

UNIVERSITY OF MINNESOTA
Fall/Winter 2011

Raptor Release

The Raptor Center

Ensuring the health of raptors and the world we share



In this issue of *Raptor Release*

Human-Raptor Connections: Habitat Change

Tales from the Trauma Center: 105 'Orphans'

2010 Annual Report: Celebrate Our Success

Spotlight on a Species: Northern Harrier

Conservation: Galapagos Hawk

UNIVERSITY OF MINNESOTA

College of Veterinary Medicine

Driven to DiscoverSM

Raptor Release

The Raptor Center

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Sharp-shinned hawk

This sharp-shinned hawk was photographed after being banded in the Hawk Ridge area of Duluth, Minnesota, a major flyway for migrating raptors. Photo by Amber Burnette

FROM THE DIRECTOR

Dear Friends,

Raptors, like most wildlife, face challenges daily as the influence of humans spreads. Sometimes, the stories are about individuals that sustain injuries or become ill as a result of human activities. At other times, the stories of these birds alert us to dangers being faced by entire populations and ecosystems. Regardless of whether the challenges faced by these magnificent creatures stem from widespread destruction of their nesting habitat, obstacles in their migration pathways, or toxins in their environment, they need our collective help. They need us to think about how our actions affect them and what we can do to mitigate those effects.



Planned months in advance, the theme of this issue of *Raptor Release*—human-induced habitat change—has become even more significant to us in recent weeks. As this issue goes to press, I will be in the Galapagos Islands, working on a momentous project involving just this subject. These ecologically sensitive and fragile islands—home to the Galapagos hawk—have suffered their share of human impact. The introduction of invasive species such as rats and feral goats has changed the landscape and put extraordinary ecological pressure on many native plants and animals. A goat-eradication program was completed several years ago, and now a group of interested partners has set its sights on eradicating rats from several of the islands. These partners—the Charles Darwin Foundation, Galapagos National Park, Island Conservation, Bell Laboratories, University of Missouri, and The Peregrine Fund—have invited us to assist with plans to protect the hawk population during the rat-eradication efforts.

Ecosystem health, a personal passion of mine, has also taken a prominent role in how veterinary medicine is both taught and practiced at the College of Veterinary Medicine. And while those of us in veterinary medicine would prefer to focus on the health of animals and the environment, business issues also need to be addressed at least once a year. Please take a moment to look over our 2010 Annual Report insert as you peruse this issue of *Raptor Release*.

I look forward to sharing my Galapagos experiences with you when I return, but for now, this incredible opportunity reminds me to express my gratitude. You, our donors and supporters, are a critical part of our work and our success. Without you and your support, we would not be able to lend our expertise to this essential project. Thank you so much!

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julia Ponder'. The signature is fluid and cursive, with a long horizontal line extending to the right.

Julia Ponder, D.V.M.
Executive Director

HUMAN-RAPTOR CONNECTIONS

Habitat destruction and raptors

Some raptors are better than others at adapting to habitat change

By Amber Burnette

Since its beginning, The Raptor Center has been interested in how raptors serve as lenses for changes in the environment. We are very engaged in studying ecosystem health and the interactions between humans and animals in our shared environment.

In 1950, world population stood at 2.5 billion. In 2005, there were 6.5 billion people. By 2050, it is estimated that the world population could rise to more than 9 billion. In addition to new births, people are living longer. The population is also moving from rural areas to urban areas, and that trend is increasing. According to the United Nations, half the world's population lived in urban areas at the end of 2008.

The additional infrastructure and housing needed to accommodate everyone is putting increasing pressure on our landscapes. One only has to look around their area to see new housing developments springing up seemingly overnight on what were once meadows. Retail businesses seem to replicate on every available corner. Increased food demand has turned prairies into miles of cropland, with no biological diversity.

We also have more pairs of shoes, our cell phones are obsolete within a few years, and all of these items need to be produced—and then disposed of in landfills. Illegal mining of coltan, a mineral used in electrical components that control current flow in cell phone circuit boards, for instance, is threatening the Congo's national parks and the habitat of gorillas. This is just one example of how our actions can unknowingly harm wildlife. We, of course, need roads to get to work and cell phones and their towers to communicate, but all of these things are changing the ecosystem and habitat for wildlife, including raptors and other birds.

For some raptors, adapting to these changes is not as difficult as it is for others. Red-tailed hawks will use utility

poles for perching, which provide great views of their territory and hunting opportunities. The inevitable trash that follows humans along roadsides also provides meals for rodents, who make up a large part of the hawks' diets. However, power lines are deadly to hawks that they connect with. And hunting along roadsides can bring hawks into contact with vehicles, often with fatal or injurious results.

