Dear Friends,

I am absolutely thrilled about this issue of Raptor Release because it details the hope that the next generation of scientists, environmentalists, and wildlife veterinarians offers the Earth and its inhabitants.

People of all ages all over the world are doing what they can to help raptors, wildlife, and the environment. As you will read in this issue, The Raptor Center’s interns, veterinary students, and volunteers gain valuable knowledge and experience at our facility in St. Paul, Minnesota, that they will use to help wildlife, humans, and the planet.

And now that it’s breeding season, the next generation of raptors is arriving. These young birds are truly a sign of hope for wild raptor populations as well as bearers of vital information about the challenges raptors face in the wild. The information we glean helps us devise research and surveillance projects to develop solutions to the many problems raptors, wildlife, and humans face.

Some of the solutions are obvious but not easy to implement. For instance, it is well-documented that spent lead ammunition, a known contaminant, causes lead toxicity in bald eagles when consumed. The solution is either to ban lead ammunition through legislation or educate hunters about alternative, nonlead ammunition to promote voluntary changes in behavior. For some of the other contaminants, scientists are in a race to determine which are causing the most harm and which species are most affected, so that mitigation strategies can be developed.

The science that stems from our research and that of others working in ecosystem health must be communicated to the public, especially youth. To reach the next tech-savvy generation, educational efforts must keep pace with changing times. We have many exciting efforts in this area of our work, but there is still more to do.

Your donations of time, money, and supplies are vital to our success; helping us discover solutions to the problems we face so we can all continue to share this marvelous planet.

As always, thank you for your generous support of our efforts.

Together we can change the world.

Sincerely,

Julia Ponder, D.V.M., M.P.H.
Executive Director
Changing the world

By Fran Howard

The Raptor Center (TRC) trains tomorrow’s experts in wildlife medicine and ecosystem health while benefiting from the work of these dedicated environmental experts, veterinary scientists, and conservationists. These dedicated people are working on ways to make the world a better place for humans and wildlife alike. This story explores the work of some of these individuals and their hopes for a better tomorrow.

Sharing information across borders
TRC intern Dr. Ernesto Domínguez Villegas, a veterinarian from Mexico City, wants to improve communication between the Americas. He has spent the past three years working and training at some of the world’s renowned wildlife centers and zoos.

“The main reason I chose to do an internship at The Raptor Center is I wanted to continue my veterinary training at one of the best wildlife rehabilitation facilities in the world,” says Villegas. “TRC is also the best in the world in avian medicine and surgery.”

A 2013 graduate of the National Autonomous University of Mexico College of Veterinary Medicine, Villegas initially enrolled in medical school but transferred to veterinary school because it offered more challenges.

“There are so many things we don’t know about wildlife and diseases in the environment,” he says. “Every species is different, and every species has a different type of contact with the environment. Every day we have to challenge ourselves to learn more.”

Eventually, Villegas hopes to open a wildlife center in South America to improve communication between wildlife scientists in the Americas.

“I want to form partnerships between wildlife centers in South America and North America, and I want to share information on survival plans developed for endangered species and on species that migrate between North and South America,” he says. “In South America, for instance, armadillo and anteater species are endangered, but in North America there are breeding programs for these species.”

Making the world safer for wildlife and humans
TRC intern Dr. Kathleen MacAulay hopes to make the world a safer place for both raptors and people. A veterinarian from Nova Scotia, Canada, MacAulay has worked in wildlife rehabilitation for the past 10 years, primarily with raptors at Cobequid Wildlife Rehabilitation Center in Brookfield, Nova Scotia, where lead poisoning in bald eagles has been a primary problem.

A 2015 graduate of Atlantic Veterinary College at the University of Prince Edward Island, MacAulay has worked in wildlife rehabilitation for the past 10 years, primarily with raptors at Cobequid Wildlife Rehabilitation Center in Brookfield, Nova Scotia, where lead poisoning in bald eagles has been a primary problem.

“Scientists were able to see the problem and find a solution.”

Banning lead ammunition would go a long way toward improving the world for bald eagles and humans, MacAulay notes. “As more people appreciate nature, our desire to protect it grows as well.”

Working with the next-generation hunter
Kate Henry, who is working on her master’s degree in environmental education at the University of Minnesota, Duluth, wants to understand the attitude, behavioral intentions, and behavior of Minnesota deer hunters regarding their use of lead ammunition.

