



NOVEMBER 2017

The Roost

VOLUME 21



Great Gray Owl

Photo by Kurt Lindsay



MESSAGE FROM THE PRESIDENT

Greetings from the ORI headquarters in Charlo, Montana. This past year was quite a weather story. It started during the winter of 2016/2017, with record cold, heavy snow, and a prolonged winter. This was followed by a wet and cool spring. Then, one day in late June, summer arrived. We experienced record-setting heat, which was followed by fires and choking smoke-pollution. Fires burned over 1.2 million acres of Montana and it seemed it would never end.

Then, one day in early September, winter arrived. Rain, cold, and snow quelled the fires, clearing the smoke from our valleys. However, our usual beautiful spring and autumn seasons never quite developed in 2017. Is this the new normal?

On a lighter note, our resident Great Horned Owls nested once again about a half mile away in a neighbor's yard. They raised three chicks to fledging. The owls have now been living around the field station for 20 years.

For the first time in about 25 years, I spent the entire summer in Montana. About one week before heading to our Snowy Owl project in Alaska, I tore my right calf muscle while working on Great Gray Owls. I'll admit, I enjoyed being home and getting some landscape and house chores done while recuperating. I have now snapped my left Achilles on Snowy Owls, wrecked my right knee on Boreal Owls, my right shoulder on Long-eared Owls, and my left thumb on Saw-whet Owls. I have also had my head and back opened up from the talons of nesting Snowy Owls. Who said bird research was easy?

The ORI welcomes Liberty DeGrandpre to its staff. Liberty has taken over the Development Director role and works like a fast-moving wildfire. A longtime friend, neighbor and supporter of the ORI, we recently discovered that Liberty's skills and the ORI's needs could be a great match. Just three miles from the ORI headquarters we discovered this highly talented individual.

The ORI also welcomes 17-year-old Brooklin Hunt. Also from right in our backyard, Brooklin has many roles, including managing our social media platform. [\(See Seasonal Employees, p. 12\)](#)

In other big news, we will be celebrating our 30th Anniversary in 2018. To honor the occasion, we have decided to revive the Hat Party for one last fling. It will be on 25th August or 8th September 2018. We are working out the final details. [\(See Hat Party, p. 3\)](#)

In closing, I ask once a year for your support. Every dollar counts, and I hope you contribute today. Please read on to see the programs your gift supports. When done with this newsletter, pass it to an interested friend or acquaintance.



Thanks — and enjoy the autumn and winter seasons.

~Denver Holt

New Development Director

After a year of searching, the ORI hired Liberty DeGrandpre as its new Development Director. Liberty brings a degree in English and writing, a background in business, and a keen eye for design. Her enduring smile, energetic personality, and strong leadership qualities make her perfect for taking the ORI to the next level.

Liberty is a Montana native who has lived in Charlo, down the road from the ORI, for 20 years with her husband and three children.

She is proving to be a great addition.



Liberty DeGrandpre



HAT PARTY RETURNS

It's been 7 years since the last Hat Party. It had become so big, managing it was difficult. However, since 2018 will be the ORI's 30th year in operation, we decided to give it an encore performance to celebrate.



People from all walks of life, young and old alike, enjoy music, food, and festivities at the Hat Party.



So set the date, get a hat or costume, prepare to eat well, hear outstanding music, and camp out. The date is 25th August or 8th September 2018.

INSIDE THE ORI

It's been a while since you, our readers, had an inside look at the ORI field station, affectionately known as The Farm. When we bought the place in 1997, every building was filled with 'stuff'. It took about 5 years to clean out the buildings and tidy them up. There are 9 buildings: the house (our offices and accommodations for visiting researchers), large garage (our lab and library), hut (writing cabin), barn (tool room, workshop and equipment storage), chicken coup (capture gear storage), hog house (lumber storage), shed (ATV, lawnmower, and snowmobile storage), wood shed (firewood storage) and granary (storage).

Whether we're teaching a class, hosting interns, or having visitors, all comments revolve around what a interesting place this is. The following photos give an inside look of the buildings we use most.



Lab dissection table



Living room at the farm house



The Nancy Claflin Writing Cabin, in honor of Denver's mentor: no phones, internet, or clocks permitted.



Denver and Matt cataloging small mammal skulls



Denver's cat Gnomia
(Northern Pygmy Owl,
Glaucidium gnomia)
Gnomia = small, diminutive

NEW ORI WEBSITE

After years of stagnation, our new website is up and running. We've redesigned the appearance, corrected mistakes, updated information, and added more photos. We thank the many people who gave suggestions, helped correct mistakes, and donated information and photos. Please check it out at: www.owlresearchinstitute.org.



There are about 270 species of owls in the world, distributed on all continents except Antarctica, and occurring in every habitat. Most species occur in equatorial regions where the greatest diversity of habitats occur. As a group, most owl species have not been studied in great detail. Indeed, given their nocturnal habits and secretive, diurnal behaviors, owls are difficult to study. Additionally, there are few owl researchers in the world. Consequently, many species could easily be overlooked in conservation and management of our natural resources.

Even in places where some long-term studies occur – such as Canada, the U.S., and a few Scandinavian and European countries – more information is needed for biologically relevant conservation and management agendas. This is all the more reason the ORI encourages national and international agencies to initiate long-term surveys, research, and monitoring programs of owls.

The ORI hopes that its long-term studies and monitoring can contribute to conservation and management programs related to owls, and the habitats they occur in. Please see the following annual summary of our research projects.

