The Roost

NEWSLETTER OF THE OWL RESEARCH INSTITUTE (ORI) & NINEPIPES CENTER FOR WILDLIFE RESEARCH & EDUCATION
NOVEMBER 2013 VOLUME 17

Message from the President

Greetings from the ORI's office in Charlo, Montana. It's been another beautiful autumn and the year to date has been exceptionally busy. The ORI's resident Great Horned Owls nested in our driveway this year and raised two young – the same as last year. With a conservation partner (www.explore.org) we set up a live camera with infrared capability to monitor the owls' nesting season (See Owl Cams p 16).

I just returned from Churchill, Manitoba, Canada were the ORI once again collaborated with Polar Bears International, Tundra Connections Program (www.polarbearsinternational.org). I served on a panel with other researchers to discuss Arctic wildlife diversity, climate change, and Arctic wildlife conservation. This annual program is timed to coincide with the Polar Bear gathering, as the bears wait for sea-ice to form on Hudson Bay, and then embark on their winter journeys. This is unlike most Black and Grizzly Bears that enter winter hibernation (See p 13, and PBI website for more on Polar Bear natural history).

This past winter and spring we hosted Hanna Prüter from the Max Planck Institute Department of Ornithology, Germany. Hanna's winter visit focused on raptor research techniques including: capture methods, ageing, sexing, and taking appropriate measurement data. The ORI demonstrated owl research techniques, while Rob Domenech, Raptor View Institute (www.raptorview.org), advised on diurnal birds of prey research techniques. During her spring visit, Hanna interned with a local veterinary clinic in Polson, MT. Hanna's skills will be applied to upcoming projects in Germany.

We gave numerous talks this past year. However, one was rather special. I was invited to speak and help raise funds for the Birds of Vermont Museum. The parking lot, road, and bridges were wiped out after a spring flash flood, and desperately need rebuilding.

The museum is unique in that all of Vermont's birds were hand-carved by Vermont native Bob Spear, and placed in see-through enclosures with appropriate habitat. Hopefully, the ORI helped in generating the funds they needed to help rebuild. Check out the museum at www.birdsofvermont.org.

An unexpected gift was anonymously donated in 2013. This special gift is a Snowy Owl print from a newly established set titled: "Audubon's Fifty Best Watercolors", created by the New York Historical Society and printed by Joel Oppenheimer, LLC, Limited Edition (200 sets), circa 2006. It is the actual size and was reprinted from the original editions.

The Wildlife Society of North America has initiated a special session in conjunction with a joint wildlife conference to address conservation of birds of prey. The Raptors of the Northwest Symposium will be held in Pasco, WA in February 2014. I was asked to be part of a scientific committee overseeing the upcoming event.

I was flattered recently to have been nominated for the 2014 Indianapolis Prize, which is often considered the Nobel Prize of wildlife conservation. To be nominated for this prize is an award in itself. Past recipients include George Schaller and Ian-Douglas Hamilton, among other significant names. The 2014 candidates include Jane Goodall. See www.indianapolisprize.org.

On a very special note, ORI employees Matt and Jessica Larson had their first baby in September. I am proud to welcome Lula Mae Larson. (See photo p 9.)

Finally, I ask once a year for your support. These funds or gifts, in addition to grants and corporate donations, are directed to research, education, and conservation programs.

Economic times remain difficult, and if you can contribute, I thank you. If not, I understand and hope you support us in spirit. After reading this newsletter, pass it on to an interested friend.

Thanks and
Happy Holidays.

~Denver Holt

Photo by Dick Walker

RESEARCH

Barn Owl (BNOW). Starting with a fisherman's observation in 2005, we have completed our 9th year of our BNOW study. We found several BNOWs, and a few nests in the Mission Valley in 2013. This is the second year in a row we've found BNOWs nesting, after five years without evidence of breeding. As was the case in 2012, nests were located in man-made structures.

In Missoula, we were also encouraged by BNOW sightings throughout the spring and fall of 2013. See page 11 for more information about the BNOW project and intern Kari Eneas, who led the BNOW effort this year.

The BNOW is also known as the "agricultural" owl, as it has historical ties to farmlands where it uses man-made structures for nest sites. BNOWs hunt local farm fields for small rodents that potentially damage crops. In most areas, BNOWs are welcomed by farmers and ranchers to nest in old barns and buildings. We've now banded 43 BNOWs and found approximately 20 nests.

Unfortunately, there is evidence of a declining population in northwest U.S. and southwest Canada due to loss of habitat, construction of new barns that are owl-proof, and poisoning of rodents the owls eat.

Photo by Bruce Sherman/www.pbase.com/brucesherman

BNOW chicks

Flammulated Owl (FLOW). Now in its 6th year of research, migratory FLOWs returned to many of the same territories as in years past. In fact, one nest was located in the same cavity as 2012. Unfortunately, some nests are up to 70' high, making efforts to trap and band adults and chicks difficult or impossible.

Adult FLOW

Photo by Alan Nelson/Judy Hoy

Nonetheless, we are gaining a better understanding of their mating system and site fidelity through banding. In 2013 we hung a few nest boxes to help us gather better information on this species' breeding biology. Success was immediate as one box was used for nesting. This pair impressively raised four chicks to fledging. This is an unusually high number for FLOWs, which normally raise two, less commonly three chicks. As in previous years, several other territorial pairs were heard and observed, but breeding was not confirmed. We have now banded 25 FLOWs and documented nine nests.

