

THE RAPTOR CENTER | *Ensuring the health of raptors and the world we share*

Raptor Release

Spring 2022



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TRAINING TO TEACH

Raptors undergo a thorough process to take wing as educational ambassadors.

Letter from the director

The Raptor Center (TRC) is humbled to work with the incredible species that we do. With this work comes the enormous responsibility to ensure we're providing them the highest level of care possible. Whether one of the over 1,000 patients that come in injured, sick, or orphaned needing care, or one of our 27 education ambassador birds our team works endlessly to ensure excellence in care and welfare for every single individual.



Dr. Victoria Hall with bald eagle ambassador Lutsen. | Photo by the Raptor Center

But what do we mean by “animal welfare”? The American Veterinary Medical Association defines animal welfare as “how an animal is coping with the conditions in which it lives.” Good animal welfare involves an animal being physically and mentally healthy. It means they are comfortable, well-nourished, and able to express normal behaviors, as well as free from pain, fear, and distress.

Wild birds are admitted to our clinic for a variety of reasons, but they all share a level of fear and stress. Wild birds don't understand that we are trying to help them. That is why every action done in our hospital utilizes the expertise of our veterinarians, veterinary technicians, and volunteers to reduce stress, minimize pain, and create an environment where these birds can heal, regain their strength, and return to the wild as soon as possible.

The permanent ambassador birds in our education team require different considerations to ensure their best welfare. They are provided engaging environments, which offer safety and choice, and they are given the opportunity to positively engage with their caretakers each day. Being cared for by our team, they live longer than their wild counterparts, meaning we encounter geriatric (age-related) conditions, like arthritis and heart problems, that may not be seen in the wild. These require unique treatments and monitoring to keep our ambassadors as comfortable and healthy as possible. We constantly strive to improve and provide the best welfare possible to these vital team members.

Excellence in animal care and welfare is at the heart of everything we do, whether working hard to give wild birds a second chance at life or inspiring the public through our education ambassadors. In this issue of *Raptor Release*, we dive into how we deliver this excellence and how we amplify it to the broader world.

The care we can provide and the success stories we can tell from our hospital are all thanks to supporters like you. So thank you very much from myself, The Raptor Center community, and the birds who get a second chance because of your support and generosity.

Victoria Hall

Victoria Hall, DVM, MS, DACVPM
Executive Director and Redig Endowed Chair
in Raptor and Ecosystem Health

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On the cover: Anna Voss, interpretive naturalist for The Raptor Center, introduces a red-tailed hawk ambassador to a crowd. | Photo by The Raptor Center

The 2022 outbreak of highly pathogenic avian influenza

by Victoria Hall

This issue of *Raptor Release* was written prior to the current outbreak of highly pathogenic avian influenza, but we still want to address this major event in this publication. Highly pathogenic avian influenza, or HPAI, is a strain of bird flu currently spreading across the United States. Carried primarily by waterfowl, like ducks and geese, this strain is deadly for domestic birds, like chickens and turkeys, and fatal to raptor species.

Highly pathogenic avian influenza has major implications for our agricultural sector, and it is rightfully getting a lot of attention. It is also having a serious impact on raptors and the work of wildlife rehabilitators. For us at The Raptor Center, this means heartbreak as we see these ill birds coming to us without a way to heal them.

What we are doing, however, is continuing to rescue and treat those that come to us without HPAI and easing the suffering of those already infected. To accomplish this, we've enacted extreme biosecurity measures and erected a separate triage and quarantine area to test and assess incoming patients. Through these enhanced measures, we are still doing everything that we can to protect the owls,



Dr. Dana Franzen-Klein holding a bald eagle that was tested for HPAI | Photo by The Raptor Center

eagles, hawks, and falcons that need our help and can be released back to the wild.

We will cover HPAI in more depth in our fall issue of *Raptor Release*, but you can stay up-to-date on what we're doing to combat it and how it is impacting wild raptors by checking out our website or following us on Facebook at www.raptor.umn.edu or @TheRaptorCenter.