Barn Owl. Barn Owls are perhaps the most widely distributed owl in the world, and may be one of the most common birds in the world.

Fossil records and molecular analysis indicate Barn Owls and their relatives are the oldest group of living owls. They eat primarily small rodents, and their numbers can fluctuate with highs and lows in rodent populations. In western Montana, however, Barn Owls are relatively uncommon. In fact, in many years we don't find any evidence of nesting in the Mission and Missoula valleys – but we usually see a few when searching barns, buildings, natural cavities in cliffs, and other habitats. A flurry of Barn Owl observations occurred around the Christmas Bird Count in 2017 and raised our hopes of finding nests in the spring.

Unfortunately, the only Barn Owls we found this spring were found dead. They appeared to be either preyed upon, starved, or succumbed to the long, harsh winter.



©Daniel J. Coy/NaturalExposures.com



This Barn Owl was rehabilitated and raised by Beth Benjamin Watne, Montana Wild Wings Recovery Center. It was released in the ORI barn.

Arctic in location and time. Thus, in some years, some Snowy Owls may not breed. But when huge numbers of Snowy Owls migrate south into southern Canada and the northern U.S., we know they just had a terrific breeding season, as most of the owls are young of the year, perhaps 5-6 months old. Now in its 26th year, our Snowy Owl Breeding Research project is the longest running breeding study in North America. Snowy Owls did not breed in Barrow, AK in 2017, presumably because lemming numbers were low. We were not able to travel to Barrow this year to conduct our lemming study.

Snowy Owl. Snowy Owls have a circumpolar breeding distribution associated with Arctic tundra. Here they nest on the ground and are dependent on lemmings for successful breeding. However, lemming numbers fluctuate widely throughout the



Northern Pygmy Owl.

Northern Pygmy Owls are associated with a wide variety of coniferous and deciduous forest habitats in western North America. The owls can occur from near tree line to river bottoms. Pygmy Owls are active throughout the day, are fierce predators capable of taking prey larger than themselves, and usually nest in cavities with small-diameter openings.

Although Pygmy Owls are relatively common in western Montana and are easily detected during March and April surveys, finding nests in natural cavities is time-consuming and difficult. We are happy to locate a couple nests every year. The two nests we found and monitored in 2017 brought our total to 38 in the last 18 years.

As always, Volunteer Steve Hiro spent countless hours hiking through the forest in search of these aggressive little owls.



Photo by Kurt Lindsay

Great Gray Owl. The Great Gray Owl has a wide distribution in North America and Europe. In Canada and the U.S., the Great Gray Owl is considered an owl of coniferous forests. It can be rather common in much of its northern distribution, but uncommon and isolated in more southern areas, such as California.

In our first serious research season we were able to locate several territories. One of our main research objectives is to identify nesting trees used by this species. Similar to the cavity nesting owls, Great Gray Owls often use very large, dead broken-topped trees (snags). However, these owls nest on the top where the tree has broken. And due to the owls' huge size, nest trees have to be large enough to accommodate them.

By recording measurements, we should be able to provide forest managers data to preserve and manage these trees. However, sample sizes must be large enough for meaningful results.



Photo by Kurt Lindsay

Additionally, our live camera allowed us to watch the nesting behavior. Because the camera is live 24/7 and equipped with infrared capability, we were able to observe the owls continuously. This allowed us to observe behaviors we had not known of before. In the future, we'll be able to break down the camera recordings into behavioral units and provide more life history information on this very charismatic species.



Photo by Kurt Lindsay

Northern Saw-whet Owl.

Northern Saw-whet Owls are distributed throughout North America in a variety of habitats. They may be the most common and numerous owl species in the U.S. and Canada. Most information on this species comes from nest box studies, which are interesting and valuable, despite their limitations. Although we do occasionally find Saw-whet Owls using nest boxes, most of our research effort is dedicated to finding natural nest sites.

We detected several males singing on territories this past spring, but for the first time since 2010, we did not find any Saw-whet Owl nests. Was this related to our harsh winter?

Since 1981, we have documented 55 natural nest sites of Northern Saw-whet Owls and are currently analyzing and writing up results for publication.

Boreal Owl. Within North America, Boreal Owls were once thought to nest only in Canada. However, surveys in the 1980s and review of the historical literature suggested otherwise.

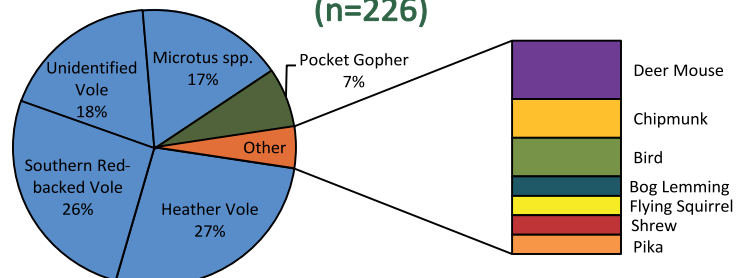
We now know that they are found throughout the west in high elevation spruce-fir forests from Alaska to New Mexico. There is evidence they breed in northeastern Canada, perhaps northern Maine, as well.

We've monitored and maintained nest boxes for Boreal Owls, originally set up by the Forest Service in the early 1980s, since 1994. We do harbor some concerns about nest boxes in general with regard to authenticity of biological data, but find them useful for specific research questions. Finding and monitoring nests in boxes is far more convenient than natural cavities, but it is rarely easy. Spring conditions on the high elevation passes present many logistic challenges.