She is collaborating with TRC, the Minnesota Department of Natural Resources, and the Minnesota Department of Natural Resources.

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As part of her project, Henry attended four state park-sponsored Mentored Youth Hunts, where speakers, including Dr. Julia Ponder, executive director of TRC, provided information to the young deer hunters about the effects of lead bullets and the benefits of alternative ammunition. Henry provided surveys to the 99 young hunters who participated in the deer hunts.

“We wanted to target the youth because they are the next generation of hunters,” Henry notes. “The thought is if they can make the switch early, they are likely to stay with that choice throughout their hunting careers.” Henry is still analyzing the results of the 55 returned surveys, but she says that overall the young participants seem receptive to alternative ammunition.

After graduating, Henry hopes to become an interpretive naturalist.

“Growing up, I was always outside playing in the woods,” she says. “I want to protect wildlife and the environment and help others develop an appreciation for nature. It is critical to understand how to care for and manage our natural resources so they can be enjoyed by future generations.”

Speaking their language

Since 2012, first-year veterinary student Robin Doherty has been both helping and learning from raptors. As a clinic volunteer, Doherty has learned valuable lessons that many veterinarians will never have the opportunity to learn, while providing research data to TRC staff.

When raptors start to get sick, they often develop a heavy parasite load of flat flies. For her undergraduate honors thesis, Doherty collected and categorized the species of flat flies found on TRC patients on admission and compared infestation rates across raptor species.

“There were significant variations in how heavily different species of birds were infested, but one species of flat fly was responsible for 90 percent of the infestations,” says Doherty, who plans to practice wildlife or exotic pet medicine once she graduates.

“It’s really valuable to work with an animal that is in a different class than what we are used to. Talking to them to try and soothe them like you would a dog or a cat is not going to help,” she says. “Another valuable lesson I learned from The Raptor Center is that human-produced problems are a big issue for wildlife. I like to think that having that knowledge has helped me to minimize my footprint.”

Teaching budding scientists about ecosystem health

Students at several Minnesota grade schools are playing the role of a scientist as they analyze real-time data provided by TRC on lead levels in bald eagles. Through this exercise, budding scientists learn how these apex predators alert humans to problems within the environment.

For the past four years, Allison Fasking, a seventh grade life science teacher at Twin Oaks Middle School in Prior Lake, Minnesota, has been involved with TRC’s Raptor Lab, a science-based pilot project offered to select grade schools.

“Raptor Lab is an engaging way to teach the process of the scientific method to our students,” says Fasking. “It illustrates how the process of science is utilized in making evidence-based conclusions and decisions within the field of veterinary medicine and environmental science.”

One of the goals of Raptor Lab is to create an appreciation for the complexity of ecosystems and how human behaviors can affect all organisms within a shared environment.

“Observing the process from start to completion—as one bald eagle is brought into the clinic, diagnosed, treated, and released—is interesting for our students,” says Fasing. “It has fostered an interest in professions related to the environmental sciences and veterinary medicine.”

Fran Howard is a St. Paul-based freelance writer specializing in veterinary medicine, wildlife, and conservation writing.
Tales from the trauma center

By Lori Arent

As spring breezes warm the chilly air, earth springs into action, sharing the promise of new life. In the clinic, there is a feeling of anticipation—both for the first nestling fluff ball that will need our help and for meeting the next generation of raptor caretakers and scientists. At The Raptor Center, we share knowledge that was ultimately acquired from the best teachers of all—our raptor patients. Successful techniques in raptor medicine, captive management, and behavior training have been created with the help of the recipients themselves. Although raptors don’t speak our language, they communicate with us through their behavior. Knowledge streams from the mastery of interpreting what they tell us.

Not only do we learn a great deal from raptor patients during their stay, but the outcomes of their releases can also give us valuable information to inform future practices. When released, our patients wear a federal leg band; it is through band returns that raptors share insights into their life in the wild. One eagle patient recently shared her story, which began 21 years ago.

BAEA V-366 was a 10-week-old bald eagle that fell from a nest in Grand Rapids, Minnesota, in 1995 after a severe summer storm. A physical exam at TRC revealed that she was unharmed, so we began the process of looking for a foster site. Fostering young raptors was a new concept at the time, and eagle nests were not as common as they are today.

