kimball Wilkins State Park and 2 Pacific Loons on Lake Hattie in southeastern Wyoming.

September Yard Bird Report: We had 29 reports for the Project in September. 26 species were reported from 14 locations in 3 states plus the Yukon. **Casper, WY:** Gloria Lawrence – American Pipit, Jim Lawrence – Sandhill Crane, Bart Rea – Broad-tailed Hummingbird, Chris Michelson – Great Horned Owl, Bruce Walgren – American Crow, Frank Odasz – Hermit Thrush, Ann Hines – Western Tanager, Donna Walgren – Black-capped Chickadee, Casper College Greenhouse – Turkey Vulture; **Douglas, WY:** Billie Snell – Northern Flicker (yel-sh); **Dubois, WY:** Anna Moscicki – Steller's Jay, Michael Kenney – White-crowned Sparrow; **Edness Kimball Wilkins SP:** Chris Michelson – Yellow-bellied Sapsucker, Bruce Walgren – Belted Kingfisher, Donna Walgren – Wood Duck; **Glenrock, WY:** Andrea Trembath – Blue Jay, Magnus Trembath – Killdeer, Cam Trembath – Northern Flicker; **Atlantic City, WY:** Jan Whitney – Wilson's Warbler, Ed Whitney – Green-tailed Towhee; **Riverton, WY:** Suzanne Hargis – Mountain Chickadee, Bob Hargis – Lincoln's Sparrow; **Gillette, WY:** Verna Hays – White-crowned Sparrow; **Bellevue, NE:** Clem Klaphake – Black-throated Green Warbler; **Walgren Lake SRA, NE:** Lonnie Frimann – Peregrine Falcon; **Ger-**

ing, NE: Alice Kenitz – Northern Flicker; **Scottsbluff, NE:** Lonnie Frimann – Spotted Sandpiper; **Orchard Park, NY:** Richard Rosche – Wild Turkey; **Whitehorse, YT:** Bruce Bennett – Gray Jay.

Thanks to all who helped with the Project in September!!! Enjoy the changing seasons and all the wildlife activity!!

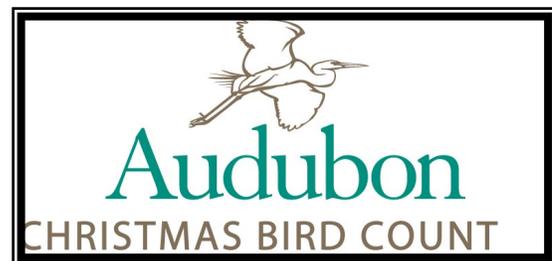
DONNA WALGREN

NOTES FROM THE DUBOIS AREA (OCT. 8, 2015)

We continue to have both chickadees, both nuthatches, along with Cassin's Finches, juncos, pine siskins, and magpies visiting the feeders. We have not seen Mourning Doves in several weeks. I sometimes hear kingfishers rattling along the river, and chattering Dip-pers, too. Mountain Bluebirds and Audubon's Warblers are flocking and flying everywhere.

We are enjoying a lovely fall, and hope you are, too. Where last week there was a billowing smoke cloud from the all too close Crooked Creek Fire, this morning the view to the west was filled with a full rainbow.

ANNA MOSCICKI, DUBOIS, WY



116TH CHRISTMAS BIRD COUNT

Vision and Goals: From the very first Christmas Bird Count in 1900, the CBC epitomizes Audubon's approach to bird conservation, involving people to help birds. As we provide feedback to Citizen Scientists on the results of their work, we hope to empower them as spokespersons for the birds they watch.

CBC aims to capture an early winter snapshot of bird populations over many decades and provide birders with an enjoyable social birding experience. Viewed in comparison with other long-term, continent wide, monitoring programs, such as the Breeding Bird Survey, CBC data give us an understanding of the dynamics of bird populations across North America during the early winter. We are also gaining an understanding of the status of bird populations in Latin America, the Caribbean, and U.S.

Minor Outlying Islands.

Activities

Volunteer Citizen Scientists gather information on bird numbers over a three-week period at the turn of the year and submit their observations to a nationally based science staff. After review by a panel of regional experts, we make the cumulative data set available to the public and researchers for review and scientific study.