This year was no different. With the profuse amounts of snow still present during much of the breeding season, we only located one nest, which was a month behind schedule compared to other years.



Prey from Boreal Owl Nest Contents (n=226)



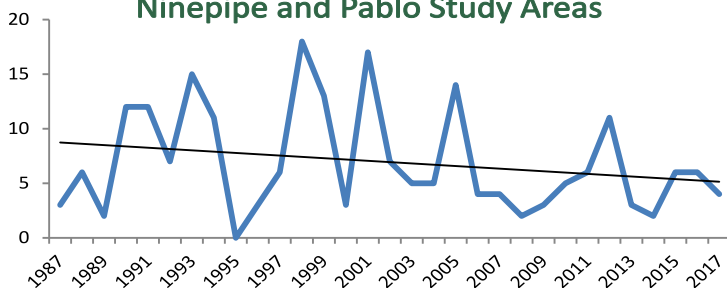


Long-eared Owl. The Long-eared Owl is widely distributed in North America. It lives in a wide variety of forest, shrub, and rangeland habitats, but is generally associated with open country. Here it forages on the wing, similar to Short-eared Owls. Due to its almost exclusive nocturnal habits however – unlike the Short-eared Owl – it is rarely seen.

Current bird survey methods are not geared to detect this species, so little is known about its population status in Canada and U.S. However, our data indicates a population decline in Montana.

Our year-round, longitudinal study of Long-eared Owls is now in its 31st year, and is the longest such study in North America, if not the world.

Long-eared Owl Nests from Missoula, Ninepipe and Pablo Study Areas



There were good numbers of Long-eared Owls in our study area during the fall and early winter of 2016. However, due to the persistent cold and deep snow, nearly all the Long-eared Owls left the area.

Then in the spring, although weeks later than normal, Long-eared Owls began to reappear and eventually nest. We monitored four nests within our study areas in 2017. All were difficult to access and hard to view, making it impossible to install a live camera, as in years past. Hopefully, we have better fortune this year.

Short-eared Owl. The Short-eared Owl is also widely distributed in North America and associated with open country habitats such as tundra, grasslands, and rangelands, where it nests and roosts on the ground. Although most tundra habitats appear intact, other habitats such as grasslands and rangelands have been lost due to changes in use. Consequently, the Short-eared Owl populations appear to be in significant decline.

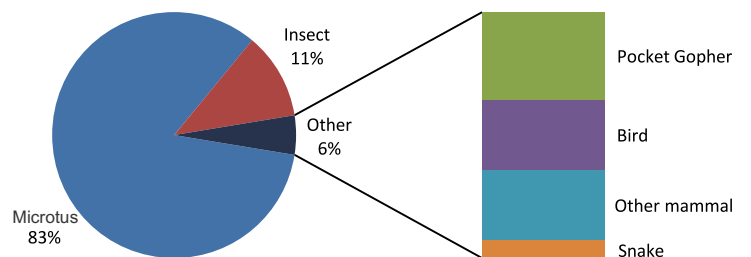
We continue to work with private landowners and land managers from the U.S. Fish and Wildlife Service to provide information about the locations and timing of Short-eared Owl nests. This information is used to help mitigate disturbance of management activities during the sensitive incubation and chick-rearing periods.

We have also entered into an agreement with the Western Association of Fish and Wildlife Agencies to act as the state coordinator for a large-scale Short-eared Owl monitoring program throughout the western U.S. (See Special Feature, p. 9.)



Photo by Ashok Khosla

Short-eared Owl Diet from Pellets (n=272)

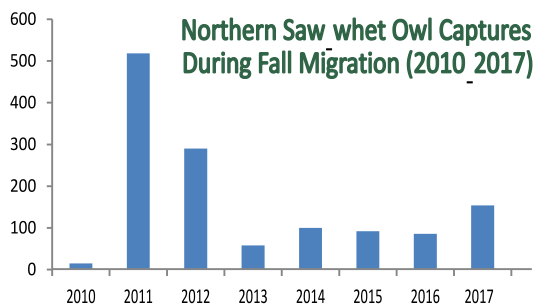




Migration. Northern Saw-whet Owls are well known to be highly migratory and, as with many species of owls, numbers fluctuate widely from year to year and place to place. Whether this species is an irruptive migrant responding to changing prey densities, similar to Snowy Owls or Short-eared Owls, is currently unknown. Nonetheless, large scale migrations are known to occur from time to time.

We are now in our 8th year of the Northern Saw-whet Owl migration study, and the 6th year at our site. As of this writing, we've caught over 150 Saw-whet Owls during migration this year – the most since 2012.

We've also seen or heard Western Screech Owls, Great Horned Owls, Barred Owls, and Northern Pygmy Owls during fall trapping. In 8 years, we have captured over 1,300 Saw-whet Owls during migration.



At right, a Snowy Owl nest



A Northern Saw-whet Owl banded and measured at a Montana migration research site.