FLOW chicks

Our manuscript titled "Breeding Status of Flammulated Owls in Montana: With a Call for Research" was accepted for publication by the Northwest Naturalist and authored by Mat Seidensticker, Denver Holt and Matt Larson of the ORI. The paper will appear in a 2014 issue and was part of Mat's master's thesis. This information is vital for forest managers to maintain FLOW habitat, nest trees, and populations. The FLOW is listed as "sensitive" by the U.S. Forest Service (Region 1), U.S. Bureau of Land Management (Montana/Dakotas), and U.S. Fish and Wildlife Service (Region 10). The owl is also deemed a "Tier 1 Species of Concern" by Montana Fish, Wildlife and Parks.

Adult FLOW entering nest cavity

Photo by Rick Kline

RESEARCH

Snowy Owl (SNOW). The summer of 2013 marked the 22nd year of our SNOW Breeding Ecology and Lemming Population study in Barrow, Alaska. It was also a rather unremarkable year on the summer tundra, as breeding SNOWs were not observed within our study area. Correspondingly, Brown Lemming (BRLE) numbers were also very low. Although lemming numbers slightly increased in 2012, numbers were lower in 2013, yielding the sixth consecutive year of low lemming numbers. This was similar to the low lemming and SNOW years of 2001-2005.

There were approximately 15-20 SNOWs seen in the study area around Barrow. Most were adult males. Over the 22 years, we have found 239 nests and banded about 700 owls (Fig. 1).

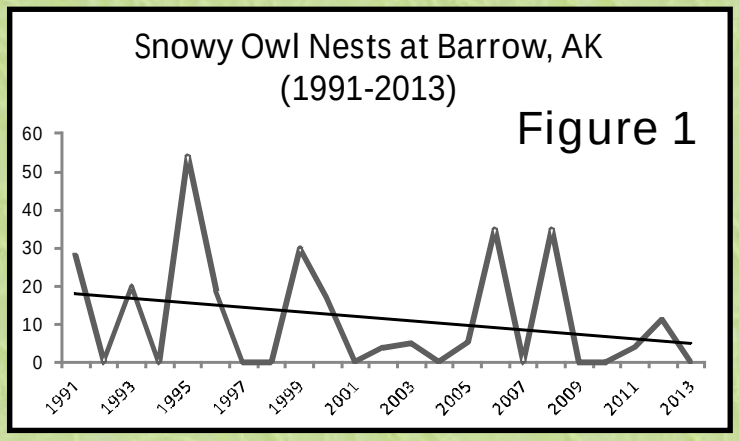
We continue advocating the use of SNOWs and BRLEs as indicators of a healthy Arctic environment in our study area, and to monitor effects of Arctic climate change. Lemmings are dependent on Arctic grasses, sedges, and forbs for nesting and reproduction. Therefore, any changes to this vegetation due to climate change could affect SNOWs, and other Arctic species.

Female SNOW

Female SNOW with lemming

ORI staff and other co-authors are currently writing the SNOW species account for the American Ornithologists Union's “Birds of North America”.

Male SNOW at nest



RESEARCH

Northern Hawk Owl (NHOW). Now in its 8th year, most of our efforts to research the NHOW have taken place on the west side of Glacier National Park (GNP) and in Flathead National Forest, where fires burned large swaths of timber in 2003.

Photo by Chris Peterson, "Glacier Park Magazine"

NHOW with starling

This spring we surveyed the usual areas and established several new routes without detecting any NHOWs. However, a late season tip from retired GNP biologist Steve Gniadek, directed us back to West Glacier, where a family group was found.

In 2008, we began surveying the east side of GNP after recent forest fires. NHOW sightings have occurred on the east side every year since the fires. Although recently fledged chicks have been seen, no actual nests have been found. In 2012, we banded our first east side NHOW. In 2013 we banded more NHOWs on the east side, including an apparent pair.

Extensive searching and hours of observation produced no evidence of breeding and we concluded a failed nest attempt occurred. Other NHOWs have also been observed without evidence of breeding (See Research Profile p 8).

Boreal Owl (BOOW).

Since 1985, we have conducted calling and nest surveys for BOOWs in high elevation spruce-fir forests in western Montana. The study was intermittent until 1995, when greater effort was put forth.

Now in its 19th year, our nest box study was disappointing in 2013. Our only nest was abandoned during the incubation period.

Photo by Chris M. Neri

BOOW

It is impossible to know the reasons behind abandonment, but food, predation, researcher disturbance, and other factors need to be considered.

During these years, ORI has found 28 nests and banded about 80 BOOWs, mostly nestlings and females. We have now gathered data on natal philopatry and site fidelity.

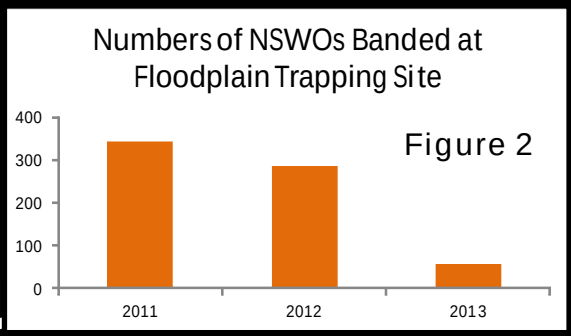
The BOOW was once thought to be an infrequent visitor from Canada. Despite being one of North America's most difficult owls to observe, we now know that BOOWs can be found breeding at high elevation forests throughout the Rocky Mountains and other western mountain ranges in the lower 48 states. Still, the vast majority of the North American BOOW populations reside in Canada and Alaska.

