

# RAPTOR VIEW

## RESEARCH INSTITUTE

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### LETTER FROM THE PRESIDENT...

Hello, everyone. It's fall and once again, time for our annual newsletter. It is hard to believe it's been a year since I last sat at the computer writing this letter reflecting on the year's projects, events, general goings on and planning for future projects. This has been a good year for RVRI, and I look forward to sharing with you an overview of what we have accomplished.

It's the 5th of November and less than a week since we completed our first season of research and educa-

tion from Nora Ridge. We had a seasoned crew on site, with Sharon Fuller returning for her sixth year, along with experienced trappers Tim Pitz and Vince Slabe. In addition, we were very fortunate to have former Willard High School student Tyler Veto (photographer extraordinaire and much more!) putting forth a huge volunteer effort. This season we banded nearly 90 raptors total, comprised of eight species, including our **100th** Golden Eagle!

We were very excited to have RVRI biologists attending national and international research conferences this fall. Tim attended the annual Raptor Research Foundation conference. This was held in Veracruz, Mexico where up to four million migrant raptors

are counted annually! Tim presented results from our Stable Hydrogen Isotope Project; his presentation drew a lot of positive review from peers. Sharon attended the Bridger Raptor Festival in Bozeman, Mont. This annual festival has been going on for less than five years and already has drawn much national attention. Both these events are great places to make professional contacts and share research data and ideas.

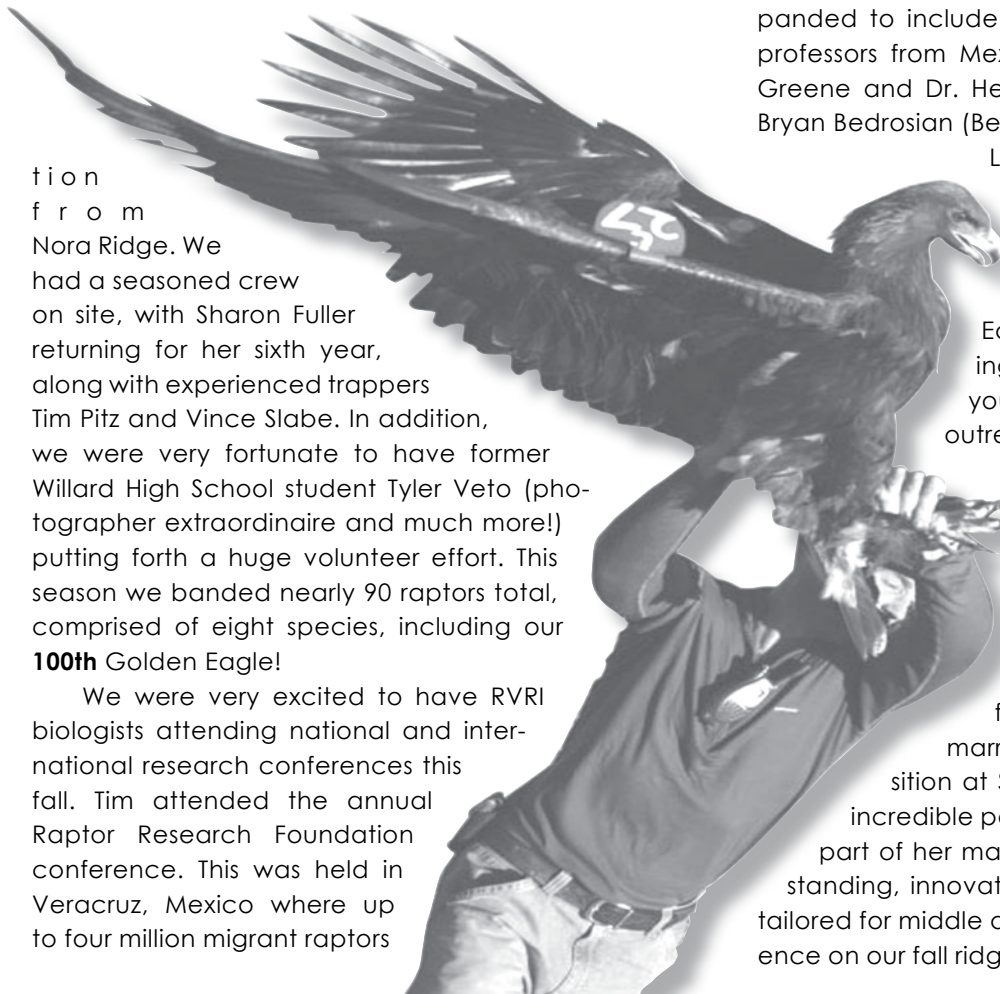


*RVRI President  
Rob Domenech*

Collaboration and data sharing with other organizations has always been a focus of RVRI. We feel this is a great way to expand our research while bringing in the expertise of others. Our cooperative projects have expanded to include work with researchers and college professors from Mexico to Canada, including Dr. Erick Greene and Dr. Heiko Langor (University of Montana), Bryan Bedrosian (Beringia South Research, Wyo.), Jim

Lish (University of Oklahoma), Rick Doucette (Northern Arizona State University) and many others. These mutual projects range from examining heavy metal toxins in Golden Eagles and Osprey to creating exciting ways to involve and educate area youth with our research and education outreach.