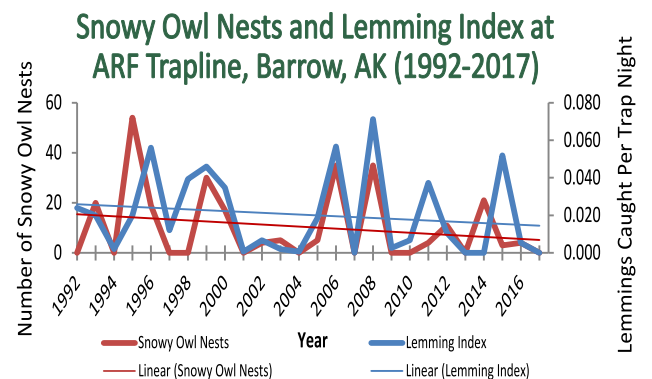


Photo by Simone Welch

Analysis of Lemmings, Snowy Owls, Climate Change.

As with the Snowy Owls, we missed our 2017 lemming research season in Barrow, AK. However, our Brown and Collared lemming sampling project is one of the longest efforts to monitor their population fluctuations in Canada and U.S.

Our data challenges the long-standing view of regular, predictable lemming “cycles” at Barrow, but clearly lemming populations fluctuate over time. Because lemmings and Snowy Owls are on a downward trend there, we are eager to begin a new project exploring the relationship between climate and our Snowy Owl and lemming populations.





COLLABORATIVE SHORT-EARED OWL MONITORING



Photo by Kurt Lindsay

We are embarking on a 3-year collaborative study to monitor Short-eared Owl populations in the western U.S. This study, “Predicting Responses of Short-eared Owl Population Size, Distribution, and Habitat Use in a Changing Climate”, involves 15 other agencies and organizations across 8 states.

This project, funded by a grant from the U.S. Fish and Wildlife Service, is a rare example of cooperation and collaboration on a large scale. This species-specific monitoring program will provide the most robust population data for Short-eared Owls to date.

The methods used for this large-scale monitoring study stem directly from a paper we published in 2016 titled, “Using Roadside Surveys to Detect Short-Eared Owls: A Comparison of Visual and Audio Techniques”. These methods have been used for several years in Idaho and Utah with promising results.

The effort aims to complete a number of coordinated surveys across California, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming. The survey design is well-suited to volunteer participation and will rely primarily on volunteer, citizen-scientists to collect data. We will act as the state coordinator for Montana.

If you're interested in learning more about this ambitious project or want to know how to participate, contact Matt Larson at owlinstitute@outlook.com.



Owls as Icons of Conservation

As stated in previous newsletters, our lecture series, and published papers – owls are iconic. There is perhaps no other group of animals in the world that is so widely recognized, admired by a vast majority of people, and generates so much interest, as owls.

Owls occur on all continents and habitats except Antarctica. Perhaps the oldest bird-art known is of owls etched out on cave walls, dated to the Paleolithic Period (12,000-30,000 years ago).

From cave etchings through verbal history, owl stories have been passed on through generations in numerous cultures. They have been depicted on Greek coins dating to 400 BC. Owls are mentioned in stories by Aristotle and Pliny. They are represented in art as paintings, pottery and sculptures. Owls occur in paintings by Durer, Michelangelo, and Picasso. They are represented in fancies and poems such as *The Owl* and *The Pussy Cat*, fables, myths, and stories. Countless trinkets of bone, ivory, soapstone, and wood idealize owls throughout the world.



Owl petroglyph from Nine Mile Canyon, Utah, cir. 950-1250 AD.

conservation. For example, owls as a group, or a specific species, can be used to help conserve local habitat; act as indicators of environmental health; bring awareness to conservation issues; and, consequently, act as advocates for wildlife and habitat conservation.

Although people admire specific animals or groups of animals for various reasons, we must evaluate this in a business-like manner, and determine what species will generate public and political support. These species should give us the best chance of protecting habitat – both large and small. This is not a matter of biological science, but rather psychological science, using an appealing-looking species, with effective marketing and sales, to achieve conservation.

Daily, consciously or not, we are influenced by marketing - it works. Popular actors, actresses, musicians, or athletes often influence people to favor products or agendas. Similarly, certain animals have influencing effects on people. These animals render admiration, concern, and sympathy for their well-being, for a variety of reasons. Most often, these species are admired for their looks, physique, or behavior. They are cute, handsome, or endearing. Bears, elephants, owls, penguins, whales, and some primates, receive much media



In present times, owls have occurred on Canadian 50 dollar bills, become sport (Temple University Owls), corporate (White Owl Cigars) and advertising (Trip Advisor) logos, and even movie stars (Hedwig in *Harry Potter*). Owls are consistently used in product advertising (beer and wine) and sales pitches (wise old owl).

Owls gather our attention, perhaps like no other group of animals in the world, and they do it consistently. Whatever the reason, people feel emotion when observing owls.

The ORI proposes using owls as the poster animals for

attention. These animals are popular in documentaries, internet sites, magazines, newspapers, and television. They have high market value as readily seen by sales of art, photographs, DVD's, iPod applications, toys and video games, among other outlets.

This unique interest in owls can be parlayed by conservationists, educators, managers, and researchers, into support for all wildlife. For example, in Canada and U.S., Snowy Owls can be used to generate interest in Arctic conservation; Short-eared Owls for grassland, Burrowing Owls for rangeland conservation; Great Gray Owls and Northern Saw-whet Owls for forest conservation, and so forth.



NORTH AMERICAN OWL POPULATION ESTIMATES

Except for a few species of animals, true population estimates are extremely difficult to determine. Although a variety of population estimate methods exist, their foundations are based on numerous assumptions, many of which seem completely unrealistic. Yet, wildlife conservationists and managers need to try to determine population numbers for a variety of reasons.