For other raptors, adapting to loss of habitat is very difficult. Birds with specific habitat needs, such as those found in old-growth forests or prairies, have been affected greatly.

The Minnesota Department of Natural Resources defines old growth forests as “natural forests that have developed over a long period of time, generally at least 120 years, without experiencing severe, stand-replacing disturbance—fire, windstorm, or logging.” It is more and more difficult to find—and preserve—large tracts of this type of habitat as urban sprawl and the need for wood consumes these areas. This is the preferred nesting habitat for northern goshawks. The management of these large, beautiful hawks has been a concern, particularly in the western United States. Boreal owls also nest in this habitat. The Cornell Lab of Ornithology points out that clear-cut sites in spruce-fir forests, in particular, will remain unsuitable for roosting or foraging for up to a century, and new nest trees will not develop for nearly two centuries. These estimates alone are startling.

Some estimates put the remaining native tall- and short-grass prairies of North America at 1-2 percent of their original land space. Two owl species in Minnesota have received state status: short-eared owls are of special concern, and burrowing owls are endangered in Minnesota. The conversion of formerly open habitats to agricultural lands, pastures for cattle grazing, and housing and recreational developments is the key factor in recorded declines for the short-eared owl, according to the Cornell Lab of Ornithology.



*A red-tailed hawk perches on a light pole.
Photo by Amber Burnette*

Birds that are cavity nesters, such as American kestrels or eastern screech-owls, have more challenges in finding suitable homes for raising young when snags and dead trees are removed for aesthetic reasons or to make way for new human housing. These birds, for example, do not build their own nests, but instead use old woodpecker cavities in dead trees as nesting sites.

Amber Burnette is the executive administrator of TRC.

You can help

- Remove trees only during certain times of year. Avoid tree removal during breeding and nesting season and don't remove evergreens in winter.
- Participate in citizen-science projects to help monitor populations. Options include the Christmas Bird Count, Kestrel Watch, NestWatch, the North American Breeding Bird Survey, and Project FeederWatch.
- Hang nesting boxes for cavity-nesting birds and leave dead trees intact or replace them with nest boxes.
- Buy products that were made or produced using sustainable methods.
- Pass the word. Tell your family and friends what you know about how human actions impact wildlife—for good or for bad.
- Recycle your used inkjet printer cartridges through Recycling for Raptors. For more information, visit www.theraptorcenter.org.

HUMAN-RAPTOR CONNECTIONS

Fall and winter are prime time to watch migrating raptors

Thermals, favorable winds aid hawk migration



Photo by Amber Burnette

By Amber Burnette

Fall in Minnesota means that many species of birds will visit the state on their way south to wintering grounds. Some species of raptors actually consider Minnesota, and specifically the Twin Cities area, a more hospitable location for spending the winter than their own breeding grounds. Fall is an exciting time for birders to see species that do not breed in Minnesota.

Migration, or any type of movement away from breeding grounds, is more easily accomplished if birds have some assistance. We know that many species of raptors utilize thermals, for example. These are columns of air that rise in a circular pattern as the ground warms. Raptors in particular can use these “elevators” to gain height without using their own precious energy stores. Once the birds reach a desired height, they can set their wings to drift out of the thermal until they reach another to help take them in the direction they are heading.

Winds can aid migration, too, when the winds are pointed in the direction the birds are headed. However, winds that are blowing from the south, for example, might waylay birds that do not want to burn the energy needed to fight the currents. Air that moves up and along cliff faces provides a welcome means for raptors to lift up or stay aloft along ridges. This geographical feature is one reason Hawk Ridge in Duluth, Minnesota, is such an important migration corridor for raptors.

Several species of raptors are seen in Minnesota during this change of seasons.

Rough-legged hawks breed along cliff faces in the tundra and taiga of the arctic, but winter in southern Canada and northern and central North America. These raptors have a large degree of variation in plumage, from very light to almost chocolate brown. The hawk’s name describes its feather pattern, which extends to the tops of its small feet. The rough-legged hawk’s wings and tail are relatively long, and well-suited for hovering over open fields as it looks for small rodents.



The snowy owl moves south from the Arctic to the Great Plains in the winter months.

which means it is active during daylight hours.

Sharp-shinned hawks closely resemble Cooper’s hawks, though they are smaller, their heads are more rounded, and their tails are squared. They breed as far north as northern North America, but are known to breed in parts of Central America. In

Snowy owls, the heaviest owl in North America, breed from the tree line to the polar seas. This owl chooses small mounds of earth or boulders for its nesting site. Winter months will see this raptor moving south to northern North America, especially the Great Plains. Since arctic summers have continuous light, this bird is largely diurnal,

winter, they can be seen in the Twin Cities metro area and into southern Minnesota.