Speaking of education and youth, this was the first season Noel (Nies) Nesmith (RVRI board member and biologist) was absent from the fall field work. Noel recently completed her master's in education from the University of Montana, got married and took a full-time teaching position at Seeley-Swan High School. Noel is an incredible person and an integral part of RVRI. As part of her masters degree, Noel designed an outstanding, innovative education curriculum on raptors tailored for middle and high school students. Noel's presence on our fall ridgeline trapping stations will be missed,



## EXTREME WEATHER CAUSES SETBACKS



This season we witnessed some of the most extreme weather in our seven years of working along the Rocky Mountain Front. Perhaps the most severe example occurred during the late afternoon and evening of Sept. 6. We left early that afternoon, due to swirling winds and ominous dark, hanging cumulous clouds to the north. The following day, we arrived on site to find the Main and West blinds (constructed of 3/8 inch plywood and 2x2 inch framing and weighing 400+ pounds), completely destroyed, with debris strewn more than 100 meters down the mountain! This was like nothing we had ever witnessed before or even imagined. Interestingly, the Observation blind 12 meters from the Main blind was untouched.



Tim, Rob, Vince and 'Trout' assess damage after wind storm destruction

We were stunned and disheartened to say the least. Wasting little time, we began the arduous process of piecing the splintered remains back together. Through a monumental effort and teamwork, we were back to square one. Only one day behind, the blinds were up again, however this time cabled to the ground!

## LETTER (CONT. FROM PAGE 1)

but her profound contributions and continued involvement with RVRI will hopefully carry on for many years to come. Thanks, Noel.

Getting our message out to the general public, as well as the scientific community, is a high priority at RVRI. For instance, our Osprey and Golden Eagle research has been featured as front-page stories in *The Missoulian*, *The Great Falls Tribune*, and *The Helena Independent Record*. This past year, Tim had his first article published in *Three Rivers Lifestyle* magazine. In addition, Becky Lomax, a Montana-based freelance writer, has been very diligent in keeping up to date with our projects. Through Becky's efforts, we have had articles in *National Wildlife*, *Montana Outdoors*, and *Missoula Living*. In the meantime, we are anxious to take this winter to write up some of our research findings for submission to various scientific journals.

As we continue to move forward, we look ahead to building on our research, educational outreach and community service. In closing, I hope that you will consider RVRI for a tax-deductible contribution. Your support is essential and ensures the continuation of our research and education programs. Thank you very much!

Best Regards,

*Rob Domenech*

<b>Board of Directors</b>	<b>Rob Domenech</b> President Missoula, MT	<b>Kathy Grey</b> Secretary Missoula, MT	<b>Victoria Parks</b> Treasurer Missoula, MT	<b>Kelly Castleberry</b> Director Clinton, MT	<b>Barry Ambrose</b> Director Moiese, MT	<b>Noel Nies</b> Director Missoula, MT
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## GOLDEN EAGLE WING-TAG UPDATE



RVRI has been applying vinyl wing-tag markers on all captured Golden Eagles since 2001, and to date, more than 88 migrant eagles have been marked at our station. We have found this technique considerably more effective than banding alone as a means of identifying individuals and receiving return information on banded birds. Studies have shown that leg bands alone have a return rate of approximately one percent. Therefore, of every 100 birds banded, on average only one will be recovered. To the contrary, we have placed wing-tags on only 88 eagles and already have yielded eight re-sightings with four of those documenting the exact alpha-numeric code on the tag. These individuals have been observed as far away as Mexico, New Mexico, Alaska and Wyoming, as well as in Montana. Several of the sightings have occurred years after the original capture.

An example of this is the eagle with tag number C-09, sighted and photographed feeding on a raccoon carcass in Wyoming on March 23 of this year. This eagle was banded as a juvenile on the 25th of October 2004 and had an isotope signature indicating a natal origin in the Mackenzie Mountains of the Northwest Territories. This bird has survived the difficulties of adolescence, and it is encouraging to see it has endured the hardships of migration. With the continuation of this technique we hope to further understand the movements of eagles captured at our site.

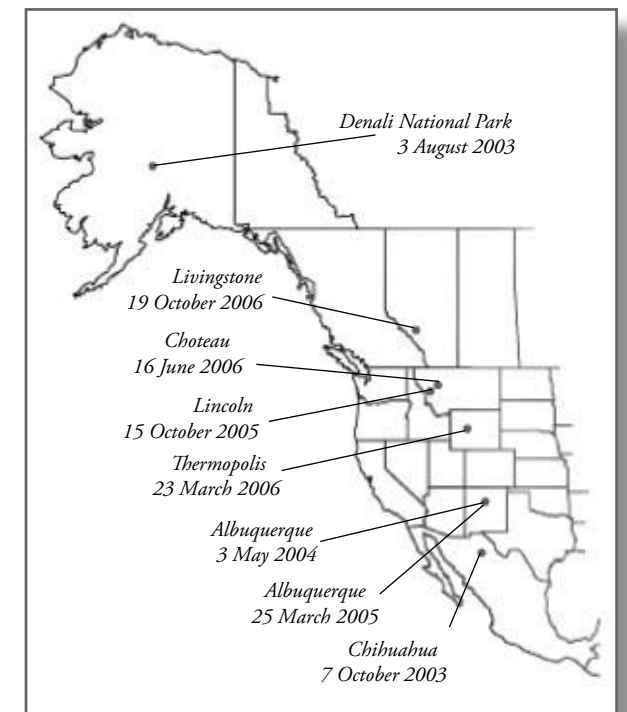


Measuring the wingspan of Golden Eagle moments before release



Tom Warren photo

Wing-tagging a hatch-year Golden Eagle



Wing-tagged Golden Eagle re-encounter locations

# EDUCATION



**R**VRI continues to offer free, hands-on outdoor education workshops for local school groups, youth homes, college students, the general public, and others. We feel that "the informal, non-traditional classroom" is a great way to augment conventional approaches to learning while exposing students to a very unique outdoor education experience. We are able to involve students from a variety of backgrounds and circumstances in all aspects of raptor research and introduce them to key ecological principles, raptor ecology, and conservation biology.