In the table below, we provide population estimates and a recent analysis of percent change of owls breeding in Canada and U.S. The groups providing this data are also the same groups that provide all avian population estimates for Canada and U.S. Table data came from Partners in Flight 2016. If there is any truth — or near truth — to these estimates, then species such as Long-eared Owls are in immediate need of continent-wide surveys.



Great Horned Owl



Long-eared Owl



Snowy Owls



Short-eared Owl



Eastern Screech Owl



Burrowing Owls

Species	Population Change (1970-2014)	Population Estimate (U.S./Canada)	Primary Breeding Habitat	Primary Winter Region
Barn Owl	48%	120,000	Habitat Generalist	Resident
Flammulated Owl		11,000	Western Forest	Mexican Highlands
Western Screech Owl		220,000	Western Forest	Resident
Eastern Screech Owl	-41%	680,000	Eastern Forest	Resident
Whiskered Screech Owl		<500*	Mexican Pine Oak	Resident
Great Horned Owl	-27%	3,900,000	Habitat Generalist	Resident
Snowy Owl	-64%	<30,000	Arctic Tundra	Northern U.S./Canada
Northern Hawk Owl		100,000	Boreal Forest	Resident
Northern Pygmy Owl	2%	100,000	Western Forest	Resident
Ferruginous Pygmy Owl		<1,000*	Tropical Dry Forest	Resident
Elf Owl		40,000	Desert Scrub	Pacific Lowlands
Burrowing Owl	-35%	1,100,000	Grassland	Widespread
Spotted Owl		<15,000*	Western Forest	Resident
Barred Owl	99%	3,200,000	Forest Generalist	Resident
Great Gray Owl		95,000	Boreal Forest	Northern U.S./Canada
Long-eared Owl	-91%	140,000	Forest Generalist	Widespread U.S.
Short-eared Owl	-65%	660,000	Arctic Tundra	Widespread U.S.
Boreal Owl		1,700,000*	Boreal Forest	Northern U.S./Canada
Northern Saw whet Owl	>200%	2,000,000	Forest Generalist	Widespread U.S.

Source: Partners in Flight Landbird Conservation Plan Revision (2016). * Denotes population estimate from independent estimate, all others based on Breeding Bird Survey data.



Volunteer Researchers

Angie Marbais, a physical therapist from Ohio, returned for her second, week-long volunteer stint with the ORI. Angie has an interest in raptor rehabilitation and providing nesting opportunities for owls on her property in Ohio.

She is extremely helpful and enjoys learning about owl ecology, and how to handle, age and sex owls in the field.

Also this season, we have Jeremy SunderRaj, of Missoula, MT. He is senior at the University of Montana in the Wildlife Biology program. He's volunteered on the migration project and the Pygmy Owl project.

When not volunteering, Jeremy works for Montana Fish, Wildlife and Parks doing wolf monitoring and research.



ORI Researcher Matt Larson and volunteer Angie Marbais examine a Long-eared Owl for coloration and wear on feathers to determine age.

Seasonal Employee

Brooklin Hunt, from St. Ignatius, MT, began volunteering in 2017 and now works part-time.

A high school senior and daughter of a logging mill family – Hunt's Timbers – Brooklin would rather be in the field banding owls, rehabbing a stray, or planning out her ambitious future. Her interests are in raptor biology, with an emphasis on veterinary medicine.

This summer she completed course work at Cornell University for Captive Raptor Management, and is looking forward to attending Montana State University in the fall of 2019.

At the ORI, Brooklin works in the field and conducts literature searches, as well as interning, and is our new social media talent. She is a bright girl with a bright future, indeed!



Forward Photography, St. Ignatius, MT



Brooklin Hunt, seasonal employee



EDUCATION

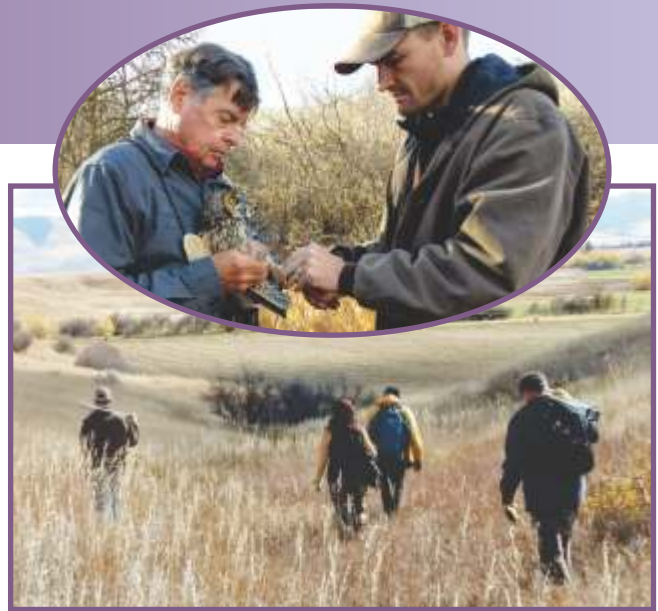
Day in the Field (DITF)

We donated our first DITF for a fundraiser around 1990. Now, 27 years later, we donate about 10 DITF annually to school groups of all levels, community groups, hospitals, or charitable group fundraisers.