Amber Burnette is TRC’s executive administrator.

Get ready for eagle watching

In the winter months, many bald eagles in Minnesota will follow the Mississippi River south and congregate along areas of open water. Fishing is easier in these areas where the river is wider or at a confluence with



another body of water. Since there are no breeding activities, and therefore no territories to defend, the birds can be seen in large numbers in small areas. Younger birds will be easy to tell from the adults—they will range in color from dark, chocolate brown to splotchy patterns of white in their tan and brown feathers. Winter along the Mississippi in southeastern Minnesota presents a wonderful opportunity to watch these beautiful birds! — A.B.

TALES FROM THE TRAUMA CENTER

Clinic sees 105 ‘orphans’ during busy nesting season

By Lori Arent

The northwest winds of fall carry great change. Masses of air signal the change of seasons, and thousands of winged creatures make their annual journey to their winter destination. The question is what will they find when they get there? Not only is habitat destruction evident during the nesting season as raptors move into closer proximity to humans, but it also can have a great impact on survival for those raptors needing to locate suitable areas to winter. Keep in mind that for some, Minnesota is a winter home.

For the clinic, this nesting season was especially busy. We found more birds nesting in county and city parks, people’s backyards, on company property, and even at construction sites. With this proximity can come increased raptor injury and displacement of youngsters perceived to be “orphans.” A total of 105 young raptors, most from the Twin Cities and surrounding suburbs, needed our help before they were capable of full flight. They included 32 great horned owls, 20 American kestrels, 10 bald eagles, 9 Cooper’s hawks, and several barred owls, broad-winged hawks, eastern screech owls, northern saw-whet owls, red-shouldered hawks, and red-tailed hawks.

An unusual visitor to our facility this summer was a young prairie falcon, discovered injured in Chisago City. She suffered a fractured wing from an unknown cause and is recovering well.

Then, as the cool winds hit Minnesota skies, our efforts shifted to treating the casualties of migration. Early in the season, seven young merlins were admitted, the majority of which had hit windows during the beginning of their journey south, resulting in head trauma and fractured collarbones.

Assisting us in the care of these feathered casualties were veterinary students from the states of Illinois, Michigan, Minnesota, and New York, as well as Canada, China, and Germany.

Patient highlight



You probably know that bald eagles are now nesting in urban environments. However, city life can come with unique challenges. This is what a young bald eagle, case #10-406, discovered one late July morning.

Recently fledged and still refining its flight and landing skills, the young eagle took to the sky over a Minneapolis neighborhood and chose the highest spot in the landscape to land: a chimney with double flues. It got its right leg stuck between the flues and its talons caught around wire encasing one of them. When the bird tried to free itself, it ended up hanging from the chimney.

With the assistance of the Minneapolis Fire Department, TRC volunteers were able to reach and rescue the distressed eagle. Exhausted from struggling, the eagle was quiet and its right leg covered with blood. It sustained a fractured leg in two places and an extensive soft-tissue wound where its leg became caught.

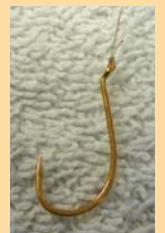
The radiograph also revealed an incidental finding: the bird had ingested a fish hook! Not knowing if the hook



was embedded, the first plan for removal was to feed the eagle a large amount of rat skin, encouraging its stomach to form a pellet incorporating the hook. It worked.

After two months of treatment for its wounds and fractured leg, the eagle is currently being exercised in preparation for release. We hope it will choose safer perching spots in the future.

Lori Arent is the clinic manager at TRC and author of The Raptor Care Manual, available at www.theraptorcenter.org, and several scientific publications.



This hook was fished out of a pellet regurgitated by the eagle.

FUND DEVELOPMENT

Let's meet . . .

Bonnie Grzeskowiak

Longtime donor and friend shares why she has included The Raptor Center in her estate plan

Bonnie Grzeskowiak has always been interested in the environment, spending time outside, and helping injured animals.

"I was one of those kids who was always bringing home a stray or injured animal," Grzeskowiak recalls. "We had a real menagerie at our house."

She particularly remembers bringing home some baby squirrels that had fallen out of their nest. "I fed them with an eyedropper. It was very time-consuming."

The young person who spent so much time helping baby animals went on to become a pediatric nurse caring for newborn babies in a neonatal intensive care unit. As a longtime supporter, Grzeskowiak can't recall when she first learned about The Raptor Center—only that birds, especially raptors, have always been part of her adult life.

"My husband, Terry, and I live in a wooded area that is great for raptors," she says. "Our backyard is part of the National Wildlife Federation's Certified Wildlife Habitat program. We have all kinds of songbirds, Cooper's, and other types of hawks. The eagles just love our cottonwood tree. I've even seen turkey vultures. I can watch the birds for hours."