## RVRI'S NEW EDUCATION CURRICULUM • • • • •

**R**VRI now offers a comprehensive education curriculum designed and written by Noel Nies-Nesmith as part of her masters degree in education. Noel delicately merges field research techniques and classroom learning into an informative, fun, and very complete format designed primarily for middle and high school-age students. However, people from all ages and backgrounds could benefit greatly from her teachings. *Please contact us for more information on this exciting curriculum.*

## NORA RIDGE EDUCATIONAL PROGRAMS • • • • •

**T**his season, we conducted numerous educational programs from Nora Ridge. Nora offers an exceptional 360 degree view of the surrounding terrain, great views of the migrating raptors, and excellent banding opportunities. Visiting groups included **Seeley-Swan High School, Willard Alternative High School, Missoula Youth Homes, Glacier Institute, National Audubon Society** and, **University of Montana**, among others.

RVRI incorporates a very interactive approach to education. We always directly involve visitors in our work, encouraging them to help spot, identify, count, and process the migrant raptors. All the while, we offer natural history information on the raptors and discuss our research in detail.

## U OF MONTANA / FLAGSHIP YOUTH PROGRAM • • •

*This program provides positive youth development for Missoula-area school kids.*

## OSPREY CITIZEN SCIENCE • • • • •

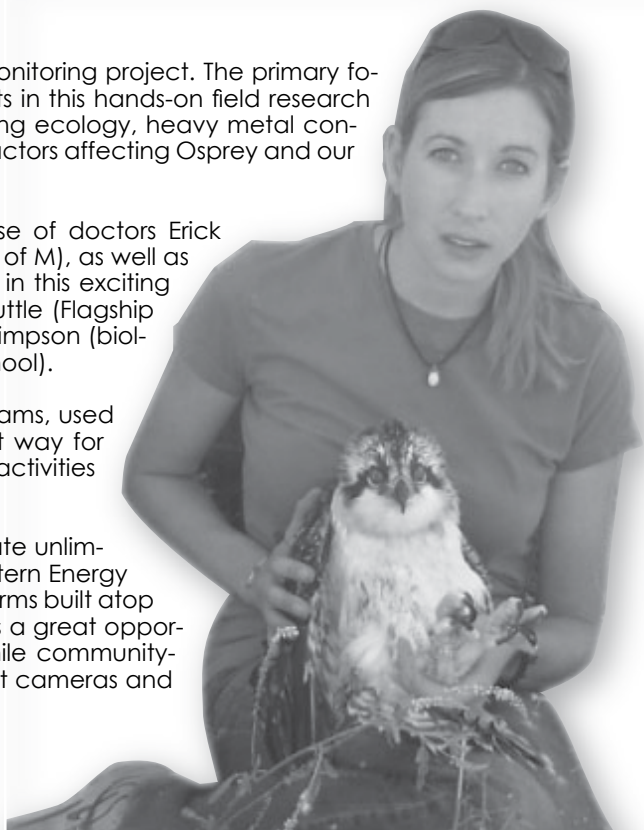
### Hellgate High School and Willard Alternative High School

**T**his is the second year of the Osprey Citizen Science monitoring project. The primary focus of this project is to directly involve Flagship students in this hands-on field research project, while collecting valuable scientific data on nesting ecology, heavy metal contaminants, baling twine issues, and other anthropogenic factors affecting Osprey and our environment.

This partnership brings in the volunteer scientific expertise of doctors Erick Greene and Heiko Langor of the University of Montana (U of M), as well as several U of M student interns. Other instrumental players in this exciting project include Emily Brock, Lisa Beczkiewicz and Anna Tuttle (Flagship program coordinators) and Dave Oberbillig and Charlie Simpson (biology teachers for Hellgate High and Willard Alternative School).

As part of this project, we will be installing two nest webcams, used to record detailed nesting behaviors. This will be a great way for students, researchers, and others to view intimate nesting activities that otherwise would go unnoticed.

Already, Dave Taylor, of DTR Roofing, has offered to donate unlimited bucket truck time to access nest platforms. Northwestern Energy also will donate bucket truck time for those nest and platforms built atop power poles (see *research section for more details*). This is a great opportunity for local businesses to get involved in this worthwhile community-based project. We need help raising the funds for the nest cameras and related hardware for this exciting program.



*Biologist Brandi Powell volunteers time for our Osprey Research Project*

# EDUCATION



## SEELEY-SWAN HIGH SCHOOL RAPTOR RESEARCH PROJECTS • • • • •

**T**his project focuses on Mary Johnson's Seeley-Swan High School sophomore biology class and was initiated in 2005 by Mary, Bob Petty (National Audubon Society) and Ken Wolf (Grounded Eagle Foundation) through a grant from the Liz Claiborne Art Ortenburg Foundation.



Mary's class visits our fall banding station several times per season, learning first-hand about field biology, raptor migratory ecology, and natural history. They are astute apprentices and quickly become engrossed in spotting, banding, and working with the raptors.

*Vince w/ Sharp-shinned Hawk and students from Seeley-Swan High School*

Similar to last year, we are working with student groups throughout the winter and spring on several raptor research projects of their choosing. RVRI biologists help guide the students through the scientific process and facilitate their research projects.

This year the student research projects include lead poisoning in Golden Eagles, American Kestrel nest site selection (natural cavities vs. artificial nest boxes), Red-tailed Hawk nesting ecology, and Osprey nest site selection.

We always look forward to working with these student groups. They will present their research findings at a community-based forum at the end of the school year. We look forward to seeing these amazing presentations. Even though we are there to educate the students, we always gain new information about their study subjects that we (as experts) didn't formally know. We love this aspect of the project and look forward to this complete learning experience for all.

## MISSOULA YOUTH HOMES • • • • •

**R**VRI still conducts several field trips per year for the Missoula Youth Homes (MYH). These kids were part of our very first educational outreach programs. They are always enthusiastic and have experienced a unique view into wildlife conservation that few people ever see. The original kids have moved on, and new ones have come to the program.