One of our volunteers and her teenage son notified us of an active eagle nest on an island in the Mississippi River, so we ventured out by boat with the young eagle aboard. When we arrived, the situation looked promising. One adult was within sight near the nest, and a low branch blanketed the shoreline.

We placed the young eagle on the ground. She walked a few steps and perched on the fallen branch. Perfect! We quickly retreated, and as the boat pulled away, I remember looking back, taking a picture, and praying the adoption would work. Since that time, we have successfully fostered many bald eagle youngsters.

Fast forward 21 years. In late February, one of our transport volunteers carried in an injured, banded bald eagle he had rescued in Minneapolis after it was reported to have “fallen from the sky.”

When I checked our database, my excitement could not be contained. It was the young eagle fostered in 1995. This time, she had the classic injuries of a territorial battle—punctures on her chest and feet and internal trauma. She was also sporting the beginnings of a brood patch—a plucked area on her abdomen that provides the heat necessary to incubate eggs—an indication that she was preparing to create yet another generation of eagles to dance in the skies.

Throughout the years, studying birds in nature, trying innovative approaches, and enlisting the help of creative volunteers have helped us reach new heights. When we dare to try, we spread our wings and fly. This is truly the message of hope for the next generation.

Lori Arent is the clinic manager at TRC and author of Raptors in Captivity, Guidelines for Care and Management, available at www.TheRaptorCenter.org.

2015 clinic statistics

Total number of patients admitted: 843

Top five species
1. Bald eagle: 167
2. Great horned owl: 133
3. Red-tailed hawk: 127
4. Cooper’s hawk: 105
5. Barred owl: 69
All gifts vital to TRC’s success

By Ellen Orndorf

Gifts of all sizes are vital to the success of The Raptor Center (TRC), which is able to continue its work thanks to support from its generous donors. From garage sales held by young raptor lovers to showers for baby raptors to large estate gifts, every donation sustains TRC’s pioneering work in avian medicine and conservation.

Next-generation philanthropists
Generosity often begins at a young age. Thirteen-year-old Sam, for instance, asked for contributions to The Raptor Center at his annual garage/toy sale.

“I have always loved birds and raptors, and wanted to help The Raptor Center return them to the wild,” Sam says. “I love to visit The Raptor Center—every time, I learn something new.”

Meanwhile, students at North Junior High School in St. Cloud, Minnesota, have a service-learning group called Eagles Act. This year, the group is focused on animals, especially raptors. Since their school mascot is a bald eagle, the group adopted Maxime, one of The Raptor Center’s education eagles, through TRC’s Adopt-a-Raptor program. Now, Eagles Act is hoping to raise enough money to adopt a second eagle.

To learn more about how you can support a raptor, go to TheRaptorCenter.org and click on “Get Involved,” then “Adopt a Raptor.”

We’re having a baby shower
Springtime is baby season. In a typical year, TRC sees 120 young raptors that require assistance for a variety of reasons. The knowledge and experience that TRC clinic staff and volunteers provide raptor babies offers them the best chance of survival in the early—and often most difficult—months of their lives.

Nearly 65 percent of TRC’s operating budget comes from donations, and due to the heavy draw on resources during this very busy time, TRC Board of Advisors member Teresa Daly has issued a challenge. If TRC can raise $20,000 from donors and friends between May 1 and June 15, she will generously donate $5,000 to help baby raptors. Please help us unlock this gift by visiting https://crowdfund.umn.edu/TRCBabyShower2016 to make an online gift, or call Ellen Orndorf at 612-624-8457.

Farewell, friend
TRC is saddened by the passing of Susan Wilder, a longtime devoted friend and donor. New York City residents, Susan and her husband, Bob, learned about The Raptor Center from an article in the New York Times when TRC was first established. Many years later, the couple visited TRC, and Susan was able to release a rehabilitated red-tailed hawk into the wild at one of TRC’s public raptor release events.

To honor Susan’s love of raptors, her husband made a lead gift to support a much-needed renovation project at TRC. TRC’s vision is to create a dynamic learning environment called the Susan P. Wilder Visitor Center, which will open in 2017. This new learning center will use a combination of technologies, including interactive displays and video, to complement and enhance teaching with live raptors.