Like raptors and other wildlife, supporting The Raptor Center is part of who Grzeskowiak is.

"I want that part of me to live on after I am gone," she says. "That's why I have included The Raptor Center in my will. I want the important work that The Raptor Center does in educating people about the environment, caring for injured raptors, and teaching the next generation of avian veterinarians to live on."

To learn more about how you can include The Raptor Center in your estate plan, contact Susan Hommes at 612-624-8800 or shommes@umn.edu.



Terry Wade and Bonnie Grzeskowiak at Grand Canyon National Park

Raptor Bowl a big success

A good time was had by all at the 2010 Raptor Bowl on July 14. More than \$45,000 was raised to benefit TRC programs. Sponsors included:

- Archiver's
- Aspen Research
- Brit's Pub & Eatery Establishment
- Delta Airlines
- General Mills
- Haskell's
- Hollstadt & Associates, Inc.
- KARE 11
- Medical Technologies
- Oscar's Ornithologists
- Denny Schulstad
- Xcel Energy
- Walser Honda



TRC executive director Julia Ponder, left, with the first-place team from Medical Technologies

2010 Raptor Bowl celebrities included Dave Lee from WCCO-AM and former Minnesota Viking Randall McDaniel.



'Friend-raising' events expand TRC network

The Raptor Center has some new friends, thanks to some old friends. Several advisory board members have hosted "friend-raising" events in their homes, inviting friends, neighbors, and co-workers to learn more about the work of The Raptor Center. The get-togethers include a brief talk by TRC executive director Dr. Julia Ponder and a variety of raptors for guests to learn about and enjoy.



Dr. Julia Ponder, Gail Buhl, and a bald eagle visit the home of Renee and Jann Olsten for an August 25 friend-raising event.

For more information or to schedule a friend-raising event, contact Ellen Orndorf, current giving and stewardship coordinator, at 612-624-8457 or eorndorf@umn.edu.



University of Minnesota Regent Dean Johnson bowls with TRC board member Julie Lee, executive director Julia Ponder, and Susan Hommes of the University of Minnesota Foundation.

Mark your calendar for the 2011 Raptor Bowl on July 13, 2011, at Brit's Pub & Eating Establishment in downtown Minneapolis. For more information, call Ellen Orndorf at 612-624-8457.

Northern harriers: hunters of the last great open spaces

These hawks are particularly vulnerable to habitat destruction

By Gail Buhl

When I take visitors on a tour to see TRC's education birds and we stop in front of our northern harrier (*Circus cyaneus*), I always ask what kind of bird they think she is. I get answers that range from owl to hawk to falcon. Most people have not seen a harrier up close, even though the hawks are fairly common in Minnesota.

Northern harriers live in the open—medium to tall prairie grasslands, marshes, tundra, and agricultural fields. Their breeding range extends from northern Alaska to the mid-northern area of the lower 48 states. These populations winter from the central United States to Central America. Some harriers in the central United States are residential and stay year-round.

Northern harriers are not large—females weigh an average of 18.7 ounces, while males are smaller at an average of 12.7 ounces. Adult males and females are different colors. The females are many shades of tawny mixed with cinnamon and rufous brown. Their eyes are dark brown as juveniles but gradually change to a pale yellow by the bird's fifth year. Juveniles look similar to females. The males in their second year are gray with black primary feathers. Their eyes turn from a yellow-gray or gray-brown to a bright lemon yellow. Both sexes have a white rump patch that is fairly easy to see when the bird is flying. Harriers have long, lean bare legs and long wings with a very long, thin tail. Those characteristics are not that unusual. It is their head that surprises people—harriers have a facial disc/ruff of feathers around their ears that makes them appear more owl-like than anything. That facial disk works to funnel sounds into their ears, much like an owl's.

When they hunt, they slowly fly—quartering or coursing back and forth across an open area with their head (and ears) pointed downward, listening for an



A harrier courses through a field.
Photo by Jan Storebo

unwary mouse, vole, reptile, or young rabbit. Prey can be heard from 10-13 feet away. When the birds have their prey targeted, they hover until they can drop down and strike with sharp talons.

Northern harriers nest on the ground, sometimes under a small bush but often in tall vegetation. Males will often be polygamous (having more than one mate/nest) if conditions are right, which is unusual in the raptor world. The courtship flights, especially from the male, are a series of dives, barrel rolls, and looping arcs. The female lays four to five eggs asynchronously—so when the first eggs hatch at about 31 days, she still is incubating other eggs. The young fledge at four to five weeks of age.