*Tom Roy Youth Group releases juvenile Cooper's Hawk*

It is amazing to see the progression from tentative onlookers to active, in-the-field participants. We feel they will forever remember their experiences on the mountain with us and the raptors, taking with them an understanding of raptor natural history and conservation. We look forward to more visits from these residents.

Experiencing these awe-inspiring predators up-close and personal and learning about their natural histories, and the daily challenges they must face to survive in the human-altered environment makes for a life-long appreciation of these truly extraordinary creatures.

# RESEARCH

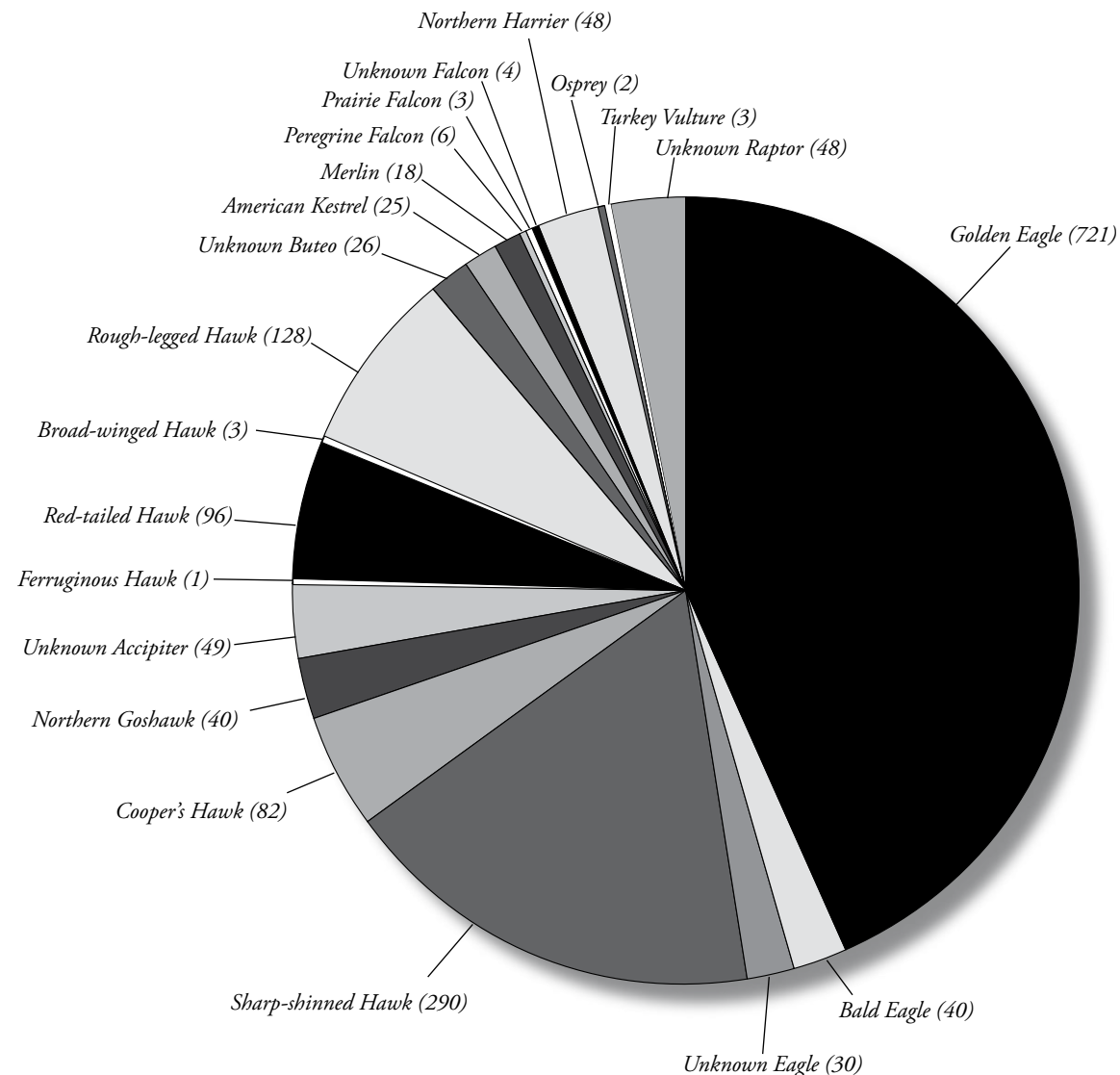


## GOLDEN EAGLE & FALL RAPTOR MIGRATION

This fall we successfully completed our eighth season of research along the Rocky Mountain Front and first complete season of counting and banding from Nora Ridge. The numbers and species composition of migrants at Nora Ridge were very encouraging, and the 360 degree view allowed us to detect passing migrants in all directions.

## COUNT TOTALS

We observed a total of 1663 raptor migrants, in 260 hours of observation comprised of 15 species including Turkey Vultures. We counted 721 Golden Eagles, comprising 43% of total observed migrants. Unseasonably overcast and snowy conditions from Oct. 15 – 21, typically our peak Golden Eagle migration period, limited us to only 9.5 hours of observation for that entire week, compared to roughly 50 hours for the same time period during an average year. Being unable to count during this critical migration period, no doubt accounted for our overall lower than expected total.



# RESEARCH



## NORA RIDGE BANDING SUMMARY

Overall, our pilot banding season at Nora Ridge was a success and a great learning experience for the crew. Going into the season we knew we would be faced with the challenges of learning the particulars of a new site. As is always the case in breaking in a new site, subtle nuances in the behavior and flight of the migrants can only be discovered through time spent in the field.