Clinic statistics

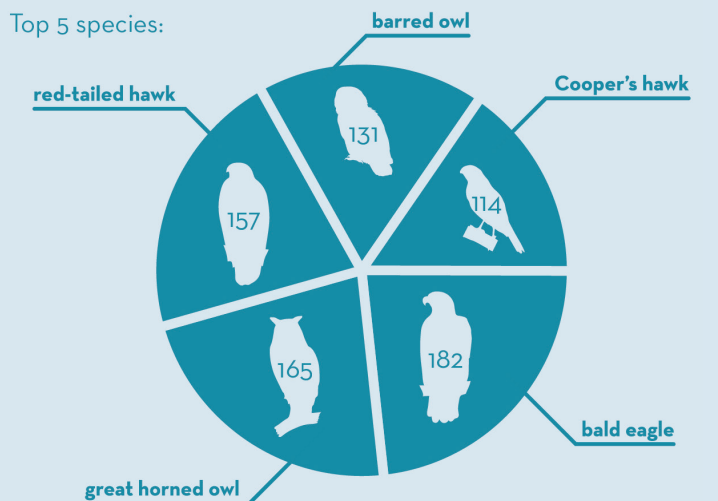
by Lori Arent

For only the third time in The Raptor Center's history, the clinic admitted over 1,000 raptors patients (1,034) in 2021. Although the top five species remained the same as in 2020, we saw more of each. This included a record number of barred owls: 131 compared to an average of 83 per year over the previous five years.

Admissions

January 1 - December 31, 2021: 1,034

Top 5 species:



What a relief

Raptor pain management

by Dana Franzen-Klein

A large proportion of wild raptors admitted to The Raptor Center (TRC) have suffered a traumatic injury. They may have been hit by a car, have a broken bone, or have a traumatic brain injury after hitting a window. How do staff control the pain patients are experiencing after these types of injuries?

You may be surprised to learn that TRC uses many of the same

medications that humans and domestic animals receive for pain control. These include non-steroidal anti-inflammatory medications similar to the ibuprofen that is in your medicine cabinet at home, along with other classes of pain meds, such as gabapentin, a medication that is used routinely in dogs and cats.

While there are well-established treatment regimens for pain control in humans, there is limited information about which pain medications work best in raptors. TRC staff and veterinarians across the country are actively studying pain medications in raptors to gather the scientific information needed to make the best choices for patients. From these studies, scientists have found variations in how different raptor species process these pain medications. This research has shown that medical staff aren't able to treat pain in a bald eagle the same way they can in an eastern screech owl.

The medical staff at TRC uses all available research and consults with colleagues to ensure that their raptor patients are receiving the best pain control possible. They also pay attention to each animal's behavior to gather information about the bird's level of pain. Raptor patients express variable signs of pain such as fluffed feathers, partially closed eyes, a wing drooped low towards the ground, or a decreased appetite. If signs of pain are noted, their medications are adjusted and they are watched closely for improvement.

Pain control is not only important for the individual animal's welfare and comfort; long-term pain also has many negative effects on the body. Pain can inhibit healing and suppress the immune system, making the bird more prone to infections. As the bird's injuries heal, TRC staff gradually decreases the pain medications until the raptor is feeling like new once again.

Close observations of individual patients combined with scientific studies allow TRC to gather more information about which pain medications work best in North American raptor species. Staff then share this information with other wildlife veterinarians and rehabilitators to improve pain control and welfare of raptors throughout the country.



Watch the raptor center team feed a great horned owl medicine post operation here:
z.umn.edu/whatarelief



Lower left and above: This bald eagle underwent surgery at The Raptor Center to fix a broken bone in its wing. | Photos by The Raptor Center



Raptor spotlight: Samantha

by John Sammler



Samantha is a subarctic great horned owl brought to The Raptor Center (TRC) in 1992. She was found as an adult in Deer River, Minn., along the side of a road, with a fracture in her left wing from a suspected car strike. The fracture was treated; however, the wing injury had permanent impacts on her flight. Since she was not releasable to the wild, she was placed in TRC's education department.