What initially started out as a Montana program has now expanded throughout the U.S. We not only provide the DITF with owl researchers, but have now included a DITF for bird-watching (for example: winter hawk watching and identification) and mammal watching. The DITF provides people with an exciting experience learning about wildlife research, wildlife natural history, and evolutionary adaptations.

The ORI charges nothing to these groups, and takes no money at fundraising events.

This year we provided a DITF to: Montana Natural History Center; Montana Fish Wildlife and Parks Foundation; Ohio Wildlife Rehabilitators Association; NPR/KUFM Montana Public Radio; Ecology Project International, MT; KSKC Tribal Public Television, Salish Kootenai College, Flathead Indian Reservation, MT; Ninepipes Museum of Early Montana; University of Illinois School of Veterinary Medicine; Explore.org, CA; Clark Fork School, MT.



Top: ORI Researcher Matt Larson and volunteer Steve Hiro explain banding procedures to a Day in the Field group.
Bottom: The ORI takes Day in the Field participants into live research sites.



Denver gives a presentation about Montana's owls to students and staff at the Montana Academy. Many of the students imitated owl calls themselves, hooting and tooting throughout the audience.

Lectures

Our annual talks are popular. We have species specific programs including: Snowy Owls, Flammulated Owls, Northern Hawk Owls, Northern Pygmy Owls, Northern Saw-whet Owls, Long-eared Owls, Short-eared Owls, and more.

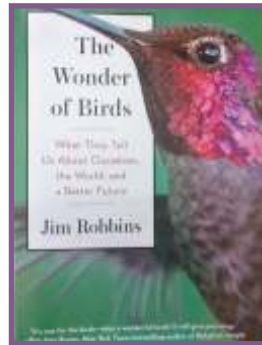
We also present more diversified, general programs, including: Owls of Montana, Owls of United States and Canada, Evolutionary Adaptations in Owls, and How to Find and Survey for Owls. If you would like to invite us to lecture anywhere on any of these topics, give us a call.

In 2017, we talked for: Flathead Lake Biological Station's Science on Tap Lecture Series, and Flathead Lake Biological Station's Annual Open House for the public.

We also gave programs for Kiwanis Club, Polson, MT; PEO, Polson, MT; Museum of the Rockies Science Inquiry Series, Bozeman, MT; Montana Academy, Kila, MT; and Small Business Group Assoc/Club, MT.



Media Coverage. We proudly announce our coverage in a recent book on birds. Jim Robbins, a noted science writer and frequent contributor to the “New York Times Science”, “Audubon”, “Smithsonian”, “Scientific America”, “Vanity Fair”, and “The Sunday Times Magazine”, among others, has published his fifth book: “The Wonder of Birds: What they Tell Us About Ourselves, the World, and a Better Future.”



In Chapter 17, “The Transformational Power of Birds”, Jim highlights the ORI and its founder Denver Holt. We are thrilled to be recognized by such an accomplished writer and mentioned in his newest, and perhaps most influential, book.



Photo courtesy Wild Skies Raptor Center

Matt Larson and Brooke Tanner (Wild Skies Raptor Center) at Chief Charlo Elementary, Missoula, MT.

Classes

Annually, we conduct a number of educational classes; however, the field workshops have become the most popular and well received. Examples include: Owl Workshop, Winter Raptor Workshop, Winter Adaptation in Animals Workshop, and Introduction to Ornithology Workshop.

This past spring, we also conducted a joint field methods class for the Flathead Indian Reservation, Wildlife Management Program, and the Tribal Salish Kootenai College, MT. Additionally, we conducted an adult Owl Workshop for the Glacier Institute, and a children’s program with Wild Skies Raptor Center of Potomac, MT.

Book Reviews and Peer Reviews.

Owl books are extremely popular, and many are published each year. The ORI is frequently asked to review these books for scientific journals, publishing companies, and authors. However, it’s impossible to review them all, so we must be choosy. Our review of “Snowy Owl”, by E. Potapov and R. Sale, can be read in the Journal of Raptor Research, 2017.

Additionally, we have just finished a review of “Owls of North America and the Caribbean”, by Scott Wiedensal. This will also be published in the Journal of Raptor Research, 2018.

We also consulted on a few questions for “National Geographic Kids”.

Additionally, we referee scientific manuscripts for publication in peer reviewed journals. This process is more stringent than book reviews and authors of scientific papers must go through a more rigorous review than book authors. We have now refereed papers for about 12 professional journals.

Publications. Year-round field research and numerous projects make it difficult to sit around and write papers. However, we make an effort, albeit slowly.

Published. Gniadek, SG and DW Holt. 2017. First Nest Records of Northern Hawk Owls (*Surnia ulula*) in Montana, with Notes on Behavior and Food Habits. *Northwestern Naturalist* 98:117-121.

In Press. Larson, MD and DW Holt. 2017. Rope Dragging Technique for Locating Short-eared Owl nests. *North American Bird Bander*.

Submitted for Publication. Larson, MD, JC Larson, DW Holt, SG Gniadek, and A Eckert. The Northern Hawk Owl in Montana: A summary of Breeding Biology, Habitat Associations, and Records.

Holt, DW and MD Larson. Natal Philopatry and Dispersal in Long-eared Owls.

In Prep for Publication. Holt, DW, MD Larson and SH Hiro. Northern Pygmy Owl species account for the Birds of North America.

Holt, DW, MD Larson and others. North American Owl Survey Protocol.

Holt, DW. Owls of Montana.

Professional Meetings. Matt and Denver attended the Raptor Research Foundation meeting in Salt Lake City in 2017.