For more information about making a gift, or to learn about other ways to support TRC, please contact Ellen Orndorf, TRC’s development officer, at 612-624-8457 or eorndorf@umn.edu.
Enhancing education through new technologies

By Gail Buhl

The Raptor Center (TRC) was not originally designed as a destination or visitor center, but it has become both. Nearly 8,000 visitors each year come for walk-in tours given by trained volunteers. An additional 10,000 visitors attend organized programs. From the time visitors step into the lobby, they are captivated by TRC’s live educational ambassador birds.

While TRC remains heavily focused on developing leaders who will address the critical environmental issues facing the world in coming decades, it also strives to educate the public about the issues facing wildlife, humans, and the health of the ecosystem. As such, TRC is in the process of creating a dynamic learning environment that will use a combination of live ambassador birds and new learning technologies.

An overall renovation of TRC’s lobby and educational spaces will enhance the educational opportunities offered at the center. The goals of renovation are to provide a more powerful visitor experience with updated, interactive displays designed to engage a young audience; inspire visitors to care about raptors and understand the unique challenges they face; and empower guests with the knowledge they need to make positive changes for raptors and the environment.

TRC’s new Douglas Dayton Education Wing will be one of three areas receiving new interactive learning displays. These interpretive exhibits will teach visitors about the habitat needs of TRC’s ambassador birds and include environmentally based messages that address needed solutions to the problems facing these birds in the wild.

Renovation of the lobby area will allow visitors to have a nose-to-beak encounter with TRC’s ambassador birds while enjoying interactive learning displays that offer a wealth of information. This new area, the Susan P. Wilder Visitor Center, will also allow visitors to explore what it means to share the environment with raptors through a self-guided interpretative journey.

The next phase of renovation will be to update the technology and exhibits used in TRC classrooms with a combination of technologies, including interactive displays and videos.

These renovations will build on the quality of the visitor’s educational experience and further educate guests of all ages on how to create a more sustainable world for raptors and the world we share.

Gail Buhl is the education program manager at TRC. For more information about supporting TRC’s renovation effort, contact Ellen Orndorf, development officer, at eorndorf@umn.edu or 612-624-8457.

The next generation of ambassadors and trainers

By Amber Burnette

Meet Talon, a recent addition to The Raptor Center’s team of educational ambassadors. A peregrine falcon hatched in 2015, Talon was found injured near St. Cloud, Minnesota. Her leg band identified her as having been banded at 23 days of age in Fort Wayne, Indiana, as part of the Midwest Peregrine Society’s restoration project. Talon had burns on her face and feet, and many of her feathers were singed. Due to permanent damage to some of her talons, TRC veterinarians determined she is not releasable. Also new to our team of educational ambassadors is a female red-tailed hawk brought to TRC with a congenital condition that caused blindness in one eye. Like Talon, she hatched in 2015. She doesn’t have a name yet, but is sure to be a valuable member of the education team. Because red-tailed hawks are common residents in many landscapes—both urban and rural—they provide ample opportunities to teach about shared habitats.

TRC’s unfeathered staff members are always busy creating new ways to enrich the lives of the education raptors. These trainers provide enrichment objects to stimulate and encourage natural behaviors. For some education birds, limited flight programs help ease stiffness in joints and keep them engaged. Birds like Nero, a 42-year-old turkey vulture, benefit from the introduction of additional handlers, who manage the transitions using food—Nero’s favorite reward!

Amber Burnette is TRC’s program associate and blog master.
The growing problem of contaminants and toxicants

By Fran Howard

As humans continue to release more and different types of contaminants and toxicants into the environment, scientists are unable to keep pace with the research needed to determine the long-term effects.

The research that is occurring, however, shows that as top avian predators, raptors can provide an early warning system for the potential impacts of contaminants and toxicants on the health of humans, wildlife, and the environment.

Recent work in Europe, for instance, shows that monitoring raptors that have been exposed to contaminants and toxicants not only helps scientists understand how serious and widespread problems are in the environment, but also provides a way to track the success of mitigation measures.

“Raptors are particularly good sentinels for monitoring environmental contaminants and toxicants because they feed on animals lower in the food chain that might have been exposed directly,” says Dr. Julia Ponder, executive director of The Raptor Center (TRC). “Humans are constantly throwing more of these substances into the environment, and the number of chemicals that are actually regulated is tiny.”