Photo by Chris M. Neri

BOOW

RESEARCH

Northern Saw-whet Owl (NSWO) Migration Study. Now in its third season, we experienced a dramatic decline in 2013 in the number of owls trapped during autumn migration. Over 600 NSWOs were caught at low elevations sites between 2011 and 2012, but this year we trapped only 57 owls (Fig. 2). Conversations with colleagues to the north in Canada revealed similar low numbers at banding stations. Although we know populations can fluctuate seasonally, we do not fully understand how or why these changes occur, or if our low migration numbers will correlate to lower winter and local breeding populations next year. We had no recaptures in 2013. Dedicated volunteers helped us sustain the long nights on the migration project. A special thanks to UM students Lindsey Hall, Sam Case, Chelsea Hutton, and Sara Schwarz for their time spent in the "Owl Trailer".



Photos by austin.trayser@blogspot.com

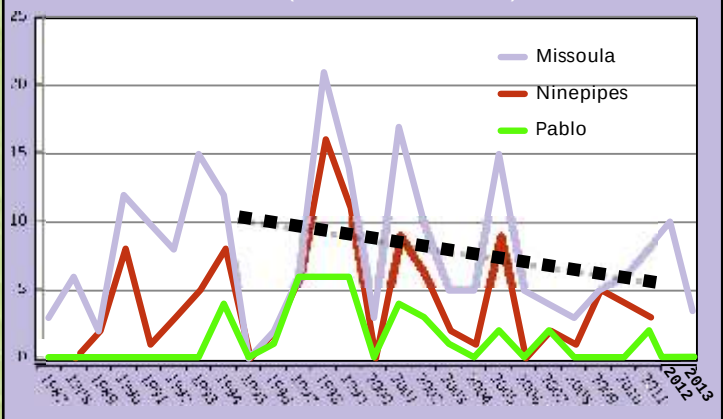
Photo by Dick Walker

Adult LEOW

Long-eared Owl (LEOW). Our LEOW study, now entering its 28th year, is one of the world's longest running studies of this species. We have recorded 235 nests and banded over 1750 individuals. After a good breeding year in 2012, we found few nests in the Missoula Valley and zero at our Pablo site in the Mission Valley. We hoped the population was rebounding after the 2012 breeding season, however, the trend for breeding numbers in our study remains downward (Fig. 3).

Figure 3

LONG-EARED OWL NESTS:
MISSOULA & MISSION (NINEPIPES, PABLO) VALLEYS, MT



The dashed line is a regression indicating a downward trend in nesting at all three sites

Habitat loss and population declines for the LEOW and most grassland species are considerable. Recently, Partners in Flight published population estimates for North American Birds. The North American LEOW population was estimated at 15,000 individuals with 9,000 in Canada and 6,000 in the U.S. This is the lowest estimate for any owl species in the U.S. (Table 1, p 9).

Photo by Christina Nealson

LEOW chick in defense posture

These estimates only bolster our opinion that LEOWs should be considered a “Species of Special Concern” in Montana, and should be further reviewed at the national level. We consider the LEOW an indicator of grassland community health.

Photo by Dick Walker

Inspecting Adult LEOW underwing lining

RESEARCH

Short-eared Owl (SEOW). SEOWs were observed in the Mission Valley throughout the winter and spring of 2013. Similarly, we observed SEOWs at Missoula Valley study sites. We had high hopes these sightings would precede a good breeding year, but we found zero nests in either valley. Unfortunately, we cannot survey all grassland sites, consequently we cannot say with certainty that SEOWs did not breed in either valley. In the future we hope to implement a citizen science program using our survey techniques to locate owls during the courtship period and delineate areas for nest searching.

Like LEOWs and other open-country species, SEOW populations have experienced dramatic declines throughout much of their North American range. ORI staff co-authored a manuscript that highlights SEOW population declines and research needs. The paper, titled "Assessing the Decline, Status, and Conservation of Short-eared Owls in North America" is in review. Travis Booms (Alaska Fish and Wildlife) was lead author of this collaborative effort with members of the North American SEOW Working Group, formed as a direct response to the serious decline of SEOW's in North America. In Montana, the SEOW is listed as a "Potential Species of Concern" by Montana Fish, Wildlife and Parks. Surveys to assess the owl's population status are critically needed.

Photo by Ashok Khosla/www.seeingbirds.com

SEOW in flight

Natural Cavity Nesting Species. Unlike our BOOW nest box study, finding natural cavities used by small obligate cavity nesting owls is labor intensive. Indeed, few nests are found annually and monitoring their success is extremely time consuming and difficult. Each spring we scour study sites, inspecting countless trees and looking into hundreds of nest holes in search of cavity nesting owls. Even when pairs are suspected of breeding, such as Northern Pygmy Owls (NOPO), in some cases we can never confirm a nest. However, during spring of 2013, the hard work of citizen scientist Dr. Steven Hiro was rewarded, as he found several NSWO and NOPO nests. Our NSWO nests were successful while NOPO were not.

Photo by Bruce Sherman/www.pbase.com/brucesherman

NOPO at nest cavity

Over the past 30 years, the ORI and others have collectively documented natural cavity nest sites for these small owl species. For example, we have found; 45 NSWO, 35 NOPO, 15 NHOW, 3 BOOW, 2 WSOW (Western Screech Owl) nests.