In the 20th century, the population of northern harriers declined and continues to slowly decline. The pesticide DDT and habitat loss are the main culprits. Northern harriers are not currently endangered or threatened on the federal level, but many states have them listed as a species of concern. However, the continued destruction of wetlands in the United States threatens both breeding and wintering populations of these birds. Locally, grassland prairies that are converted to farmland, larger crop fields and fewer fencerows, and the increased use of pesticides have contributed to the slow population decline of the northern harrier. At TRC, we often get young

harriers in for treatment when a field is being mowed and the nest is exposed and vulnerable.

Harriers are amazing North American raptors that everyone should get to know better. And harriers can use our help. Learning about these fascinating animals is one thing you can do to begin to help harriers. Protecting habitat, however, such as wetlands, grasslands, and even fencerows will enormously benefit these wonderful birds in the long term.

Want to learn more about harriers? Here are some great references:

- *Hawks, Eagles and Falcons of North America*, by Paul A. Johnsgard
- *Raptors: The Birds of Prey*, by Scott Weidensaul
- The Birds of North America Online at <http://bna.birds.cornell.edu/bna/species/210doi:10.2173/bna.210>

Gail Buhl is the manager of environmental education at TRC.

Meet TRC's new harrier



Photo by Gail Buhl

One of TRC's new education birds is a northern harrier. The bird came to the clinic from Ellsworth, Minnesota, where she was found along the side of a county road. When clinic staff members looked into her eyes, they noticed lesions consistent with West Nile virus. The bird is blind in her left eye and considered non-releasable.

Hatched in 2008, the harrier joined the education department in 2009. When she molted, TRC staff knew she was a female since males turn a pearl gray color and females and juveniles look very similar. The harrier is currently on display at The Raptor Center.

BOOK REVIEW

Essays tell of an uncertain future for birds

By Sue McCarthy

Flights of Imagination

Edited by Richard Cannings
Greystone Books, 273 pages,
\$16.95

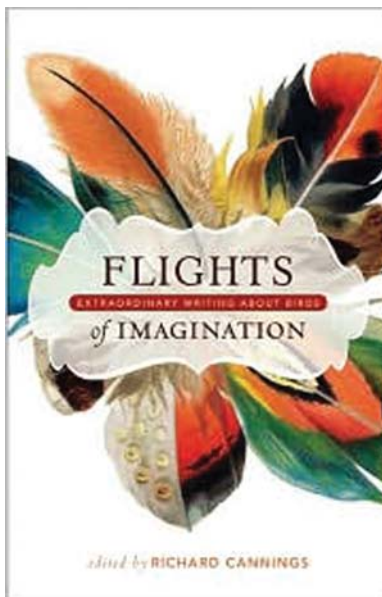
“So why are catbirds’ eggs a bright, almost luminescent, blue, flickers’ eggs pure white, and the loons’ eggs a dark green olive?” asks Bern Heinrich in his essay, “The Color of a Bird’s Egg.”

Eggs become colored and marked as the egg squeezes pigment from glands in the uterus. Color patterns are affected by the motion of the egg: An egg remaining still when the glands are secreting will have spots, and one that moves will have some type of lines. But what can account for the variety of colors and designs on eggs, and why don’t birds with similar nesting habits, such as cavity nesters, have eggs with uniform colors or patterns?

You will find answers to these questions and others about egg color in this fascinating essay, which is included in *Flights of Imagination*, edited by Richard Cannings. The editor divides the essays into four sections: The Beginnings, Watching Birds, Cycles in the Air, and The End of Birds. Some are scientific and technical, some humorous, and others philosophical, but most carry the theme that birds are facing an uncertain future.

“The birds are telling us that we must change our ways before it is too late,” Cannings writes. “If we fail, the consequences may be more drastic for us than for the birds.”

I found myself chuckling as I read Charles Graeber’s “Big Bird Gone Bad,” about the “giant dinosaur bird called the southern cassowary,” which lives in northeastern Australia. The bird is huge, standing over six feet tall and weighing about 180 pounds. The author treats us to some humorous tales of joggers being chased (apparently the bird doesn’t like joggers), a group of Japanese tourists held



hostage inside a tour bus while an adult male head-butts the door, swimmers at a luxury hotel being harassed by a band of juvenile purse-snatching cassowaries, and the author’s own exciting encounter with the bird.

To date, there has only been one death attributed to the cassowary, and that was in the 1920s. It may not be a coincidence that the word “wary” is imbedded in this bird’s name! It’s important to realize that most of the problems with these huge birds occur because people have been feeding these birds as if they were pets, and their native environment is being lost to human development. They have been squeezed into smaller and smaller corridors of protected space. Sound familiar?