Bryan, Heiko and Rob examine wing molt on an adult Cooper's Hawk

We positioned our station on the northern end of Nora Ridge. This location was chosen for two reasons, one being that it was easiest to access while hauling heavy gear. The second more important reason is that this location provided excellent viewing positions in all directions, for counting the migrants while also putting us in plain view of the approaching migrants for trapping.

As we observed the flight of the raptors moving through the site, we began to see a clearly defined pattern. This flight path was productive for monitoring and trapping all raptors, however was not conducive for trapping large numbers of eagles. Eagles are notoriously difficult to capture, as compared to most of the other raptors we band, in part due to their large size and extreme wariness when approaching the banding station.

Over the years, we have noticed that eagles prefer to move on the lure through a "contour attack" approach. In this way, these huge predators can sneak up on and ambush their prospective prey. Next season we will position our banding station farther down ridge, directly in the flight path of the south bound migrants, making it relatively easy for these large bodied birds to come down on the lures. Though we fell short of our expected number of captured Golden Eagles, we did quite well with some of the other species including Sharp-shinned Hawks and Red-tailed Hawks. In total, we banded 82 raptors during this pilot season. This includes our **100th** Golden Eagle since the inception of this project! We look forward to next year and building on what we have taken from this year's experiences.



Carefully riveting a USGS band to a Golden Eagle



Great care is taken when applying wing-tags

## MANUSCRIPTS IN PROGRESS

**RVRI biologists are currently working on several manuscripts to be submitted for publication in 2007.**

- Estimating Natal Origins of Migratory Golden Eagles Using Stable-Hydrogen Isotopes
- Estimating Natal Origins of Northern Goshawks Using Stable-Hydrogen Isotopes
- Golden Eagle Morphometric and DNA Sexing Study
- An Increase in Broad-winged Hawk Sightings and Encounters in Montana
- Comparing Wing-Tags and Standard Banding for Golden Eagle Re-Sighting/Encounters
- Heavy Metals Analysis of Missoula Valley Osprey

# RESEARCH (CONTINUED)



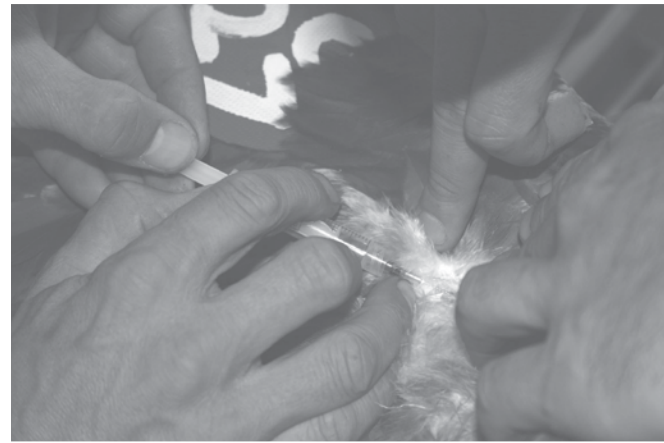
## GOLDEN EAGLE MORPHOMETRIC AND DNA SEXING PROJECT

Morphological measurements such as wing-chord, tail length, and body weight have proven to be reliable indicators in determining gender for several raptor species. In many raptor species, females are measurably larger than males; however, this is not the case with Golden Eagles. In some individuals, it seems obvious, for example, a very small male or an exceptionally large female. Nevertheless, we observe substantial overlap within measurements and often are left questioning whether the bird is, in fact a male or female. Considering, we annually capture more Golden Eagles than all North American raptor banding stations combined, we realized we should test previous research findings against our own.



Measuring impressive hallux length of a Golden Eagle

Since 2001, we used foot-pad length combined with body mass to verify the sex of Golden Eagles, based on these previous research findings. Sharon Fuller, RVRI biologist, was skeptical of this prediction method and decided to spearhead a sexing/DNA investigation to test this theory. By collecting DNA and comparing it to the above morphological measurements, as well as other theorized predictors such as hallux and culmen length, we hope be able to identify the most accurate techniques for sexing Golden Eagles in hand.



Carefully drawing blood for DNA and heavy metal analysis

To acquire the DNA, small samples of feathers and blood were taken and sent away to a professional DNA/sexing lab. Preliminary test results conducted locally by Damian Kremins from the University of Montana show, of the sixteen eagles captured in 2005, we correctly predicated the gender of twelve. With additional analysis and larger sample sizes more accurate results are pending. We look forward to more of Sharon's findings and using them to develop and/or improve upon sexing methodologies via physical characteristics for Golden Eagles.

Chad Harder photo



Securing the talons of a Golden Eagle

# RESEARCH (CONTINUED)



## SWAINSON'S HAWK NESTING ECOLOGY PROJECT

The spring of 2006 marked the second year of our Swainson's Hawk study. This season, we incorporated color bands as a marking technique, along with the traditional U.S. Fish & Wildlife Service bands. The ability to identify individual birds allows us to gain a much better understanding of the breeding ecology and behavior of our Missoula Valley Swainson's Hawks.

This season, we identified and monitored 10 nesting territories. Six of the 10 pairs successfully fledged young, with an average of 2.8 fledglings per nest and a total of 17. We were able to access four of the six productive nests, banding 11 of the 17 nestlings. All 11 nestlings were color banded, and blood samples were collected from them. One of the three adults banded this year is a recapture from 2005, the male from the Walmart nest.

Nesting in areas of high human activity and development comes at a cost. For example, this summer one of the Walmart nest fledglings was killed shortly after leaving the nest due to vehicle collision. Also, in August 2005, the adult female from the Broadway nest was killed due to vehicle collision. It will be interesting to see how the hawks cope with the development and increased human encroachment occurring in and around their home ranges.

We are looking forward to this April and the return of the Swainson's Hawks. We will continue to monitor the known territories and search for new ones as we learn more about Swainson's Hawks in the Missoula Valley.