TRC staff performed evaluations and did training to ensure Samantha would be a good fit for life as an ambassador. TRC's training regimen is rooted in positive reinforcement, which lets birds choose to participate with their trainer in different activities. Over the years, Samantha has proven to be one of the most versatile ambassadors, doing thousands of events and educating hundreds of thousands of people. She is one of TRC's most senior and beloved education birds.

Samantha is at least 32 years old and has some age-related medical conditions that are being actively monitored and treated. She has arthritis in her left wing and cataract formation in both of her eyes. She receives joint supplements, and TRC is doing behavioral monitoring and treatment trials with pain medications to ensure she is as comfortable as she can possibly be. Arthritis is a common problem for older birds, particularly in relation to prior injuries. Consistent monitoring and meticulous daily care have kept her healthy and comfortable to keep doing her education work with the public. Come to TRC for a tour and meet Samantha!

Great horned owl Samantha is a longtime member of our education ambassador team. | Photo by Gail Buhl



Naturalist Anna Voss presents to the public with a great horned owl trained to be an education ambassador. | Photo by Les Conrad

TRAINING TO TEACH

Raptors undergo a thorough process to take wing as educational ambassadors.

by Brandi Rupard

No bird's journey to The Raptor Center (TRC) is exactly alike, and the same can be said for their life after receiving care at its clinic.

Raptors are ultimate athletes and need nearly perfect function to survive in the wild. Despite the expert medical care they receive at TRC, sometimes returning them to the high level of function required to survive in the wild is not possible, and a few raptors are given the opportunity to accept a new role as educational ambassador.

As the title implies, these special birds become the face of educational programs both at TRC and other permitted facilities, such as nature centers and environmental learning centers. They accompany education staff on outings to schools, community events, and other settings. Not every raptor is a great fit for the ambassador role, but those who are help educate thousands of people each year about the

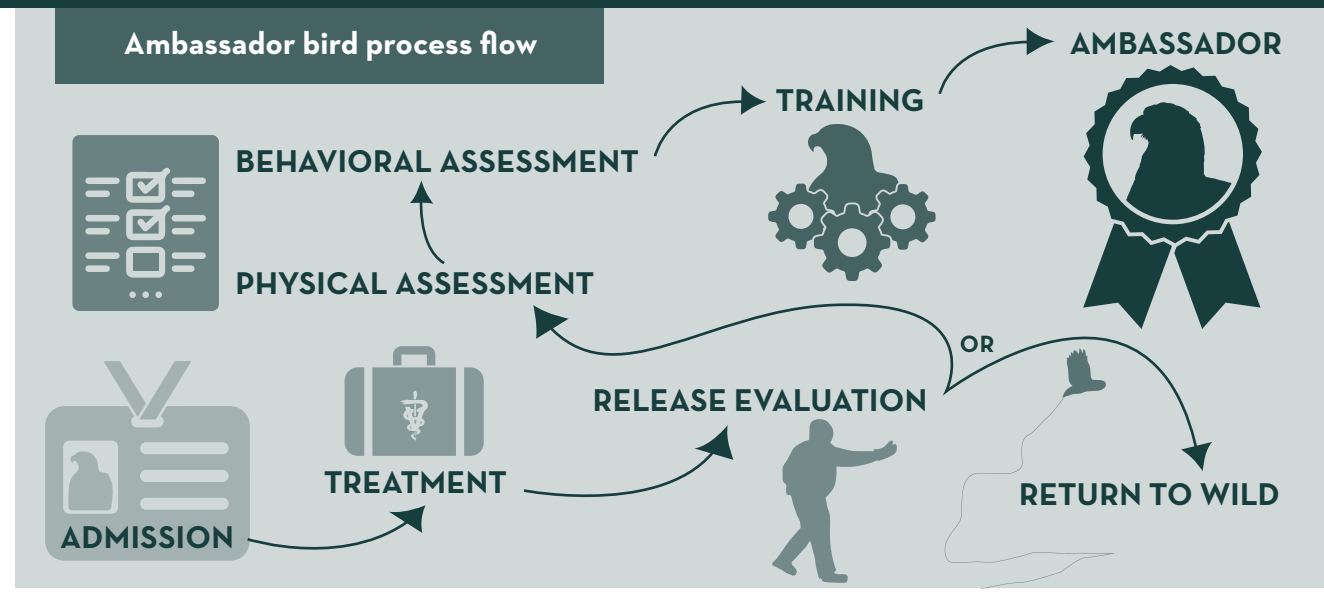
importance of conservation and inspire audiences to take action in preserving the world around them.