Heavy metals, such as mercury and lead, are widely found in the environment. Research on mercury exposure has been conducted on a few avian species, including bald eagles, but no data exists on exposure for the majority of species. Even less is known about the levels of mercury that are harmful to individual birds, so scientists cannot determine which species or populations are most affected.

Endocrine disruptors are compounds that alter, or interfere, with the normal functioning of the endocrine system of wildlife (and humans), and can cause cancerous tumors, birth defects, and other developmental disorders, including weak eggshells. Many pesticides have been identified as endocrine disruptors.

Some endocrine disruptors and the new generation of pesticides, the neonicotinoids, have not yet been documented in raptors, but are in the food chain, says Ponder. To date, scientists are not sure why these toxicants have not been found in raptors. Are few if any researchers looking for them, can current tests not detect them, or have they not yet worked their way up the food chain?

Impact data is deficient on some contaminants and toxicants, but plenty of documentation exists that bald eagles ingest lead fragments while feeding on gut piles and deer carcasses, and severe problems result. It is also clear that the solution to this problem is to either encourage voluntary change through hunter education or ban lead ammunition for deer hunting.

The issue is not black-and-white.

“There is a continuum of subclinical effects,” Ponder says. “Birds that are less healthy due to exposure are more susceptible to other problems. We find ourselves in a race to develop the science needed to support policy changes.”

Fran Howard is a St. Paul-based freelance writer specializing in veterinary medicine, wildlife, and conservation.

Hunters’ Choice workshops offer alternatives—Making the right choice for the environment

When a deer hunter uses lead ammunition, it shatters into tiny pieces when it hits the animal. These fragments can disperse as far as 18 inches from the bullet track. Scavengers that feed on contaminated gut piles or carcasses left behind by hunters ingest these lead fragments, which can cause reproductive impairment, immune suppression, tissue damage, and death.

TRC, in conjunction with the Minnesota Department of Natural Resources (DNR), The Wildlife Society, and others, has been working to change hunters’ perceptions of alternative ammunition in an effort to persuade them to make the better choice.

“Alternative nonlead ammunition is widely available, effective, and affordable,” says Dr. Julia Ponder, executive director of The Raptor Center. “At our Hunters’ Choice workshops, we provide hunters with these alternatives and encourage them to try them onsite at the workshop. We want to let them discover for themselves that the alternatives have excellent ballistics and don't leave behind toxic fragments.”

The Minnesota DNR has proposed banning the use of certain types of lead ammunition on wildlife management areas in the farmland zone of the state. While a good first step, this proposal does not include lead bullets or shot used for deer hunting, a major source of poisoning for eagles. —F.H.
A Sand County Almanac: a conservation classic

A Sand County Almanac, with Essays on Conservation on Round River
By Aldo Leopold
Ballantine Books, 1970

By Sue McCarthy

When A Sand County Almanac with Essays on Conservation from Round River was first published in 1949, the terms “conservation” and “ecology” were probably unfamiliar to most readers. Yet this classic book by Aldo Leopold is still relevant 67 years after publication.

This edition on land ethics and conservation is divided into four sections: A Sand County Almanac, The Quality of Landscape, A Taste for Country, and the Upshot. A keen observer, Leopold writes in prose that practically sings: “The shadow of a pelican sailed over a pool in which a yellow-leg alighted with warbling whistle; it occurred to me that whereas I write a poem by dint of mighty cerebration, the yellow-leg walks a better one just by lifting his foot.”

In the first section, Leopold describes monthly observations of his worn-out sand farm in Wisconsin. The chapter “February, Good Oak” is especially poignant because Leopold describes his affection for a venerable tree struck by lightning after putting on 80 growth rings. From the outermost ring to the core, Leopold describes sawing up the tree that was a seedling in 1865, giving an historical timeline of events that coincide with each growth ring.

“It took only a dozen pulls of the saw to transect the few years of our ownership, during which we had learned to love and cherish this farm,” he wrote about the outer ring. As for the core, he wrote, “1865 still stands in Wisconsin history as the birth year of mercy for things natural, wild, and free.”