Our data indicate that NSWOs, NOPOs and NHOWs use different types of natural cavities in different types of trees. These findings highlight the need for forest managers to retain a diversity of snags with a diversity of cavities in their forests. These data will also benefit forest managers by identifying cavity makers and protecting snags for a host of other snag dependent species.

Our sample sizes for BOOWs are certainly too small for meaningful results. And we admit that by only checking nest boxes, we will never identify trees needed to be preserved for this obligate cavity nesting owl. Thus, we need more commitment to finding BOOW natural cavities.

It is interesting to note that NSWOs use our BOOW high elevation nest boxes where natural cavities are few, but have not used our low elevation nest boxes where natural cavities are somewhat abundant.

We have not established a rigorous study on WSOWs. However, this would be timely as WSOWs use mature Cottonwood trees in river corridors and creeks; a habitat threatened by a host of factors.

Research Profile: Northern Hawk Owl (NHOW)

by Matt D. Larson

The Northern Hawk Owl *(Surnia ulula)* is a medium-sized owl that inhabits the boreal forests throughout the northern hemisphere. The NHOW is known for its hawk-like shape and flight, and its fierce look. The NHOW hunts small mammals and birds from high perches, usually by daylight. It is one of the least studied owls in North America. Prior to 2012, there were approximately 50 known nest sites in the continental U.S., primarily located in northern Minnesota and Montana. There are also a number of indirect observations of breeding (i.e. recently fledged chicks) in a few other states of the continental U.S.

The NHOW appears to use a mix of boreal forest types throughout its range, but in Montana, Alberta, and Minnesota it appears that burned forests may play an important role in their ecology. NHOWs in Montana appear to select breeding sites in recently burned conifer forests with some component of deciduous trees (usually Aspen or Cottonwood) and near an open meadow or creek. Recently burned forests may afford small mammals an influx of food (i.e. growth of new vegetation) and NHOWs with good nest sites (snags with cavities or broken tops), hunting perches, and an open understory to detect and catch their prey. Possible threats to the NHOW are increased fire suppression, post-fire salvage logging, oil and gas development in the boreal region and management of boreal timber stands resulting in increased age homogeneity and reduced tree species diversity. The NHOW is listed as "sensitive" in Alberta. In Montana, the NHOW is listed as a species that is potentially at risk due to its small population size and restricted distribution (Montana Natural Heritage Program).

Photo by Chris Peterson

Denver Holt and Billy Norton banding NHOW chicks

In 1994, the first nest in Montana was found in Glacier National Park (GNP) by park biologist Steve Gniadek. The ORI banded chicks and one adult from this nest and analyzed prey remains. The ORI conducted casual surveys in the GNP region for the next 10 years without detecting any NHOWs; however, several sightings were reported by others. In 2005 there was a flurry of reports of NHOWs in and around GNP with several accounts of recently fledged chicks and paired owls.

The next year the ORI, in partnership with GNP, began its NHOW breeding study in earnest. The original research objective was to determine NHOW presence and distribution within the park. When ORI began this study, there was still scant information regarding nest characteristics and habitat use. Thus, any breeding information garnered from our GNP study would be valuable to both park biologists and land managers in the region. ORI documented six nest sites the first year, all located on the west side of GNP in forests burned during the summer of 2003. Since 2006, we have continued to search areas where we initially found NHOW nests, but have explored many new areas following standard owl survey protocols.

RESEARCH

We have now banded 23 adults and 37 nestlings. We have also contributed 14 new nest sites and numerous proximate locations where we know breeding occurred without knowing the exact nest location. In total, we can account for approximately 30 incidents of nesting in GNP and Flathead National Forest, MT.

We have begun to see a possible shift in habitat use by NHOWs in GNP. As habitat is ever-changing, the burned forests of our west side study area are regenerating and now many of the places where we first found NHOWs look drastically different. It is possible that NHOWs are more difficult to find or have moved on to other areas. Some research indicates a period of 2 to 8 years where post-fire forests are suitable for NHOWs. Thereafter, and due in large part to difficult hunting conditions created by the growth of new vegetation, NHOWs may move on to other areas. It is yet to be determined in our study, but NHOWs may find the more recently burned habitat of GNPs east side preferable. However, we have yet to document this shift by any banded NHOW. We remain optimistic that our efforts will be rewarded. Overall, our study has already contributed much useful information about breeding NHOWs in Montana and we look forward to future findings as we continue to monitor this charismatic predator from the North.

NANCY CLAFLIN AWARD

The 2013 Nancy Claflin Award was given to Draženko Rajković of Serbia. Draženko is part of the Serbian Owl Conservation Center. His work centers on the breeding and wintering ecology of European Long-eared Owls. The $1,000 award is unrestricted.

Serbian Owl Conservation Team

http://paigekingphotography.blogspot.com

Lula Mae Larson, newest member of the ORI Team, joined us in September

Table 1.
Population Estimates for North American Owls.