CONSERVATION PARTNERSHIPS

We rely on partnerships with many other organizations to fulfill our mission and accomplish all the work that we do. We acknowledge the following organizations and thank them for their support:

Private Landowners. We extend a special thanks to private landowners. Over the years, many individual landowners and the Flathead Indian Reservation have been kind enough to allow us access to their lands for research studies and education programs. We thank them all.

In Memory. We extend a special thanks to all those who contributed to the ORI in memory of our friend, Karen Fabiani, who deeply admired owls.

Photographers. We thank all those who generously allow us permission to use their pictures in lectures, presentations, and this newsletter.

2019 Space Coast Birding Festival

Denver has been chosen as keynote speaker for the 2019 Space Coast Birding Festival in Titusville, FL. The festival will be in January 2019 and owl-themed. We are flattered, excited, and will be looking forward to some sunshine in January 2019!

This is a great opportunity for us to share our information and message. If you've never been to the Space Coast Festival, consider joining us there – it's a birder's paradise, and one of the top three bird festivals in North America.

We're working out the details, but Denver may be guiding a couple field trips from the festival as well. Stay tuned. We will post updates in the ORI News section of our website.



Great Horned Owl

Kurt Lindsay



Deb Hanson

Short-eared Owl



© Daniel H. Cox/NaturalExposures.com

Snowy Owl chicks

Alaska

**Alaska Department of Fish and Game
North Slope Borough, Department
of Wildlife**

**Ukpeagvik Inupiat Corporation (UIC)
UIC Science and Logistics
U.S. Fish and Wildlife Service**

Montana

**Confederated Salish & Kootenai Tribes,
Flathead Indian Reservation
Flathead Lake Biological Station
Glacier Institute**

Kurt Lindsay Photography

Montana Academy

Montana Fish, Wildlife and Parks

Montana Raptor Conservation Center

Montana Wild Wings Recovery Center

Natural Exposures Photography

Polar Bears International

U.S. Fish & Wildlife Service,

National Bison Range Complex

U.S. Forest Service, Beaverhead,

Bitterroot, Flathead National Forests

Wild Planet Nature Tours

Wild Skies Raptor Center

Zach Clothier Photography

New York

Melissa Groo Photography

Texas

Victor Emanuel Nature Tours

"Thank you for your continued support from the ORI for our 'Birds & Bears Festival', as well as my Salish Kootenai College Field Methods class. You and your staff are excellent professionals and your outreach in the Mission Valley is greatly appreciated."

Whisper Camel, Biologist, Confederated Salish & Kootenai Tribes, Wildlife Program



The world is watching!

For the fifth year in a row, we partnered with Explore.org, an arm of the Annenberg Foundation, to share our planet's wildlife and scenic landscapes through LiveCams. For Explore's "Pearls of the Planet" series, we have now established live cameras on nests of Snowy Owls, Great Horned Owls, Long-eared Owls, and Osprey. In 2017, we introduced the Great Gray Owl cam. To view highlights of our owl and Osprey cams, go to our website or Explore.org. Look for new, live footage when nesting begins in late winter.

The cameras are active 24/7 – when no technical difficulties arise. By day, you can view the scene in color – by night, infrared. These cameras have given us an ability to learn more about breeding behavior of the species mentioned above. The cameras allow us to see the good times, and the bad, in the lives of these animals – including life and death. It can be difficult to watch a chick die, but that's life and we do not interfere – but we do learn.

The cameras have become incredible tools for numerous reasons. From a research perspective, they allow us to learn more about the owls' life, allowing never before seen behaviors during the night hours. From an educational perspective, they summon endless levels of interest for the casual cam watcher to the scrutinizing, citizen-scientist cam viewer.

In addition to the cams, we conduct live chats with the viewing audience – answering questions and conveying information.

This information has been used for the conservation of owls and their needs, and research projects. Besides learning more about the Great Gray Owls' nesting behavior, we are also able to discuss the importance of large, dead trees for nesting.

This, in turn, has direct implications for forest managers deciding what trees to leave for the owls. Consequently, our conservation message gets directly out to the public and professionals without having to wait for publishing papers.



Photo by Kurt Lindsay

In 2017, our three live cameras (Great Horned Owl, Great Gray Owl, Osprey) and one archived piece of footage (Long-eared Owl) were viewed by people in all countries, and generated 4,515,426 page views, representing 2,689,011 independent page views. We also generated 4,046,858 Live Cam streaming views, 4,016,431 YouTube views, 30,427 U Stream views, and 11,607,775 Facebook Live, and Video on Demand views. Obviously, these cams enable us to bring our message and educational programs to a large audience.

We will continue these cameras in 2018, and hope to add a camera on a small cavity nesting owl, such as the Northern Saw-whet Owl or the Boreal Owl.



NATURAL HISTORY TOURS

ORI Natural History Tours. The ORI is offering a new program for the research-thirsty donor. We have decided to offer a weekend of research, once per year, for any interested party. For a \$10,000.00 tax-deductible donation, a group of up to 4 can come to Montana, stay in our research station, and join ORI researchers in the field conducting studies on owls. For more details, contact Liberty DeGrandpre at liberty@owlresearchinstitute.org.

Wild Planet Nature Tours.