Since the Christmas Bird Count's birth on Christmas Day of 1900 with 27 observers at 25 locations across Canada and the United States the Count has grown to include well over 63,000 counters at more than 2200 locations each year from above the Arctic Circle to the waters of the Drake Passage off Tierra del Fuego.

The widespread use of CBC data by scientists almost from the beginning of the program have helped lead to the acceptance that citizens can produce valid scientific data in a wide variety of fields. The CBC database continues to add to our understanding of the distribution and status of bird populations across North America with new data available each year.

CASPER'S 61st CBC INFO: The Christmas Bird Pre-count organizational meeting will be held **December 17, 2015 from 7 PM to 8:30 PM at the Tate Museum.** Anyone interested in participating in the Christmas Bird Count on **December 19, 2015** (contacts for more CBC info. are Chris Michelson—234-8726 or Stacy Scott—262-0055) is encouraged to come to this planning meeting. We will discuss the area (s) to be covered, what birds we may see on the count, and other aspects of the Christmas Bird Count.

Gathering meeting on the morning of the count (**Dec. 19**) will be at King's Corner (112 S. Beech—on the corner of 1st Street and S. Beech Street) from 7-8AM. Potluck and compiling of count will, also, be at King's Corner at 5:30PM.

Help is needed to set up tables and chairs before the potluck, put away tables & chairs following the meal and clean-up of kitchen area. Please bring your own table ware. Ovens and/or microwaves are available.

BATES HOLE CHRISTMAS BIRD COUNT

The Bates Hole Christmas Bird Count will be on Friday, **January 1, 2016.** We will meet at 7:30 AM at Charlie Scott's house on the Two-Bar Ranch. This is a great opportunity to start the new year off right with a great list. Also, while those staying home in Casper will have to suffer with the wind, Bates Hole is usually calm and very beautiful. Come join us. Call Charlie Scott at

473-2512 or Stacey Scott at 262-0055 for more details.

DR. OLIVER SCOTT—WYOMING OUTDOOR HALL OF FAME INDUCTEE



In recognition of his lifetime contribution to conservation of Wyoming's outdoor heritage, co-founder of the Murie Audubon Society, Dr. Oliver Scott is being inducted into the Wyoming Outdoor Hall of Fame this year. He is joining Murie Audubon members

Frank and Lois Layton and Fred Eiserman who were previously inducted into the Hall of Fame. **The ceremony will be in Cody on November 14.**

Dr. Oliver Scott grew up on a small dairy farm in Framingham, Massachusetts, and acquired his lifelong passion for birdwatching under the tutelage of Ludlow Griscom. He travelled widely across North America in search of rare birds and amassed a total of 727 life birds. He conducted the first Audubon Christmas Bird Count in Casper on Jan 2, 1949 just before the start of the Blizzard of '49. In 1954 he co-founded the Wyoming Audubon Society, precursor to the current Murie Audubon Society.

For years he taught a popular bird identification course at Casper College introducing dozens of people to the hobby of birdwatching. A noted expert on Wyoming bird life, from 1949-1971 he was editor of the "Rocky Mountain Region" for "Audubon Field Notes," (predecessor of "American Birds"). He also aided Roger Tory Peterson with range descriptions and field identification for Wyoming birds for both the 1961 edition and the 1990 revision of *A Field Guide to Western Birds*. In 1993 he published his own definitive *A Birder's Guide to Wyoming*. The result of extensive field trips to every corner of the state, he considered the book his life's work.

In 1956 he bought a small ranch in Bessemer Bend near Casper which has grown into the family owned Eagle Ridge Ranch. In 1971 he bought the Two Bar Ranch in Bates Hole which is now the family owned Bates Creek Cattle Co. He was an early advocate that ranching and wildlife habitat enhancement were very compatible. In 1980, he placed a conservation easement on the private land of Eagle Ridge Ranch. This 8,000 plus acre easement with The Nature Conservancy was one of the first large conservation easements in Wyoming.