Common Name	Scientific Name	N.A. Population Estimate
Barn Owl	Tyto alba	160,000
Flammulated Owl	*Otus flammeolus*	12,000
Western Screech-Owl	*Megascops kennicoti*	300,000
Eastern Screech-Owl	*Megascops asio*	800,000
Whiskered Screech-Owl	*Megascops trichopsis*	200,000[?]
Great Horned Owl	*Bubo virginianus*	4,000,000
Snowy Owl	*Bubo scandiacus*	100,000
Northern Hawk Owl	*Surnia ulula*	60,000
Northern Pygmy Owl	*Glaucidium gnoma*	60,000
Ferruginous Pygmy Owl	*Glaucidium brasilianum*	20,000,000[?]
Elf Owl	*Micrathene whitneyi*	70,000
Burrowing Owl	*Athene cunicularia*	700,000
Spotted Owl	*Strix occidentalis*	15,000
Barred Owl	*Strix varia*	3,000,000
Great Gray Owl	*Strix nebulosa*	90,000
Long-eared Owl	*Asio otus*	15,000
Short-eared Owl	*Asio flammeus*	600,000
Boreal Owl	*Aegolius funereus*	1,700,000[?]
Northern Saw-whet Owl	*Aegolius acadicus*	200,000

Please remember: these are estimates only. These data were taken from: Partners in Flight Science Committee 2013.
Population Estimates Database, version 2013. Available at http://rmbo.org/pifpopestimates. Accessed on 04 Nov 2013.
*Global population estimates derived from various data sources.

EDUCATION

ORI education is focused on volunteer opportunities, internships, hands-on field classes, and lectures. Participants are of all ages. Conservation education is now more important than ever before. Economic woes, political party division, and an increasing public skepticism about science, have resulted in increasing challenges for conservation. Recent surveys place U.S. education literacy in math and science somewhere between 17th and 25th in the world. We urgently need to remedy this. Indeed, we need proactive conservation education at all levels. We most often emphasize children as the conservationists of our future, and this may be true, but we also need to provide more conservation education programs for adults. Many adults are eager to learn about wildlife and conservation issues, but programs are limited when compared to the opportunities for children. It is our responsibility to communicate with others who may not think like or agree with us. Adults vote, have influence, provide money, and often commit time to heartfelt causes. Ultimately, parents are their children's teachers, and influence how their children view, value, and interact in the world.

Photo by Rebecca Richter

Volunteer Researchers. Volunteers are an integral part of the Owl Research Institute, and contributed thousands of hours to our programs in 2013. We are enormously grateful for the support they provided, and could not achieve our goals without them.

Volunteers participate in year-round research, enter and manage data, maintain facilities and equipment, foster partnerships, help build a foundation for high-quality programs for the public, often assist in presenting these programs.

In turn, we offer volunteers valuable hands-on field experience in wildlife research, public communication, recognition for their efforts, and other services.

This year volunteers came from the Avian Science Center, Audubon Societies, University of Montana, Montana Conservation Corps, Max Planck Institute of Germany, and some were private citizens.

We are especially grateful to Lindsey Hall, Kari Eneas, Chelsea Hutton, Sara Schwarz, Taylor McKee, Rose Wright, Sam Case, and Bob Taylor for volunteering on our Missoula projects. Yumi Kawaguchi, of Fairbanks, AK, and Patrick Herzog of Germany volunteered for two weeks and one month, respectively, on our Snowy Owl and lemming project in Barrow, AK.

Hannah Prüter with an American Kestrel.

EDUCATION

Internships and Seasonal Employees.

Throughout the years we have hosted a number of interns. Interns are typically high school or undergraduate students. The overall objective of this program is to provide a deeper understanding of wildlife research field methods, study design, life history traits, and the importance of long-term study and monitoring. In addition, students often participate in literature searches and data analysis. Occasionally they take the lead in their own projects. A typical internship lasts one field season.

This season we were pleased to offer internships to Lindsey Hall and Kari Eneas, both of the University of Montana. Lindsey is a senior in the Wildlife Biology program, and a noted UM track and field athlete. She worked on several projects including: Boreal Owl, Northern Hawk Owl, Long-eared Owl, and Northern Saw-whet Owl migration. She experienced many aspects of field research, including success and failure. She learned by participating in surveys, setting nets, removing captured owls, banding, sexing and ageing, interpreting feather molt, measuring and data recording.

Kari Eneas is also a senior in Wildlife Biology at the University of Montana, and a trainee for the Confederated Salish and Kootenai Tribes, Flathead Reservation, Department of Wildlife, MT.

Kari helped establish a Barn Owl survey protocol and tested her methods. She visited many of the Mission Valley's barns, old structures, and natural sites looking for evidence of Barn Owls. She also created a Barn Owl informational pamphlet which she distributed to farmers, ranchers, and other land owners. When not speaking with land owners, Kari learned by participating in setting nets, removing captured owls, banding, sexing and ageing, interpreting feather molt, measuring and data recording.

If you're interested in volunteering or becoming an intern, contact: Jessica Larson at owl institute@hotmail.com

Intern Lindsey Hall, University of Montana with NSWO chick

Intern Kari Eneas and Denver banding BNOWs

Matt discusses owl adaptions with Sentinel H.S. science teacher, Kate Dircksen

EDUCATION

Day in the Field. For over 20 years, we have donated a Day in the Field (DIF) with researchers. Essentially, ORI provides an opportunity for the public to join us for a day. These donations typically go to schools, community groups, and charitable fundraisers. Charitable groups receive the donation and we provide donors with a day in the field, observing and learning about research, natural history, and wildlife conservation. In 2013, recipients included: American Heart Association, Five Valleys Audubon, Glacier Institute, Glacier National Park Conservancy, Montana Audubon, Montana Land Reliance, Montana Natural History Center, KUFM Montana Public Radio / NPR, Salish Kootenai College Public TV, Sentinel High School, Wild Skies Raptor Center, Go Red For Women.