The essays in *Flights of Imagination* are written by authors from around the world and offer reflections about a variety of birds, from the tiniest hummingbird to the huge cassowary, from the rare whooping crane to the often-disparaged house sparrow. This book is an important addition to my collection of bird books, and I found it interesting and informative to read. 🐦

Sue McCarthy is a volunteer at TRC. For information about volunteer opportunities, visit www.TheRaptorCenter.org.



Vulture View

By April Pulley Sayre;
illustrated by Steve Jenkins
Henry Holt and Co., \$16.95

Perhaps the bird that evokes the most comment among visitors to TRC is Nero, the turkey vulture.

“Ee-uw! He’s sort of cute and sort of ugly,” I hear when I take visitors to see him in the lobby display. It’s fun to remind people about some special characteristics of turkey vultures—particularly, their behavior of regurgitating food and their highly developed sense of smell to locate food, a special diet of carrion—but I’m always careful to bring up the fact that turkey vultures are specialists in soaring.

Vulture View, a children’s picture book appropriate for preschoolers or early elementary students, highlights the vulture’s flying skills. The lyrical text and unique cut paper illustrations help the reader and child understand how special the turkey vulture’s flight is. “Wings stretch wide to catch a ride on warming air. Going where?”

This book is one of my favorite nonfiction children’s books. Every time I read it, I delight in how this simple text makes learning so much fun.—S.M.



A Galapagos hawk on Santiago Island
Photo by Sue Kirchoff

TRC working with hawks on Galapagos Islands

The Raptor Center is currently working on a project to protect Galapagos hawks on the Galapagos Islands.

The hawks are being brought into captivity during an effort to eradicate invasive rats from 10 islands in the Galapagos archipelago. Four of the islands are home to small numbers of the Galapagos hawk, an endemic species that is vulnerable by virtue of its small population. Because the hawks' prey includes rats, the hawks would be at very high risk for secondary poisoning during the rat-eradication program. To mitigate this risk, approximately 22 hawks—the entire population from the islands being targeted for rodent eradication—are being brought into temporary captivity for four to six weeks.

TRC's role is to provide consultative input on the project, veterinary expertise with raptors, and care and management of the hawks during their time in captivity. Dr. Juli Ponder, TRC's executive director, is spending six weeks in the Galapagos, actively managing the birds and providing veterinary support.

"I am absolutely thrilled that when the project managers realized that they would benefit from a veterinarian's perspective, they contacted us," Ponder says. "In addition to our experience in raptor medicine, surgery, and critical care, we bring leadership and knowledge in the

area of captive management of raptors, which is critical for this project."

TRC's partners on the project are the Charles Darwin Foundation, Galapagos National Park, Island Conservation, Bell Laboratories, University of Missouri, and The Peregrine Fund.

Clinical Wildlife Health Initiative database completed

By Dr. Michelle Willette

Recognizing the critical role of wildlife in the emergence of disease as well as the impacts of anthropogenic change—alterations brought about by humans—on animal health, the Clinical Wildlife Health Initiative (CWHI) was launched in 2009. With leadership provided by TRC and the Wildlife Center of Virginia (WCV), CWHI is a collaboration of public and private academic and scientific institutions focused on utilizing data from animals presented to wildlife rehabilitation centers to monitor the health of free-ranging wildlife. Animals seen in wildlife hospitals and rehabilitation centers represent an untapped resource for data on free-ranging wildlife.

A critical step in utilizing information from animals presented for rehabilitation is the development of an electronic medical records system and minimum data sets. With grant monies from the Minnesota Environmental and Natural Resources Trust Fund and One Health (Center for Animal Health and Food Safety), TRC held a series of workshops to establish standardized terminology and definitions. Over the past eight years, WCV has been developing a wildlife incident/intake database with a medical records component. Standardizing the terminology was the critical component to finishing the development of the system, which eventually will be distributed to wildlife clinical care facilities around the country.

Nationwide, there are more than 3,000 permitted wildlife rehabilitators, both individuals and organizations. Each year, they collectively receive hundreds of thousands of wild birds, mammals, reptiles, and amphibians, which represent a cross section of wildlife in their

respective communities. In October, Dr. Julia Ponder, executive director, and representatives of WCV traveled to Washington, D.C., to discuss the potential use of this information in the U.S. Fish and Wildlife Service's permitting process for rehabilitation center reporting. Another proposal will be the use of the new system for long-term monitoring at rehabilitation centers along the Gulf Coast as a result of the Deepwater Horizon oil spill.

Dr. Michelle "Mitch" Willette is the staff veterinarian at TRC.