In the remaining sections, Leopold mourns the loss of wildlife and wildlands—the plight of the prairie chicken, the wolf, and the wild turkey—and the lack of land management and conservation education. Yet he enables us to compare 1949 to 2016. How much have we lost? Have we gained anything? He helped found the Wilderness Society, and if that were his only accomplishment, he would have helped change the world. But his classic environmental writing, with its poetic prose, will influence future writers for years to come.

Sue McCarthy is an avid reader and longtime volunteer at TRC.

Volunteering helps both TRC and the volunteer

By Fran Howard

Grace Rexroat will never forget the first time she heard Mêstaáe, TRC’s resident screech owl, give her call.

“It was beautiful,” says Rexroat.

Rexroat, a senior at the University of Minnesota, has volunteered on TRC’s education crew since 2013. An ecology, evolution, and behavior major, Rexroat hopes to pursue a career in environmental education or zoology when she graduates.

“While I knew what I wanted to do before I started volunteering, The Raptor Center solidified my career goals,” says Rexroat, who estimates she has been involved in hundreds of walking tours at TRC and about 10 education programs.

TRC’s many volunteers provide critical services. In 2015, volunteers like Rexroat contributed 24,000 hours to TRC, which is the equivalent of 12 full-time employees.

As they help out at The Raptor Center, these volunteers gain valuable experience and fond memories.

“I have learned many things while volunteering at The Raptor Center,” Rexroat says. “I have learned to be flexible, how to meet a deadline, and how to act on my feet. My volunteer experience has been priceless. I have learned the tools needed to relate to all types of people and to teach people of all ages and abilities.”

She has also learned how to inspire people, a skill she will need in her career.

“I really enjoy seeing when someone I am interacting with learns something,” she says. “I get enjoyment from seeing other people enjoy learning about nature and animals.”
Around The Raptor Center

The Douglas Dayton Education Wing was dedicated on September 24, 2015. University of Minnesota President Eric Kaler and Dr. Trevor Ames, dean of the College of Veterinary Medicine, led the ceremony.

Staff news
TRC welcomed two new clinical interns, Dr. Kathleen MacAulay and Dr. Ernesto Dominguez Villegas. A veterinarian from Nova Scotia, Canada, MacAulay has 10 years of wildlife rehabilitation experience and has worked with several field projects related to birds. Villegas, a veterinarian from Mexico City, graduated from the National Autonomous University of Mexico School of Veterinary Medicine in 2013. He spent a year working in an exotic pet practice and trained at the Belize Wildlife and Referral Clinic, Arcas Wildlife Center in Guatemala, Maryland Zoo in Baltimore, Africam Safari Zoo in Mexico, Johannesburg Zoo in South Africa, and the Wildlife Center of Virginia.

Dr. Angela Rodriguez Hernandez, a veterinarian from the University of Mexico, completed a three-month externship at TRC.

Dr. Saeed Mokhayery, a veterinarian from Iran, began a six-month externship/sabbatical in October.

Awards and presentations
Dr. Patrick Redig, co-founder of TRC, was named the T.J. Lafeber Avian Practitioner of the Year at the 2015 Association of Avian Veterinarians Annual Conference & Expo. The T.J. Lafeber award is presented to an outstanding practitioner who is advancing the quality of health care for companion birds. Criteria for the award include clinical excellence, innovation, promotion of the profession, contributions to the knowledge base, and compassion for avian patients and clients.

Dr. Julia Ponder, executive director, was a featured speaker at SciSpark 2016: Women in Science, a fast-paced evening of mini-lectures by researchers on the St. Paul campus on March 28. The week before, she presented "What's Lead Got to Do with It?" at a University of Minnesota “Minnesota Sparks” event at the Red Wing Golf Club in Red Wing, Minnesota. In December, she discussed invasive species at the Bell Museum of Natural History’s Café Scientifique event at Bryant-Lake Bowl in Minneapolis. In November, Ponder addressed the question “When Does Conservation Mean Killing?” as part of the Frontiers on the Environment Big Question Series at the University of Minnesota.

Mike Billington, education program associate, made the presentation, “The Raptor Lab: Using Online Technology to Create Authentic Learning Experiences in Science Education” at the Minnesota Science Teachers Association’s Conference on Science Education in Duluth in February.