### Our research questions are within the following topics:

- Nest and mate site fidelity
- Home range size
- The effects of development on nest site selection and survivorship

We would like to extend a hearty thanks to our professional arborist friends: **Rob Dillon**, owner of Dillon Tree Service & Landscape in Missoula, and **Tim Nesmith**, owner of Salmon Logging in Seely Lake. Both these gentlemen donated their time and climbing expertise to access nests, safely lowering the nestlings down to us while dodging protective parents that flew low overhead.

We couldn't have done it without you guys!

### THANKS!!

Young naturalist, Makalia Watkins helps band Swainson's Hawks



Rob Dillon and Makalia w/ nestlings from "Walmart" nest



Nestling ready to go back to its nest



Tim Nesmith climbs down w/ nestlings

Megan Peterson photo



## OSPREY RESEARCH PROJECT

Located at the confluence of the Clark Fork, Bitterroot, and Blackfoot rivers, the Missoula Valley boasts a high density of breeding Osprey, which nest primarily on man-made nesting platforms. For years these platforms have been erected by local utility companies to discourage Osprey from nesting on live utility poles. Information regarding the exact number of platforms and their locations was unknown and prompted the first in a series of questions involving Missoula Valley's Osprey.

During the development stage of this project and through a series of meetings with Flagship, University of Montana, and state personnel, it became apparent that we should investigate Missoula Valley's Osprey population more closely. Questions regarding nest site frequency, breeding productivity, and utilization of platforms quickly led to questions regarding heavy metal residues and what effect they might have on Osprey.

Missoula also is located at the terminus of the largest Super Fund site in the country. For more than 100 years, heavy metal contaminants from mining operations, including mercury, arsenic, cadmium, and others, have accumulated behind the Milltown dam. The dam is slated for removal this year, and there is legitimate concern that these heavy metal contaminants could find their way into the watershed downstream.

As top predators that feed exclusively on fish, Ospreys serve as biological indicators of riparian ecosystem health. By monitoring the Osprey and testing them for anthropogenic contaminants, we can gauge and monitor contaminant levels that may be present in these systems. This project presents an ideal opportunity to establish baseline data for pre- and post- dam removal.

To answer questions regarding heavy metals, we sought the expertise of Dr. Heiko Langor of the University of Montana's geochemistry lab. Rob walked into Heiko's office seeking advice and guidance, and before he knew it, they were partners on this very interesting and environmentally important study. Heiko's knowledge is impressive to say the least, and his enthusiasm is second to none. He also bakes a mean six pound rye bread, the best we have ever had!

For the 2006 pilot season, we accessed 10 nests from Deer Lodge to Frenchtown, successfully banding and taking blood samples from 16 nestlings. Heiko is preparing to analyze the samples for a whole suite of heavy metal contaminants. We are eagerly awaiting the results. We look forward to the return of the Osprey this spring and the continuation of this multi-faceted research and education project.



Deadly results of encounter w/ baling twine

## HAZARDS FACING OSPREY

Through monitoring, we have encountered a serious hazard to these birds that we feel can be mitigated. Baling twine has been found in more than 95% of nests observed in Missoula County. Last season, we documented two twine-induced mortality events and heard of numerous others. Through our outreach we hope to increase awareness of this problem and encourage all landowners and stewards to make an effort to clean up baling twine.



## STABLE HYDROGEN ISOTOPE PROJECT

The use of stable isotopes to determine the natal origins of migratory birds is becoming increasingly popular with avian researchers. Specifically, an isotope of hydrogen called deuterium was selected due to the ratios of deuterium changing consistently with latitude. With this technique we only need to sample a "thumb sized" piece of feather, which then can then be analyzed to determine the ratio of deuterium. By sampling only juvenile birds, whose feathers are grown in the nest, we can estimate the individual eagle's natal origin.



Clipping leg feathers for isotope analysis

We have been sampling fall migrant juvenile Golden Eagles since 2004 and recently presented some of our results at the Raptor Research Conference in Veracruz, Mexico, this October. Our results have shown that more than 60% of our sampled birds originate from a region between the Northwest Territories and the Yukon. Using this technique, coupled with our wing-tag markers, we were able to link the natal origin and wintering grounds of an individual eagle captured at our site.

Eagle C-21 was banded as a first-year female on Oct. 10, 2006. The stable isotope analyses indicated the Mackenzie Mountains located in the Northwest Territories as her natal origin. She later was found in Chihuahua, Mexico, in the spring of 2006 after migrating nearly 3000 miles. She was discovered by rancher Benito Sanchez, who noticed the blue-wing tags on C-21 as she lay dead in a dried-up creek bed. The wing-tags prompted Benito to dismount from his horse and take a closer look. It was then that he saw RVRI's contact information and phoned us. We don't know how she died, as she showed no signs of obvious trauma. According to Benito, there is an old saying in Mexico: "Old eagle, young snake, the eagle wins...old snake, young eagle, the snake wins."



"Old eagle, young snake, the eagle wins... old snake, young eagle, the snake wins."

This is a prime example of how isotope analysis incorporated with wing-tags can be used to bring us new insight and understanding about Golden Eagle migratory ecology in North America.

## ADULT GOLDEN EAGLE SATELLITE TRACKING STUDY

Little is known about adult Golden Eagle migratory ecology in North America. Do they use the same migration routes and wintering areas annually? What are the major causes of mortality, human related and naturally occurring? These are just some of the questions that we need to answer in order to determine appropriate conservation and management strategies.

Satellite tracking technology is being used more frequently as a research and education tool. Questions that in the past, would have taken years to answer and thousands of dollars to research now can be answered in days for fraction of the cost. This project will help shed light on the migratory mys-

(Continued on page 12)

# RESEARCH (CONTINUED)



*(continued from page 11)*

teries of these secretive birds. Currently, almost all the satellite tracking of Golden Eagles has been conducted on younger birds. This is due to the fact that capturing adults is exceedingly difficult. Presently, we are the only researchers who regularly capture several adult Golden Eagles per season.