Study uses MRI to explore effects of lead poisoning on bald eagles

By Dr. Patrick T. Redig

The Raptor Center, which has long been studying lead poisoning in bald eagles, recently completed work on a study entitled "MRI for Localizing Lead-Induced CNS Lesions in Bald Eagles." This study was conducted with a grant from the Association of Avian Veterinarians and was a collaborative project with the Medical Imaging Service at the University of Minnesota Veterinary Medical Center and Veterinary Diagnostic Laboratory.

The objectives of this study were to determine the diagnostic and prognostic utility of magnetic resonance imaging (MRI) in detecting brain lesions caused by lead poisoning. Dr. Olga Nicolas, a former TRC intern from Spain, was the lead person in conducting the study. The clinical neurological presentations seen in these eagles included depression, abnormal posture, head tremors, and blindness. The MRI findings were correlated with and confirmed by histological examination of neurological lesions in select brain sections.

The study found that MRI could detect brainstem lesions that correlated with major neurological signs. This localization was useful in guiding histopathological work, and has future utility in the assessment of brain architecture in recovered cases of lead poisoning.

Dr. Patrick T. Redig is cofounder of The Raptor Center and a professor in the College of Veterinary Medicine.

AROUND THE RAPTOR CENTER

New clinical intern

Dr. Ana Carolina

Ewbank of Brazil has joined TRC as a clinical intern.

In Brazil, Ewbank worked at the Vila Vet Clinica Veterinaria, where she practiced small animal medicine, which included working with reptiles, small mammals, and birds. She also worked at SOS Fauna, where she dealt with wild animals from the wildlife trade. Ewbank's experience also includes externships at the Wildlife Center of Virginia and the Atlanta Zoo.



Dr. Ana Carolina Ewbank



Dr. Irene Bueno-Padilla

New resident

Dr. Irene Bueno-Padilla, TRC's

former clinical intern, has been selected as TRC's newest clinical resident. She will be with TRC for the next three years, completing her master of public health degree with an ecosystem health focus.

On the road

In May, **Dr. Juli Ponder**, executive director, and **Dr. Pat Redig**, cofounder, taught a course in ecosystem health at the University's Public Health Institute.

Drs. Paula Castano, Juli Ponder, and Pat Redig attended the Association of Avian Veterinarians conference in San Diego in August. Ponder and Redig presented two master classes on clinical raptor medicine; Ponder led two orthopedic wet labs; and Redig presented a paper on magnetic resonance imaging on bald eagles with lead toxicity.

Interpretive naturalists **Adam Barnett** and **Mike Billington** attended the International Association of Avian Trainers and Educators conference, demonstrating a model for teaching about the pesticide DDT's impact on egg production. They also presented a poster on "Donate a Rat,

Eat a Ratty!" a novel fundraising tool for environmental outreach.

Gail Buhl honored

Gail Buhl, TRC's manager of environmental education, received the Roger Tory Peterson Nature Education Achievement Award from the Roger Tory Peterson Institute of Natural History in July. The award recognizes "exemplary work in the field of nature education, continuing the legacy of Roger Tory



Gail Buhl with Maxime, a TRC education eagle

Peterson to guide people in the study of nature and thereby inspire them to know, appreciate, and protect the natural world upon which we all depend."

TRC gift shop now online

In August, TRC launched a new e-store on the Web. For sale are assorted T-shirts, books, plush animals, and other raptor-related items. Customers are able to shop online and have their purchases sent to their home or another address. TRC's e-store can be accessed by going to www.theraptorcenter.org or directly to z.umn.edu/raptorcenter.

Fall Raptor Release

The Fall Raptor Release was held on September 25 at Carpenter Nature Center (CNC) in Hastings, Minnesota. Red-tailed hawks were released by Jackie Lynch, presented to her by her grandmother, Peggy Lynch, executive director of Friends of the Parks and Trails of St. Paul and Ramsey County; Jeremy Grezek, 3M Cottage Grove; Bonnie D'Aquila, friend of TRC; and Jim Keller, friend of CNC, releasing in honor of the 96th birthday of his mother-in-law, Myna Goodwin. Bald eagles were released by Marschall Smith, 3M senior vice president of legal affairs and general counsel, and Mary Jo Wheeler, friend of TRC. A Cooper's hawk was released by Bob Setzer, honorary CNC board member. Vickie Batroot, 3M

Cottage Grove and CNC board member, released a broad-winged hawk.

Connecting Youth to Nature

In September and October, education staff members conducted free nature photography workshops for teachers, providing information on enhancing curriculum using digital photography. TRC is working with the Minnesota Department of Natural Resources on this project, which is funded by a grant from the Legislative-Citizen Commission on Minnesota Resources. TRC will be providing these workshops for the next two years.