A Day in the Field near Missoula, Montana

Classes, Lectures and Media Programs

- Field Classes: Five Valleys Audubon, MT; Grizzly Peak Retirement Home, MT; Montana Academy Youth Home, MT; Montana Natural History Center, MT; Montana Audubon, MT; USFWS North Slope Science Culture Camp, Barrow, AK, YWCA GUTS, MT.
- Indoor Lectures: Birds of Vermont Museum, VT; Bridger Raptor Festival, MT; Buffalo Hills Terrace Retirement Community, MT; Community Program in town and at Tundra Buggy Lodge, Churchill, Manitoba, Canada; Coeur d'alene Audubon, ID; Ohio Ornithological Society, OH; Flathead Valley Audubon, MT; Glacier National Park, MT brown-bag lunch lecture series; Glacier Institute, MT; Grizzly Peak Retirement Community, MT; Yellowstone Valley Audubon, MT; Swan Valley Ecosystem Center, MT; Frenchtown Elementary School Sciencepalooza, MT.
- Interviews: We participated in two significant radio programs at the end of last December and in spring 2013. The first was Bird Note, a program highlighting compelling stories about the life of birds. This syndicated program reaches over 200 public radio stations, and has an online listening audience (See www.birdnote.org). The second, Jungle Jack's Zooniacs is an original program featuring Jack Hanna, from the Cincinnati Zoo, OH and famed wildlife animal TV host of "Into the Wild". This show is made by kids for kids and is broadcast through Big Valley Radio, Whitefish, MT. The program is broadcast worldwide (See www.bigvalleyradio.com or www.junglejackzooniacs.com). We conducted an in-the-field question-and-answer interview with three teenage reporters while observing Snowy Owls on their wintering grounds in Montana.

Students dissect pellets at the Frenchtown, MT, Sciencepalooza

LANDOWNER PROFILE

For 27 years, Charlie and Nancy Deschamps have allowed us to conduct research on their ranch near Missoula, MT. The ranch has been in the Deschamps family since 1877. Charlie and Nancy have farmed and ranched on their property since 1974.

With farm and rangelands, shallow hills, seasonal creeks, a reservoir, and deciduous woody draws, the ranch maintains large open space and a diversity of native prairie plants and animals within a few miles of Missoula.

Not only have Charlie and Nancy granted us permission to research on their land, but we have become good friends as well. We've dined at the ranch house, played basketball, attended a few Lady Griz games, and we've even branded calves.

Due to their kindness and interest in wildlife, our Long-eared Owl project is one of the longest running studies on this species in the United States. In fact, it is one of the longest running wildlife biology research projects in the world.

We often forget about private land and its owners in wildlife conservation. However, in the U.S., most land is privately held by a diversity of ownerships, in a diversity of habitats.

This is often exemplified in the vast landscapes of the western United States. Yet small tracts of land, coastlines, and woodlots are also important. Roughly 1.4 billion acres, or 60% of the U.S. land area, is privately owned.

Charlie and Nancy Deschamps

When much wildlife was wiped out during the settling of our country, many species found refuge on private lands, and still do. Indeed, some species benefit from a mix of farming and ranching adjacent to native habitats. In fact, some wildlife species finding refuge on private lands were used in reintroduction projects or naturally re-colonized areas where they were decimated by human activities. The Deschamps Ranch is a good example of that relationship.

In the Missoula Valley, where development is ongoing and habitats are steadily lost, ranches such as the Deschamps' ranch, and others, are refuge to native animal and plant communities.

The ORI is especially indebted to Charlie and Nancy, and private land owners like them, for allowing us access to their lands, and for outright protecting their lands and contributing to wildlife conservation.

POLAR BEARS INTERNATIONAL (PBI)

During the Tundra Connections Program in Churchill, Manitoba, Canada, we cruised daily on Tundra Buggy 1. Our driver and PBI guide, BJ Kirschhoffer, aligned us perfectly to view Polar Bears and other wildlife.

Here on the tundra, we conducted four live webcasts which included: Superstars of the Arctic, Wildlife on the Move, Amazing Arctic Animals, and Think Like a Scientist.

We also joined representatives from Google Earth to conduct two live webcasts in which we discussed applications of Google mapping technologies to wildlife research.

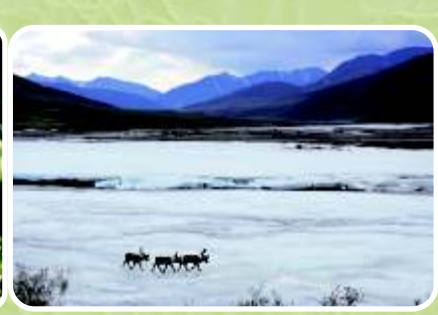
These programs reached 5300 students from elementary to high school grades. Additionally, 40 science teachers attending a regional National Science Teachers Association Conference, in Portland, OR, participated in one webcast.

We also conducted two public lectures: one for the residents of Churchill, and the second for the tourists at the Tundra Buggy Lodge (www.frontiersnorth.com) on the tundra. Both talks were on Snowy Owls, Lemmings, and Arctic wildlife conservation.

Denver with webcast panel

Tundra Buggy




ARCTIC WILDLIFE CONSERVATION

There is no doubt regarding climate change. How this will affect wildlife of the Arctic ecosystem is unknown. There is much conversation regarding Polar Bears and Snowy Owls. And this is okay, as they are two of the most high-profile species and can be indicators of Arctic health in both marine and terrestrial ecosystems. And they generate public interest, sympathy, and support.