SUBMITTED BY STACEY SCOTT

DR. KEITH JAMES, DVM—FIRE LOSSES

Many of you are aware of the Cole Creek fire event just north of Casper that occurred on the second weekend in October. The fire burned at least 13 homes, and an unknown number of pets and livestock perished. Among those lost was the home of Dr. Keith James, a local veterinarian known not only for his work with pets and livestock, but also for his donation of time and services to the care of injured birds, especially raptors. He worked out of his house, so he has lost his home and office and all of his veterinary equipment; but he was able to get all of the animals out.

Dr. James graduated from Colorado State University. (While in college, he worked with and flew falcons – until he found out that he is allergic to feathers!! Though that didn't keep him from becoming one of Wyoming's major bird vets!!) He worked very closely with Lois and Frank Layton in Murie Audubon's bird hospital. He also worked with Diane Morse in Gillette at the North East Wyoming Bird Rescue. (All of this was unpaid, donated time, services, and medicine!!)

Now is the time for us to "return the favor" and help the doctor!! One way is to donate to a "gofundme" fundraiser at www.gofundme.com/ac66maq8. Another alternative is to send your thoughts and donations to Dr. Keith James, c/o Penni Kuehl, 1993 Lake Creek Rd., Casper, WY 82604.

Thanks to all who have donated, shared, and left kind words. It is all greatly appreciated!!!

Bruce and Donna Walgren

WINTER-TIME SPARROWS

Here in Wyoming, its late fall going on winter, and our winter species are starting to make their appearance. One of the first birds to show up after making their way down from the far north are American Tree Sparrows. Oh no – sparrows! LBJs (Little Brown Jobs). Not exactly everybody's favorite when it comes to identification. Borrowing from Kenn Kaufman in *Advanced Birding*, let's set up the following scenario: It's the first week in December. Here is a typical encounter between a beginning birder and a sparrow. The sparrow sets off the encounter by flying up onto a fence wire. Fighting off a sense of panic, the birder tries to focus on field marks. Does the bird have a streaked or plain breast? Plain. Okay. Is there or is there



not a pale central stripe on the crown? Can't see that at this angle. Okay, what about a central breast spot? Also wrong angle. And wing bars; do those pale lines qualify as wing bars? At about this time, the bird drops back into the dry grass. The birder has noted only one definite field mark: the plain breast. Fortunately, at this time of year the likely suspects are not so numerous: 1) Tree Sparrows should be here by now; 2) White-crowned Sparrows might still be moving through; 3) there's also a possibility of a White-throat showing up; 4) another possible candidate is a Harris's Sparrow; 5) Chipping Sparrows are long gone, so it's highly unlikely your bird is a chipper. (Having said that, it's always wise to keep in mind that the birds do not read the books!!)

Mr. Kaufman also notes that when looking at sparrows, the "field mark approach" doesn't always work. An alternative is to observe the shape and behavior. American Tree Sparrows are small sparrows with rounded heads (with a rufous cap, IF you can see it!) and medium-long tails, notched at the tip. They are usually in small flocks, in brushy areas, and often feed on the ground. Their call notes include a soft "tsip" and a sharper sounding alarm note. Winter flocks also utter a melodious, warbling twitter that Thoreau described as the "tinkle of icicles."

White-crowned, White-throated, and Harris's Sparrows are medium to large sparrows with fairly long, square-tipped tails. Their heads appear slightly peaked, and call notes usually are sharp and distinct (though white-throats are a bit softer). They also tend to be found in brushy areas.

In *A Birder's Guide to Wyoming*, Dr. Oliver Scott says that American Tree Sparrows can arrive in Wyoming as early as late October, and are usually gone by April 1. White-crowns may be abundant migrants in September, October, and November, and again in April and May. White-throats and Harris's may show up in October and be seen infrequently until some time in May.

So, if you are looking at an LBJ, don't give up too soon trying to identify it. Trust me – winter sparrows are easier to figure out than summer sparrows!!

Dana Spizella



SHRIKES IN WYOMING

Driving out past Poison Spider School west of Casper looking for winter birds, I notice a robin-size bird perched near the top of a scraggly tree beside the road. At first glance, it looks like a kestrel; but then the bird flew off with rapid wingbeats, showing flashes of white in dark, maybe black, wings. A mockingbird!! No, not at this time of year. Though, there was one reported for the Casper Christmas Bird Count.....Anyway, I don't think those white wing patches are big enough for a mockingbird. That leaves a shrike as the most likely candidate. And, since this is January – it must be a Northern Shrike!