Kelsey Griffin, an interpretive naturalist for TRC, sees that inspiration firsthand when she brings raptor ambassadors to meet audiences. When the raptor is taken out of its carrier, she says, energy often fills the air or a hush falls over the crowd.

"It's just incredible because you really get a sense of the powerful ability of these birds to capture people's imaginations and really make a lasting impact," she says. "It is an amazing feeling to generate that kind of excitement and help people connect with the environment around us."

Picking potentials

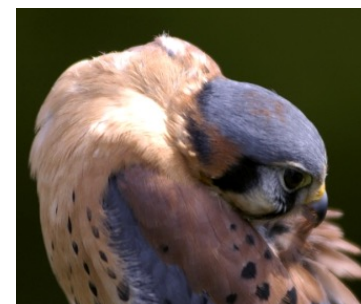
Earning the title of ambassador requires birds to undergo a thorough evaluation and training process.



Illustrations by Ashton Wignall and Nathan Pasch

So what makes a raptor a good candidate for becoming an ambassador? First, it needs to pass a thorough medical and behavioral assessment. There are several factors that staff evaluate to determine if a bird would thrive in this new role, according to assistant director Lori Arent, MS.

The first factor is the species itself because some do not manage well in captivity and are less adaptable; they are more prone to stress. The next factor is age. In general, raptors that are less than a year old tend to adapt better to life in captivity than their older counterparts. The type of injury that made the bird no longer releasable also plays a role.



An American kestrel preening. | Photo by The Raptor Center

"We want to make sure that the bird can perform natural and enriching activities," Arent says. "It doesn't necessarily need to fly strongly, but we want to be sure it can easily move between perches, tear up and eat whole food, bathe, preen its feathers, and engage with its surroundings."

Additionally, TRC staff members want to make sure the injury isn't the type that could lead to chronically painful conditions, such as arthritis.

Assessing behavior

Once a bird passes its physical exam, staff turn to evaluating its behavior. This includes assessing the raptor's temperament and habits.

"What we look for is a bird that has adapted to being in captivity fairly well," Arent says. "So it has a good appetite, is reasonably calm when in view of people/activity outside

its housing space, and it demonstrates comfort behaviors, such as stretching, preening, standing on one foot, or bathing. It is also "tested" to see if it is willing to engage with a trainer on a superficial level."

Another behavioral evaluation that is often needed for young raptors is to determine their imprint status. "Imprinting" refers to the complex process of learning that young raptors undergo in the nest to develop their sense of self-identification. If unqualified people find youngsters out of the nest and raise them for any period of time, these youngsters become imprinted on humans instead of their own species. The result is that these birds behave inappropriately for survival in the wild and sometimes demonstrate aggressive behaviors toward people as well.

Learning the ropes

For birds that join TRC's education program, passing a physical and behavioral assessment is only part of their journey. Training to become an ambassador is a series of tiny steps to allow a raptor to become acclimated to their environment and the presence of people.