However, there is much more to the story. It'is about the Arctic ecosystem. The Arctic marine and terrestrial ecosystem maintains about 25-30 species of obligate Arctic animals, not including fish. These species rely on the Arctic for most of their lifetimes, and most are mammals. They do not migrate to warmer climates, such as most species of Arctic birds. Of these species, about half are terrestrial and half marine. Examples include: Alaska Marmot, Arctic Hare, Arctic Fox, Bearded Seal, Beluga Whale, Bowhead Whale, Caribou, Collared Lemming, Hooded Seal, Muskox, Polar Bear, Ringed Seal, Walrus, and others.

Additional species are also linked to the Arctic, yet have ranges that include the Arctic, Sub-Arctic and Temperate zones. These include: Arctic Ground Squirrel, Brown Lemming, Collared Pika, Dall Sheep, Ermine, Gray Whale, Wolverine, and others.

Birds, too, call the Arctic home. Many waterfowl and shorebird species breed during Arctic summer, yet migrate to avoid Arctic winter. Others, such as Snowy Owl, Willow and Rock Ptarmigan, Snow Bunting and Raven can do both. Nonetheless, all will feel the pinch of climate change. Some species may benefit from climate change, while others may not.

It's also not just about ice, but oceanic phytoplankton and terrestrial vegetation food webs, melting permafrost, changes in ocean and freshwater temperature and chemistry, vegetation changes, and other links.

How will climate change effect the many evolutionary adaptations that plants and animals have to survive Arctic conditions? Will Polar Bears and Snowy Owls overheat? Will white animals have to evolve darker colors again? Will plants get taller? These are just some of the things to think about.






Photos by Daniel J. Cox/Natural Exposures.com

CONSERVATION PARTNERSHIPS

Ultimately, conservation is about land preservation and stewardship. To reach these goals, communication skills are essential in dealing with agencies, as well as the public. Our partnership with the groups listed below exemplifies our commitment to work together. For example, our information contributes to Montana Important Bird Conservation Areas (IBA), Montana Vertebrate Distribution, Montana Bird Conservation Partnership, Montana Bird Records Committee, and the Montana Natural Heritage Program. Our information is applicable to groups wherever we work, and to any interested parties throughout the U.S. and world. Our closest partners include:

Alaska

Alaska Fish, Wildlife and Parks. Permits and research sharing for Snowy and Short-eared owls.
Barrow Arctic Science Consortium. Community lecture series - Snowy Owls.
North Slope Borough, Department of Wildlife. Information sharing.
Ukpeagvik Inupiat Corporation (UIC). Land access, permits, and housing.
Umiaq (IUC). Permits, office, housing and logistical help.
US Fish and Wildlife Service. Information sharing.

Montana

Avian Science Center, U of M. Provides volunteer field assistance, and works to establish cooperative projects.
Flathead Reservation. Permits, land access, information sharing, interns.
Glacier National Park. Permits, land access, information sharing for Northern Hawk Owl project.
Marshall Woods Project. Cooperative partnership with U.S. Forest Service and Lolo Restoration Committee for forest restoration efforts and FLOW conservation in the Rattlesnake National Recreation Area.
Montana Bird Conservation Partnership. A state run collective group that disseminates information and suggest strategies for Montana bird conservation.
Montana Fish, Wildlife and Parks. Permits, land access, information sharing.
US Fish and Wildlife Service. Permits, land access, information sharing.
US Forest Service. Research funding for Northern Hawk Owl, land access, information sharing.

Private Landowners

A special thanks for allowing our research and education programs to be conducted on your lands.

OTHER PROFESSIONAL PARTNERSHIPS

Distill Productions. A commercial and documentary production company helping organizations define their brand. The ORI and Distill are currently working on videos to present and promote ORI's mission and research on owl and wildlife conservation issues. See www.distillproductions.com

Explore: Pearls of the Planet. Part of the Annenberg Foundation, to provide a visual recognition of our planet's natural resources. The ORI and Explore are using live cameras to view the nocturnal life of owls. See www.explore.org

Explore Green. The ORI is a member Explore Green. This is the largest speaker's bureau and eco-management agency in the U.S. It is exclusively for scientists, explorers, adventurerers, climate specialists and Eco-celebrities. Explore Green promotes their speakers and causes around the world. See www.exploregreen.com

Montana Conservation Corps. MCC visited the ORI for two days of maintenance of buildings, general clean-up, and construction of nest boxes.

Natural Exposures. Dan and Tanya Cox generously share their award winning wildlife photographs for our publications and presentations. See www.naturalexposures.com.

Nikon Corporation. Nikon provides high-quality optics for ORI staff, and promotes the ORI. Denver Holt is a member of their Pro Staff team. See www.nikonbirding.com.

Triple Creek Ranch. We serve as natural history guides for their clients. In 2013 we worked with Triple Creek to establish a small owl nest box monitoring program to determine what species might call Triple Creek their home. This resort consistently ranks in the top five private resorts of the world. See www.triplecreekranch.com.

Polson Chamber of Commerce. We worked closely with coordinating the wildlife watching tourism associated with the Snowy Owl migration, and other wildlife in the Mission Valley, MT.

LIVE OWL CAMS. In partnership with Explore.org (www.explore.org) we launched two live web cameras in 2013. The first camera was set on a Great Horned Owl nest located at the ORI office in the Mission Valley, and the second camera set on a Long-eared Owl nest in the Missoula Valley.

The cameras were outfitted with infrared systems, and microphone. Amazingly, we could now peer into the nocturnal lives of these owls, see and hear what they had to say 24/7. We gained much insight into their bi-parental behaviors as males and females conducted their specific duties to raise a family.