Basic identification points for shrikes is fairly easy – even for those of us who might be considered “bird ID challenged.” I just got the new *National Geographic Complete Birds of North America*, (I figure I can use all the help I can get!). In a nutshell, it says shrikes are robin-size birds with pale gray upperparts; a heavy, hooked bill; narrow black mask; white forehead; black wings with white patches; light gray underparts; and a long black, white-edged tail. The tricky part is that there are *two* species of shrikes here in Wyoming that look very similar – Loggerhead Shrikes and Northern Shrikes. The easy part is that basically the Loggerhead is here during the summer and the Northern is here during the winter. The *other* tricky part is that there are a few weeks in the spring and the fall when both species might be here at the same time. Dr. Oliver Scott writes that Loggerheads start arriving in Wyoming in early April and are all gone by the end of November; and Northerns arrive any time from November 1 on, and can stay until the middle of April. During these times of possible overlap, you need to look a little closer to determine which shrike you are seeing. A good clue is the head pattern – the Northern has a narrower mask with a white forehead just above the bill; the Loggerhead's mask continues across the forehead with a black forehead just above the bill. Also, the Northern has a longer, more strongly hooked bill.

Shrikes are quite interesting birds – they are basically small raptors, similar to Sharp-shinned Hawks. In fact, their morphology is designed for going after prey – broad wings and long tail, giving them maneuverability and speed, plus the hooked bill and strong jaws. They don't have the strong legs and talons of a Sharp-shin, but

they do quite well with what they have. The shrike diet consists of large insects, small rodents (mice and voles are favorites), reptiles and small songbirds. Like kestrels, shrikes keep watch from a perch in an open area, darting out when prey is spotted (generally referred to as perch-hunting).

Shrikes are also known for the rather grotesque habit of impaling prey items on thorns, barbed wire, or whatever might be handy – earning them the nickname of “butcherbird.” A favorite shrike perch may also be where the bird stores (impaled) prey items; this is the shrike's larder. A well-stocked larder helps the bird get through periods of bad weather, such as heavy snows. Sibley also notes in his *Guide to Bird Life & Behavior* that a plentiful larder seems to increase the male's chances of attracting a mate.

The Northern Shrike spends its summer in the far north, nesting in scattered spruce, alder, and willows on the periphery of the tundra. The migratory movements of this Shrike are quite irregular; they usually spend the winter in southern Canada and northern US, but their numbers vary widely, explaining their designation as an uncommon winter visitor in the States. Their movements southward are primarily motivated by food availability. When the vole populations in the far north crash, invasions of Northern Shrikes into the United States will occur – similar to those of Rough-legged Hawks and Snowy Owls. Sibley notes records of Northern as far south as Florida and Bermuda.

Shrikes are known for their boldness and perseverance; there are reports of them taking mockingbirds and Mourning Doves, and one larder was found with an impaled Blue Jay. Because of the mice and House Sparrows they are known to dispatch, shrikes are considered to earn their keep. However, they were not always looked upon with such favor; Kenn Kaufman notes that in the 1870's when the House Sparrow had just been brought over from Europe, wardens were hired to shoot shrikes on the Boston Common to protect the sparrows.

Now is a good time to go out and look for shrikes (they should all be Northerns now), get a good look at them so you can become familiar with their field marks; so when the Loggerheads show up in the spring, you can tell the difference between these two species. (They are still easier than summer sparrows!!)

Dana Spizella



SOUL MATES: NUTCRACKERS, WHITEBARK PINE, AND A BOND THAT HOLDS AN ECOSYSTEM TOGETHER

By Gustave Axelson

From the Autumn 2015 issue of Living Bird magazine.

Clark's Nutcracker by Luis Villablanca. October 7, 2015



The whitebark pine and the Clark's Nutcracker are evolutionary soul mates that help hold an ecosystem together. At high elevations in the Greater Yellowstone ecosystem, whitebark pines depend entirely on nutcrackers to disperse their seeds. The pine nuts contain more calories than butter and provide food for more than 100 species, including

red squirrel, chipmunk, Cassin's Finch, grizzly bear, Mountain Chickadee, and Hairy Woodpecker. Whitebark pines are also pioneers in mountain clearings and act as nurse trees (for spruces and firs to grow up).