Educating youth
Three learning modules for Raptor Lab have been designed, developed, filmed, and put online. Curriculum has been drafted for the first two modules and is currently being developed for module three. Module one focuses on students role-playing a veterinarian in training with Redig. More than 1,000 students from eight schools are piloting the program, and a June workshop is scheduled for teachers to thoroughly evaluate Raptor Lab.

Also under development is the Raptor Academy, an umbrella of online content geared toward wildlife health professionals interested in improving their knowledge of raptor patient care. Topics will include raptor medical care, management, and rehabilitation and conditioning, as well as self-study content on nutrition, bandaging, and raptor anatomy and physiology.

TRC has expanded its partnership with Athletes Committed to Educating Students. After enjoying a long relationship with local fourth-grade classes, with a focus on owls, TRC offered multisession meetings that included fifth graders as well. In 2016, TRC will make presentations to fourth through eighth graders at approximately 15 schools in Minneapolis and St. Paul that are considered underserved. Teachers are given curriculum to use before and after each TRC presentation.

TRC’s Family, Friends, and Feathers programs debuted in November and December. Modeled after the weekend Raptors of Minnesota program, Family, Friends, and Feathers programs are open to the public. They begin at 1 p.m. on days when families might have time off. For details, visit TheRaptorCenter.org.

Youth RaptorCorps started in October. The service-learning program for fifth through eighth graders meets once a month to explore a designated topic.
Upcoming events

Basic Raptor Rehabilitation Workshop
*For wildlife rehabilitators and veterinarians*
May 3-6

Raptor Replay
*Offered in partnership with Tamarack Nature Center*
Learn how raptors and humans have affected each other throughout history. For grades 3-6.
July 11-14

Up Close with Birds of Prey
*Offered in partnership with Richardson Nature Center*
Meet owls, eagles, falcons, hawks, a vulture, and more. Explore the habitats these birds call home, look at their food sources, and identify them in the sky using binoculars and a spotting scope. For ages 9-13.
August 8-12

Fall Raptor Release
See rehabilitated raptors released back into the wild and meet some of The Raptor Center’s winged ambassadors.
Saturday, September 24, 10 a.m.–3 p.m.
Carpenter St Croix Valley Nature Center, Hastings, Minnesota

Learn more about TRC educational opportunities and events at TheRaptorCenter.org.

Contact us

**Donations**
Gifts, endowments, estate gifts, and grants:
Ellen Orndorf, 612-624-8457 or eorndorf@umn.edu

**Raptor Release program**
Sue Wenker, 612-625-0201 or raptor@umn.edu

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

**E-communications**
Want to receive e-communications? Go to www.TheRaptorCenter.org and click “Subscribe to e-news.”

**E-mail**
raptor@umn.edu

**Events calendar**
TRC public events calendar
http://tinyurl.com/TheRaptorCenterCalendar

**Fax**
612-624-8740

**Front desk**
Injured raptors; general information
612-624-4745

**Gift shop**
TRC’s online gift shop offers raptor-themed items such as clothing, books, toys, and jewelry. Go to www.TheRaptorCenter.org and click Shop.

**Mailing address**
1920 Fitch Ave.
St. Paul, MN 55108

**Social media**
Facebook: www.facebook.com/TheRaptorCenter
Blog: www.TheRaptorCenterNews.blogspot.com

**Volunteer opportunities**
Volunteer positions and upcoming training sessions
Nancie Klebba, nklebba@umn.edu or 612-624-3928

**Website**
www.TheRaptorCenter.org

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2015 by the numbers

TRC volunteers donated **24,000** hours—the equivalent of **12** full-time employees.

The Raptor Center treated **843** sick and injured wild raptor patients.

More than **112,000** people were reached with **1,064** educational programs and events.

More than **8,000** people visited The Raptor Center.
Celebrating four decades of dedication to raptors

We’re having a baby shower

Springtime is baby bird season, and baby raptors have begun to arrive at The Raptor Center. If this spring is like most, we will see about 120 young raptors that need our help.

Please help us help baby raptors by making a special springtime gift to our baby shower fund. If TRC can raise **$20,000 by June 15**, Teresa Daly, a member of TRC’s board of advisors, will contribute **$5,000** to help baby raptors.

Visit [https://crowdfund.umn.edu/TRCBabyShower2016](https://crowdfund.umn.edu/TRCBabyShower2016) or call Ellen Orndorf at 612-624-8457.