In particular, we were able to observe motherhood, such as incubation, brooding, grooming of chicks, feeding, chick development, and behaviors that we were previously unaware of. We marveled to watch the female owls huddle down to protect their chicks during extreme spring blizzards, and the males visiting nests in the evenings to deliver food for their families.

Two chicks of two eggs fledged from the Great Horned nest, and five chicks of five eggs fledged from the Long-eared nest.

We were very pleased with the social media interest generated by our cameras and the owls. Approximately 500,000 visits were logged during the nesting season in real-time, and collectively over 1 million visitors from around the world tuned in to watch the family life of these owls either live or in re-run.

These cameras joined the collection of fascinating wildlife cameras that Explore.org has initiated worldwide as part of its Pearls of the Planet series. Pearls of the Planet have provided millions of streaming hours to people around the globe and have given the ORI a new avenue for public interaction and education.

Indeed, we answered many great questions during our hour-long live chat, and on the daily message boards. We look forward to this continuing partnership and are excited to learn what we might see and hear in 2014.

Stay tuned at www.explore.org and our website www.owlinstitute.org for the latest news about our owl cameras. Excerpts can still be accessed by visiting the Explore site. We thank Fred Deschamps for allowing us to set a camera on his land.

NATURAL HISTORY TOURS

Our affiliate, Wild Planet Nature Tours, provides the following tours, led by Denver Holt, Megan Fylling, and Matt Larson:

WILD PLANET nature tours






WINTER RAPTOR WORKSHOP
Western Montana

GUATEMALA
Antigua, Tikal, and more

MONTANA OWL WORKSHOP
Western Montana

ALASKA
The North Slope of Alaska at Barrow

WHERE THE DESERT MEETS THE SEA
La Paz, Baja California, Mexico

YELLOWSTONE NATIONAL PARK
Yellowstone National Park, Montana

- Dates announced later. See www.wildplanetnaturetours.com.
- Most tours cater to small groups and individuals.
- Denver, Megan and Matt also guide a few specialty tours and and an owl education workshop for Victor Emanuel Nature Tour Company, Austin, TX. VENT is the largest nature tour company in the world. See www.ventbird.com.

For more information, visit www.wildplanetnaturetours.com.

BUILDING MAINTENANCE SPONSORSHIP

We are upgrading buildings, and would like to hear from any individuals, corporations or foundations interested in sponsoring this task. The farm house needs energy efficient windows, and some foundation work. An energy efficient wood stove is desirable. A new roof is needed on the barn. Please contact ORI if interested in a sponsorship.

Photo by Ronan Dugan

Photo by Ronan Dugan

TRAPPING STATION SPONSOR OPPORTUNITY

Due to high costs, we are asking for a corporation, foundation, or individual to sponsor the Northern Saw-whet Owl migration sites for 2014. The sponsor would be recognized only if they elected to, and thus the site would be honored in their name. Contact ORI if interested.

2013 WISH LIST

In addition to donations and grants, the ORI is in need of other contributions. Among many gifts asked for and received in 2013, an anonymous person donated interior wood finishing for the storage building, and metal roofing for another building. Thank you, your donation is appreciated!

Our wish list for 2013 includes:

- ATV – 2 newer four-wheelers
- Banding equipment (banding pliers, nets, rulers, scales, calipers)
- Books, journals, wildlife art
- Camper trailer (newer model)
- Climbing Ropes & Gear
- Flatbed ATV trailer (heavy-duty)
- Power & manual tools (saws, drills, hammers, etc.)
- Riding lawn mower (large)
- Snowmobiles and trailer (newer models)
- Utility Trailer
- Vehicle (fuel efficient)
- Wall tent (large)
- Wood stove & pipes (modern variety)

Our programs would not be possible without your generosity.

Corporate Sponsors

ABR Incorporated, AK
Barrow Arctic Science Consortium, AK
ConocoPhillips, AK
D.H. Griffin Contracting, SC
GlaxoSmithKline Biologicals, MT
Grizzly Woods Services, MT
Kettle House Brewing, MT
Natural Exposures, MT
Nikon Inc., NY
Patagonia, MT
Triple Creek Ranch, MT
Umiaq Corporation, AK

Foundation Sponsors

Adobe Systems Matching Program
Amber Foundation
American Express Giving Program
Banbury Fund
Bobolink Foundation
Cinnabar Foundation
Charlotte Y. Martin Foundation
Community Foundation of North Texas
Fanwood Foundation
Fidelity Charitable Gift Fund
Glacier National Park Conservancy
GlaxoSmithKline Foundation Matching Gifts
Hess & Helyn Kline Foundation
JP Morgan Chase Foundation
Kendeda Foundation
Lawrence Foundation
Microsoft Matching Gifts Program
My Good Trust
Norcross Wildlife Foundation
Pleiades Foundation
Plum Creek Foundation
Seligson-Johnson Foundation
William H Harris Foundation
Woods Foundation

Government Sponsors

Bureau of Land Management, MT
Flathead National Forest, MT

NonProfit Sponsors

Five Valleys Audubon, Missoula, MT
Mission Valley Audubon, MT
Montana Audubon Wildlife Fund, MT

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.

Name_____

Size: 2"_____ 3"_____ 4"_____ 5" _____

Animal, Bird, Plant _____

Donation amount enclosed $_____

Address_____

City _____

State_____ Zip_____

Phone ( )_____

Email _____

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 names as a courtesy to our constituents, for many 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 measure of privacy.

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~ wildlife conservation through research and education ~

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