Taza Schaming heard the bird of her obsession long before she actually saw it. A *rattlesquawk* reverberated from somewhere within the Douglas-firs and limber pines. A swooping *whoosh* of wingbeats blew through the treetops. Then the Clark's Nutcracker arrived on a bare branch. Bigger than a jay yet smaller than a crow, he wiped his miniature black lance of a bill back and forth against the branch like he had an itch.

"That's a displacement activity," Schaming explained. "He's frustrated. He doesn't like it that the fat is on the ground."

For weeks, the bundle of beef fat had been strung up 12 feet high. Schaming does this to habituate nutcrackers to feeding at a spot. But now the fat is down, and she's hoping her quarry doesn't notice the metal frame of a bownet trap camouflaged with leaf litter and forest duff.

"C'mon down," she whispered.

Schaming knows beef fat works best for luring nutcrackers. She's been studying this bird—it's been her life—since 2009 for her dissertation as a Ph.D. student at the Cornell Lab of Ornithology. She's tried peanuts, playback calls, even a dead mouse tugged by a piece of fishing line. Trial and error brought her to a fresh pile of beef

trimmings from a butcher in Jackson Hole.

Her doctoral work here in Wyoming's Bridger-Teton National Forest—just east of Grand Teton National Park and smack in the middle of the Greater Yellowstone Ecosystem—has included 76 radio-tagged nutcrackers. It's the longest study ever conducted with individual Clark's Nutcrackers, a seven-years-and-running project that has sent Schaming deep into the backcountry for intensive research on their foraging behavior and habitat use.

The nutcracker swooped down to a lower branch, now tantalizingly perched just above the bait pile. Then he cocked his head to the side, reasoning and thought bubbling behind his polished obsidian pebble eyes.

When the breeze blew just right, the curtain of fir needles behind the bird opened up to reveal a glimpse of the Grand Teton, a hulking mass of snow and rock with a band of evergreens across its midsection. The trees at the highest elevations are whitebark pines. Schaming's research could be boiled down to the nutcracker in front of her, the whitebark pines in the distance, and the tight tie that binds them.

"Clark's Nutcracker is a keystone species, whitebark pine is a keystone species, and they're both in a key mutualism in this ecosystem," she says.

Keystone species are plants or animals that are so critical to an ecosystem that the landscape would dramatically change without them. In the Greater Yellowstone Ecosystem, nutcrackers rely on whitebark pines as a crucial food source, the pines rely on nutcrackers to disperse and plant their seeds, and more than 100 other species of plants and animals benefit from that mutualism between tree and bird. But the web is at risk of unraveling. Whitebark pines have suffered massive mortalities from the deadly convergence of blister rust disease and mountain pine beetle outbreaks. Nutcracker populations have declined across half their range since 2003, according to Breeding Bird Survey data. The ripple effects extend throughout the ecosystem, from disappearing forests on mountain heights to the loss of a major food resource for grizzly bears.

Today, Schaming is back on one of her study sites with a new technology, solar-powered satellite tags, to open up a new chapter of her research. She's searching for ways to keep the nutcracker-whitebark mutualism intact. But first, she's got to trap a bird.

After much consternation, this noncompliant nutcracker flew away.

"He'll be back," Schaming said confidently.

A Return Visitor

Two hours later, the nutcracker returned for the

fourth time, but he was still wary. Schaming had been munching trail mix and waiting for the morning sun to get up over the spindle tops of fir trees and shed a little warmth. It was October in the Tetons, a time when frost recedes from daylight and nutcrackers are busy finding and caching food for winter.

When a Gray Jay snatched a beef scrap from the pile and made off unmolested, the nutcracker was finally convinced. He landed a few feet away and kangaroo-hopped over on top of the pile. Schaming yanked the trigger string and *thwump*, he was caught.

She fished him out of the net and gave him a stick to grip with his feet, much like a mother might soothe a baby with a rattle. The nutcracker didn't struggle or squawk; he seemed content. "His heart's not beating hard," she said. "It's not like chickadees where their heart is just racing."