We have secured one satellite transmitter, and will deploy it on the first adult eagle captured next fall. We are working to get more transmitters, but they are costly, roughly \$5,000 for the whole package. However, when we consider the amount of scientific information they will provide and the conservation and educational benefits they afford, they are well worth it!

## EAGLE LEAD PROJECT

Lead poisoning in raptors, especially Bald Eagles, has been well documented. A ban on lead shot for waterfowl hunting was initiated in 1991. This was due in part to lead in waterfowl being identified as a significant factor in lead poisoning of Bald Eagles. Years after this ban, lead still persists in the environment and is regularly detected in Bald Eagles.

Last year, our friend and colleague Bryan Bedrosian spent a week with RVRI biologists banding Golden Eagles. Bryan is a biologist working with Beringia South Research, based in Kelly, Wyoming. While working with us, Bryan shared some of his research findings, which had revealed elevated blood-lead levels in a high proportion of the Ravens that he sampled. Bryan's preliminary findings suggest a direct correlation between hunting season and these elevated blood-lead levels. Bryan theorizes that Ravens and other scavengers are ingesting lead fragments via gut piles left behind by hunters using lead bullets. Bryan suggested a cooperative project, specifically looking at blood-lead levels in migrating and wintering eagles in Montana and Wyoming.

*Beringia South Photo*



*Bryan Bedrosian releasing Bald Eagle*

Like Ravens, Golden Eagles are opportunistic feeders, known to scavenge gut piles. During our 2006 season we tested five eagles for blood-lead contamination. Of these five eagles, two had blood-lead levels that were of concern, and one had levels that indicated acute exposure. These findings are troubling, to say the least, and warrant further investigation.

During spring 2007, we will initiate a Golden Eagle banding and blood sampling project along the foothills of the Rocky Mountain Front as the eagles migrate north back to their breeding grounds. Also, in fall 2007 we will be banding Golden Eagles from two separate stations to build on our sample size in an effort to learn more about this disturbing trend.

Furthermore, Ken Wolff, founder of the Grounded Eagle Foundation, Condon, Mont. has long suspected lead poisoning to be a factor with some of the eagles admitted to his facility. Ken is also working in cooperation with us at Raptor View and Beringia South on this project. He will call on us to test eagles admitted to his facility.

## GREETINGS FROM CHRISTA'S DESK!

It's that time of year again. The raptors have flown south, well, some of them anyway, and RVRI is gearing up for some serious fundraising. We've been busy submitting grants and have received tremendous support from many great foundations; you'll find them listed in this newsletter. Grant funding is an important part of the work we do, but equally important are your individual gifts and contributions. Raptor View is doing amazing work and setting some big goals for the coming year, but those goals require your support. Consider our Adopt-A-Raptor program; this is a great gift for the outdoor enthusiast in your life. There are so many ways to support RVRI and not enough space to tell you about them, so give us a call or send an e-mail; we'd love to hear from you. Thanks so much for all that you do; you're amazing!



*Christa Weathers takes a moment to say hello*

Because birds of a feather flock together, I'll see you next time,

*Christa Weathers  
Grants Program Coordinator*

## PARTNERSHIPS & COLLABORATIONS

RVRI continues to develop partnerships and collaborations with others to build on our research and expand on our educational outreach. Without these important relationships, we would not be able to accomplish all that we do. We would like to take this time to recognize some of these key individuals and organizations.

These collaborators include Bryan Bedrosian, with Beringia South Research Wyo.; Denver Holt, of the Owl Research Institute; Ken Wolff, of Grounded Eagle Foundation; Pete Sherrington, with Rocky Mountain Eagle Research Foundation; Kate Davis, with Raptors of the Rockies; Hawk Watch International; Bureau of Land Management; Mont. Fish Wildlife & Parks; The Nature Conservancy; Helena National Forest; doctors Erick Greene and Heiko Langor, University of Montana; Missoula area public schools; Northern Arizona State University; University of Oklahoma; and others.

## OWL RESEARCH INSTITUTE

This past winter, RVRI biologists assisted longtime friend and colleague Denver Holt of the Owl Research Institute (ORI) with their Snowy Owl research. ORI has been conducting nesting ecology and related research on Snowy Owls in Barrow, Alaska, for 15 years. Typically, only a few Snowy Owls are observed wintering in the Mission Valley annually. The irruption phenomenon of last winter has seldom been observed and created an ideal opportunity to investigate them right here in our own backyard. We assisted ORI biologists in capturing these beautiful owls, as well as lending a hand with pellet collection and analysis, as part of ORI's Snowy Owl dietary study in the Mission Valley.



*Snowy Owl ready for processing*

To view one of these magnificent owls is a rare treat; working with, and observing more than 30 individuals in one square mile was an absolute thrill. Capturing these wily owls proved very challenging and was quite a change from bringing down eagles. In the end, it was a successful learning experience for all.

## 2007 WISH LIST

RVRI is in need of non-monetary donations as well. We have provided a "wish list" of such items which would be most helpful for our research and education projects.

**All Terrain Vehicle (ATV) 4-wheeler • Wall Tent • Cameras and Video Equipment • Power Point Projector  
Binoculars • 2-Way Radios**

# 2006: A VIEW FROM THE FIELD



Jenny Sika admires nestling Osprey



Tim secures a Snowy Owl for banding



Tyler, Vince, Sharon, Heiko and GE C-27



Sharon and Rob comparing Red-tailed and Rough-legged Hawks



Rob carefully works to 'hood' a Golden Eagle



Bear Biologist Barb Macall releases Rough-legged Hawk



Bryan and Jill with a Golden Eagle



Juvenile Northern Goshawk moves on lure



Tim and Jen measure wing of GE



Gavin palm releasing a Sharp-shinned Hawk

Chad Harder photo

Chad Harder photo

# THANK YOU!



Here we recognize those foundations, organizations, businesses and individuals who have supported us, through monetary donations, professional expertise and volunteer support. Without all these generous contributions RVRI wouldn't be able to accomplish all that we have.