Feathers in fashion exhibit

TRC presented a program on opening night of the Flights of Fancy exhibit at the Goldstein Museum of Design on the University's St Paul Campus. The subject of the exhibit (and the program TRC presented) was the historical and contemporary use of feathers in western fashion, including the origins of feathers commonly used in clothing, the international feather trade, activism and laws designed to protect endangered bird populations, and the psychological appeal of wearing feathers.

A new member of The Raptor Center family

Lillian Jean Freeman was born to **Laura Freeman**, environmental educator, and Andy Freeman on May 30.

Recycling for Raptors

Support TRC's Recycling for Raptors program by donating your used printer cartridges. To see which cartridges are eligible for recycling, visit The Raptor Center Web site at www.theraptorcenter.org. To donate cartridges, contact the donor services hotline at 612-624-6945 or trcink@umn.edu. Provide your name and/or organization name, how best to reach you, and what time is most convenient. Since TRC launched Recycling for Raptors, the program has helped recycle more than 80,000 ink cartridges—amounting to more than six tons of material.

MARK YOUR CALENDAR/CONTACT US

Upcoming events

Wizarding World of Wildlife—New!

November 12, 5:30-8:30 p.m.; November 13, 2:00-5:00 p.m.;
December 3, 5:30-8:30 p.m.; December 4, 2:00-5:00 p.m.
The Raptor Center



Calling all young wizards and witches, ages 6-12! The Raptor Center's owls are ready to send out a new batch of acceptance letters for the School of Witchcraft and Wizardry. Come join us for a fun, educational three-hour

adventure! After being assigned to raptor houses, the wizards and witches will take exciting courses in order to pass their wizarding exams to receive their wands and become protectors of Minnesota's wildlife.

Cost: \$25 per wizard per session. Take-home items and a snack are included.

Registration is required. Call 612-624-2756 or e-mail raptored@umn.edu to reserve your place, providing your child's name, age, and an e-mail address for further contact.

Youth Raptor Corps

October 12 and November 9, 2010; January 11, February 8, March 8, and April 12, 2011 (Note: There is no December meeting.)
4:00-5:30 p.m.
The Raptor Center

Designed for students in grades 5-8, Youth Raptor Corps meetings include an opportunity to see live raptors and learn exciting facts about their environment, natural history, and what people can do to positively affect them. Participants will also engage in service-learning projects to benefit The Raptor Center.

Topics

- Introduction to Raptors
- Falconry
- Migration
- All About Owls
- Raptors and the Environment
- Raptor Rehabilitation

Cost: \$15 per family covers all six sessions. To register, call 612-625-0201. Registration is required and limited to 20 students. Attendance at every meeting is recommended. For more information, contact Youth RaptorCorps at raptored@umn.edu.

Spring Raptor Release

May 7, 2011
Hyland Lake Park Reserve

Donations

Endowment gifts, estate gifts, and grants
Bill Venne, 612-624-8480
or venne025@umn.edu

Gifts and Adopt-a-Raptor program
Amber Burnette, 612-624-3391
or burne018@umn.edu

Educational programs

Field trips, outreach programs, and events
612-624-2756
raptored@umn.edu

Front desk

Injured raptors; general information
612-624-4745

Volunteer opportunities

Volunteer positions and upcoming training sessions
trcvol@umn.edu

Web site

Raptor facts, information about upcoming events and educational programs, plus hours, directions, and more
www.TheRaptorCenter.org

E-mail

raptor@umn.edu

Fax

612-624-8740

Mailing address

1920 Fitch Ave.
St. Paul, MN 55108

TRC offers free nature photography workshops for teachers

The Raptor Center is working with the Minnesota Department of Natural Resources to offer free Connecting Youth to Nature teacher workshops. Each four-hour workshop is standards-based and designed to provide training for 12-24 staff members. Topics include the use of digital cameras, basic photo tips, downloading and editing techniques, and more. To learn more, or to schedule a workshop for your school, contact TRC at 612-624-9750 or raptor@umn.edu or visit www.dnr.state.mn.us/eco/nongame/projects/digitalbridge.html.



Raptor Release The Raptor Center

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Please notify us of your change of address or duplicate mailing. Call 612-624-7624, e-mail cvmadmin@umn.edu, or write to Advancement Department, College of Veterinary Medicine, 1365 Gortner Avenue, St. Paul MN 55108.

The Raptor Release

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Celebrating more than three decades of dedication to raptors

Follow Dr. Julia Ponder's adventures in the Galapagos!

Visit The Raptor Center's blog at
www.theraptorcenternews.blogspot.com



Dr. Julia Ponder, executive director of The Raptor Center, will be blogging from the Galapagos Islands for six weeks in October and November.

Follow TRC on Facebook at
www.facebook.com

Galapagos hawk photo by Sue Kirchoff