He did track her hand with his bill though, and when the opportunity arose, he clamped on. "Doesn't hurt," Schaming noted as she checked his feathers. "Their bill is designed more to pry than pinch."

When she flipped him over on his back the bird had two orange leg bands. This was a return customer. Schaming had caught him in January 2012, just a few hundred yards away. "You're still alive," she told him. "I'm so happy to catch you again!"

But he wasn't going to be part of Schaming's new project. She doesn't want data on homebodies. Instead, she wants to know what happens to the travelers. In her radio-tracking studies, she has noticed that some nutcrackers tend to wander. In 2011—after whitebark pines failed to produce cones—79 percent of the birds disappeared. "I don't know if those nutcrackers flew north to Yellowstone or even Canada to find food," she said, "or south to the Wind River Range, or all the way to pinyon pine forests in Arizona."

Finding out where nutcrackers go in the event of a food collapse could be a key to managing entire landscapes to give nutcrackers what they need. And foresters are very interested in providing for nutcrackers, because they act as an unpaid crew of avian tree planters on a scale that far exceeds anything the U.S. Forest Service could afford.

Scientists say that the whitebark pine is an obligate mutualist of the Clark's Nutcracker, the tree totally reliant on the bird for seed dispersal. Whitebark pine cones don't open on their own, and the seeds inside have no wings for floating on the wind. Instead, the tree puts all its energy into producing a large, fatty seed with high nutrition in the hopes that nutcrackers will come for a feast. A nutcracker can hold up to 150 of these seeds in

its sublingual pouch (under its tongue). Nutcrackers plant the seeds at the ideal germination depth of about an inch during caching. Each nutcracker caches up to 100,000 seeds in a single year. But they don't retrieve all of them—the untapped caches grow up into new whitebark pines.

Along with whitebark pines, nutcrackers also disperse seeds for pinyon pines, limber pines, and 10 other conifer tree species throughout the bird's range of 11 western states and two Canadian provinces, according to forest ecologist Diana Tomback of the University of Colorado at Denver. "Nutcrackers play a very important role," says Tomback. "They're an architect of high-mountain forests across the West."

Tomback was the first to document the mutualism between nutcrackers and whitebark pines in a 1977 *Living Bird* article. Schaming has carried Tomback's findings forward and expanded on them through more than 1,000 days in the field. On good days, she commutes past herds of grazing bison to spend a temperate summer's day in the mountains. But the work can be grueling, sometimes bushwhacking 20 miles just to locate one of her radiotagged study birds. Pepper-spray is a must in the warmer months, as she works in grizzly country and keeps vigil for long hours over a pile of beef fat. (Thankfully, she hasn't had a bear encounter yet.) Winter work means Telemark skiing through deep snow at minus -20 degrees Fahrenheit.

Schaming's payoff has been lots of quality time spent with nutcrackers, and a slew of field observations about their caching habits. For example, she's documented that nutcrackers cache whitebark pine seeds in a variety of locations—from right below the very whitebark pine tree where they harvested seeds to several miles away back in the breeding territory where they intend to nest. Some birds contribute at communal caching sites where hundreds of nutcrackers put up a massive larder, whereas others keep private stashes.

Land managers desperately need insights into the relationship between whitebarks and nutcrackers, because the tree is experiencing a major die-off across its range, and the bird is the best hope that whitebark pine stands will still be around at the end of this century.