## ORGANIZATION & FOUNDATION SUPPORT

Beringia South  
Big Sky Conservation Institute  
Bureau Land Management  
Grounded Eagle Foundation  
Helena National Forest  
International Osprey Foundation  
Koret Foundation  
LCAO Foundation

Maki Foundation  
Mountaineer's Foundation  
MT Fish, Wildlife & Parks  
MT Audubon  
MT Outdoor Science School  
Owl Research Institute  
Patagonia  
Plum Creek Foundation

Raptors of the Rockies  
The Nature Conservancy  
S.E.C. Charitable Corp.  
University of Montana  
Walker Family Trust

## BUSINESS SUPPORT

21st Century Plastics  
Allegra Printers  
Ancare Veterinary Clinic  
B.A. Builders Inc.  
Best Buy  
Bird Watchers Country Store  
Boyce Lumber  
Candy Goff-Bookkeeping  
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Northwestern Energy  
Pacific Steel  
Pet Nebula

Quality Supply  
R.E.I  
Salmon Logging  
Staples  
Walmart  
Western Electric Distributors

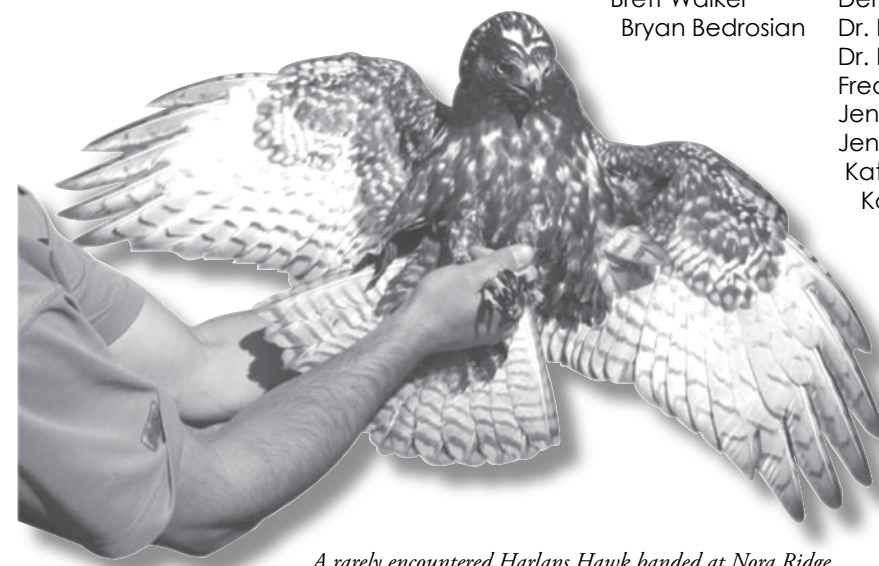
## INDIVIDUALS

From assistants in the field, to detailed lab analysis and everything you could imagine in between; we could not make it happen without their generosity. As always, we make an effort try to recognize everyone. Thanks to all of you! All photos courtesy of **Tyler Veto** unless otherwise cited. Thanks a ton Tyler for your many volunteer hours on site. In the interest of their privacy, we no longer list the names of our private and individual constituents, as many of them wish to remain anonymous.

Brandi Powell  
Bob Walker  
Brett Walker  
Bryan Bedrosian

Christa Weathers  
Dave Taylor  
Denver Holt  
Dr. Erick Greene  
Dr. Heiko Langor  
Fred and Cathy Tilly  
Jenny Sika  
Jenny Selvidge  
Kate Davis  
Kathy Gray  
Kelly Castleberry  
Kristen Johnson  
Mat Seidensticker  
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Rankin Holmes  
Rob Dillon  
Roger Jones  
Sally Philips  
Sara Ashline  
Steve Hoffman  
Ted Morrison  
Tim and Noel Nesmith  
Victoria Parks



A rarely encountered Harlan's Hawk banded at Nora Ridge



# ADOPT A WILD RAPTOR!

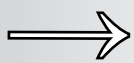


## CONTRIBUTE TO RVRI THROUGH OUR 'ADOPT A RAPTOR PROGRAM'

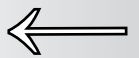
When you adopt a raptor, you will receive a packet which includes an adoption certificate specific to your individual bird with band number, wing tag (*Golden Eagle only*), age, sex, size and when and where it was banded. You will also be notified of any follow-up information regarding re-sightings, re-capture and recoveries. Furthermore, you will get a 4 x 6 color photo of your adopted bird and an informative Natural History fact sheet.

### AVAILABLE RAPTORS

Sharp-shinned Hawk.....	\$25
American Kestrel .....	\$25
Cooper's Hawk .....	\$35
Northern Harrier .....	\$35
Merlin .....	\$45
Prairie Falcon .....	\$45
Red-tailed Hawk .....	\$50
Rough-legged Hawk .....	\$50
Swainson's Hawk.....	\$75
Northern Goshawk .....	\$75
Golden Eagle .....	\$150
Golden Eagle with satellite transmitter .....	\$1000



WRITE DOWN THE RAPTOR YOU WANT TO ADOPT IN THE  
SPACE PROVIDED IN THE ENCLOSED ENVELOPE



*We are a 501{c} 3 non-profit organization; all donations are tax deductible. A receipt for your tax records will be provided.*

RAPTOR VIEW

RESEARCH

INSTITUTE

P.O. BOX 4323

MISSOULA, MT

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