We continue to work with **Wild Planet Nature Tours** and **Victor Emanuel Nature Tours** and conduct many private tours. Our tours are diverse, covering all aspects of natural history, but our expertise is in birds and mammals. We teach methods workshops: How to Locate and Survey for Owls; Adaptations in Owls; Ornithology for Beginners; Raptor Identification; and Yellowstone Winter Adaptations in Mammals.

Wild Planet Nature Tours 2018 Programs



Winter Raptor Workshop
Baja, CA Natural History
Yellowstone in Winter
Owl Workshop
Montana June

www.wildplanetnaturetours.com.



Photos by Daniel J. Cox/Natural Exposures.com

Most tours cater to small groups and individuals.

Tours led by Denver Holt, Matt Larson, Megan Fylling, and other qualified guides.

Denver, Matt and Megan also guide a few specialty tours and an owl education workshop for Victor Emanuel Nature Tours, Austin, TX. See www.ventbird.com.

2018 WISH LIST

In addition to donations and grants, the ORI is in need of other contributions.

People like to give in different ways to support causes and organizations they believe in. Some like to write a check, some donate their time, and some like to gift items that can be put right to use. In each newsletter, we provide our readers a list of items that will help us in research projects and facility maintenance – also known as a Wish List. And each year, we are fortunate enough to be granted some of these wishes. For example, in 2017 a Montana supporter donated microscopes. These were used by our staff, and useful when teaching classes that identify skulls of prey species in owl pellets. Another supporter donated banding gear, which gave us enough supplies to conduct simultaneous and widely spaced projects. And after trading some old equipment, and negotiating a price-brake by a local used car dealer, we were able to obtain a used GMC Yukon to replace the Suburban that died last year.

- **ATVs** – 2 more in good shape
- **Lumber** for next boxes
- **Tools for Shop**
- **Riding Lawn Mower**
- **Banding Equipment**
- **Binoculars & Scopes**
- **New Computers**
- **Books & Artwork** (bird & wildlife related)

Our programs would not be possible without your generosity. Thank you.

Eco-tourism in the Mission Valley, MT

Great Gray Gifts

Again this year we want to draw attention to a new gift shop in the Mission Valley, MT. With its catchy name and creative owl logo, we must mention it in our newsletter.



www.greatgraygifts.com

The small gift shop is located between the Ninepipes Lodge and Ninepipes Museum of Early Montana on Hwy. 93, about 45 miles north of Missoula. Operated by Stephanie Trudeau-Morton (smorton@greatgraygifts.com), the shop offers many unique, Montana-made gifts.

In addition, the shop will host a weekly updated bulletin board highlighting significant bird and mammal sightings in the Mission Valley, including: Ninepipes, Kicking Horse, and Pablo National Wildlife Refuges, the National Bison Range Complex, Flathead Indian Reservation Tribal Lands, and Montana Fish Wildlife and Parks state lands.

Ninepipes Museum of Early Montana

www.ninepipesmuseum.org

Located next to Great Gray Gifts is the Ninepipes Museum of Early Montana. This is no roadside tourist trap. This is a first-rate museum and comparable to any big city museum of its type in quality and quantity of artifacts and displays, including an extensive

wildlife exhibit. If you are in the area, take the time to stop – you'll be very impressed with this museum.



Ninepipes Lodge

www.ninepipeslodge.com

The Ninepipes Lodge has emerged as an eco-friendly destination, welcoming birders, hunters, and nature enthusiasts. It has updated rooms, a large dining room with a magnificent view of the Mission Mountains, and a spacious bar which shows off spectacular taxidermy displays of many of Montana's large mammals.

The Lodge is located in the heart of the Flathead Indian Reservation, and adjacent to Ninepipe National Wildlife Refuge, and only a 20-minute drive to the National Bison Range.



NEW! "I'M LOOKING OUT FOR OWLS" T-shirt Campaign

ORI T-shirts for a LIMITED TIME ONLY!

A new way to help fund research, education and conservation of Owls!

Available ONLY
UNTIL Dec. 15!

Great gifts
for owl lovers!



**MUST ORDER BY NOV. 30
for Christmas delivery!**

Check out the link below
– or find the link on our website –
to see what's available!

Email liberty@owlresearchinstitute.org
with questions or for updates.

Available in: Crew Neck Sweatshirt, Long Sleeve T-Shirt, Ladies Scoop Neck T-shirt, Men's T-Shirt, and other colors

TO ORDER, GO TO: <https://www.customink.com/fundraising/owlresearchinstitute>



Photo by Ronan Dugan

WALL OF SUPPORT

To secure your name on the Wall of Support, please fill out and return the form below. Complete the form exactly as you wish it to appear on the wall. We will use the weathered exterior wood siding from one of our buildings for your name. When the barn renovation is complete, the Wall of Support will be constructed. There are four size categories to choose from for your donation: \$100 = 2"; \$250 = 3"; \$500 = 4"; and \$1000 or more = 5". Included with a \$1000 donation is an animal and/or plant of your choice.

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**Location of the Owl Research Institute and the
Ninepipes Center for Wildlife Research & Education**

NOTE ABOUT SPONSORSHIPS: In our newsletter, our practice is to recognize only businesses, nonprofits, foundations, and agencies. We do not list individual donors as a courtesy to our constituents, as most wish to remain anonymous. Only in special cases, and with permission, do we list the names of individuals. On the Wall of Support, however, we will list all sponsors, individual or otherwise. This decision ensures a certain amount of privacy.



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~ promoting wildlife conservation through research and education ~

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Photo by Dick Walker