Submitted by Bart Rea



WYOBIRDS LISTSERVE

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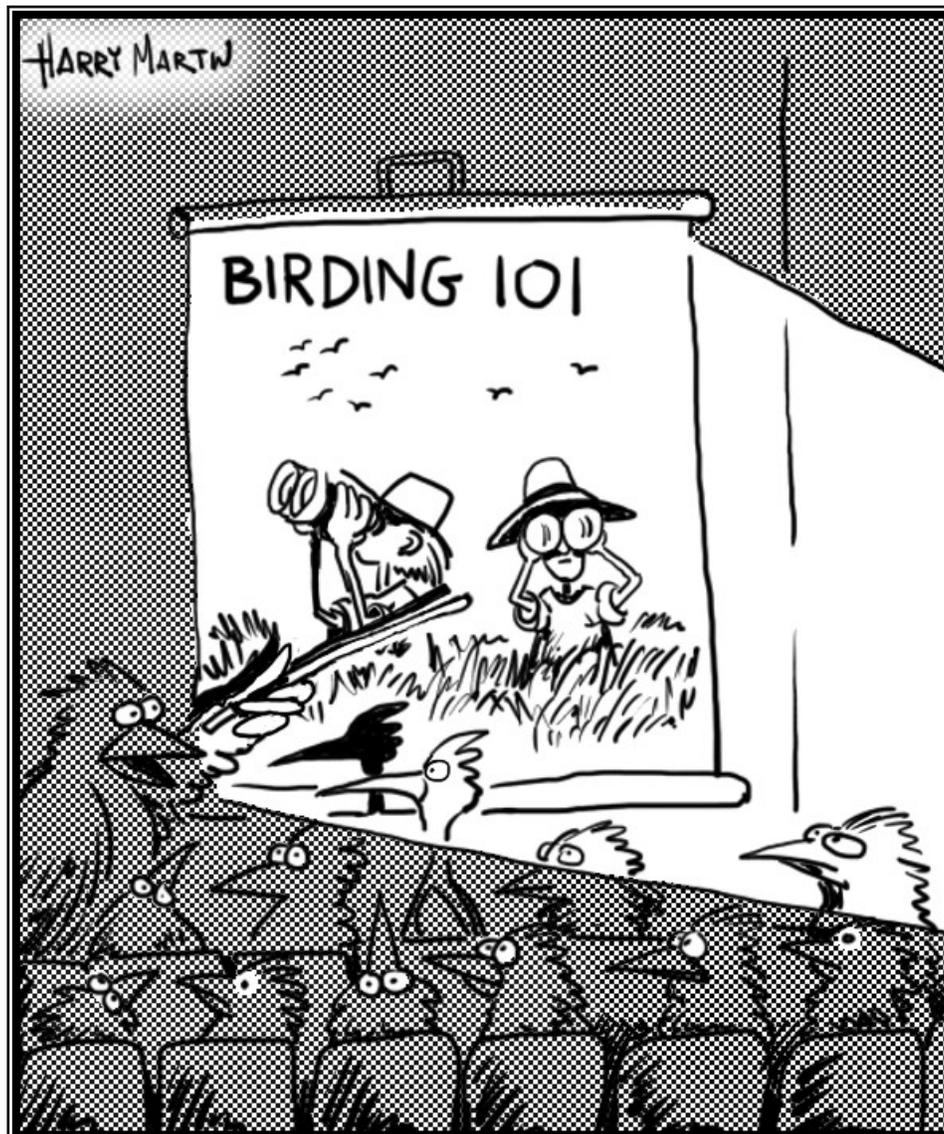
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Editor

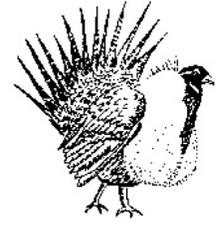
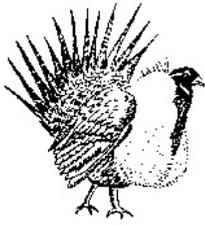
OUR SYMPATHIES

Murie Audubon extends our sympathies to Lisa Fujita whose husband, Richard, passed away on September 19, 2015. Richard was the Director of Public Relations at Casper College. Lisa, a former MAS Board Member, spent countless hours, energies, and expense in landscaping endeavors at the former Audubon Center at Garden Creek.

Editor



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The Vision of Murie Audubon Society is to instill a passion for nature in present and future generations through awareness, enjoyment, understanding, appreciation, conservation and advocacy.

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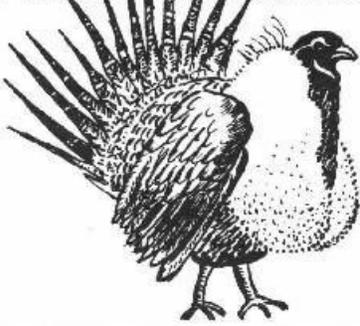
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