Watch exclusive web extras on training including our approach and retreat method with Bubo the great horned owl (pictured) as well as cueing a bird to a perch. z.umn.edu/trainingtoteach | Photo by The Raptor Center





The Raptor Center naturalist Kelsey Griffin (right) and Libby Steger (left) working with ambassador Rowan the red-tailed hawk. | Photo by The Raptor Center

Ambassadors-in-training are first housed in secluded settings to make the transition to permanent captivity as least stressful as possible. Then it's on to helping the raptor feel comfortable eating with people in the vicinity, first with the main trainer and then slowly introducing the presence of other people, Kelsey Griffin says.

Food plays an important role in the training process. It is used to positively reinforce (reward) desirable behaviors so they will occur again. However, when first starting, staff use a method called "approach and retreat". Trainers approach the bird with food, stop right before they elicit a stress response, and then retreat a little to give the bird control over how it's approached.

"That conveys a lot of information to the birds. They learn that they have the ability to modify your behavior by what they're doing," Griffin says, "and that's a fundamental building block of their training—they can do things that will change what you do. They have control over their environment by their actions. So it's really important information for them to get right off the bat while also getting them to be more comfortable with people in their space."

Associating food with positive experiences through choice-based training builds a foundation for adding new tasks, such as teaching birds to step onto a trainer's gloved hand, enter a carrier for transportation, and acclimate to new people, places, and items around them as they enter new environments.

Hitting the road

Once trainers feel a raptor is ready, they begin to prepare the bird for public appearances. The ambassador-in-training is introduced to small groups of people at TRC and works its way to larger, more energetic groups.

Another part of that process involves acclimating the raptor to being housed in a carrier inside a moving vehicle for off-site programming. Trainers want the bird to be comfortable, and that means employing some effective but unconventional training techniques.

"You do things like driving in circles around campus, feeding the birds pieces of meat through the crate windows so they get used to this kind of movement and processing," Griffin says. "We want them to know this is a really good thing that's happening and there's really nothing to worry about."

The end result of all this training is a bird that is secure when it comes to appearing in front of crowds in a variety of situations. Depending on the species and individual, this can take anywhere from six months to over a year. Some of TRC's ambassadors have been on the job for decades and have willingly participated in educating thousands of people.

It's important to note that these birds are not performers but rather partners in education with their trainers. The choice is always theirs when it comes to the role they play in programming.



Ambassador birds, like this red-tailed hawk, are trained to make public appearances. | Photo by The Raptor Center



A team effort to expand our mission

by Steve Turnbull

As The Raptor Center (TRC) looks to make larger impacts on animal welfare, raptor medicine, and ecosystem health on a global scale, it relies on a world-class team of experts. TRC is thrilled to announce several additions to this team.

TRC's special initiative Partners for Wildlife (P4W) welcomed program manager Rob Kulhanek in December and administrative assistant Alyssa Weidner in March. Kulhanek will lead the team in its goal to improve the welfare of all wildlife species in



Photo by Frank Mita

rehabilitation, and Weidner will ensure both P4W and TRC stay organized and move forward with their many administrative and operational projects.

TRC's raptor clinic welcomed the new clinic manager, Hilary DeVries, in March. DeVries comes from the New Mexico Wildlife Center, where she expertly managed the rehabilitation of 800 patients each year. P4W veterinary resident and research assistant Annette Ahlmann, DVM, will transition in June to a new associate veterinarian

role to continue her impressive work with TRC.

This summer, a new veterinary resident, Kelsey Rayment DVM, joins the clinic team as well as new interns for both TRC and P4W, Kathryn Rasp, DVM, and Kaycee Daentl, DVM. TRC staff look forward to working with them and wish the very best for current interns Michael Huffaker DVM; Rachel Amato DVM; and Tracy Swanson, DVM, as they spread their wings in their next adventures.

Venturing into the unknown: Geriatric raptor care

by Lori Arent

Raptors that are permanently under human care, such as education ambassadors, frequently outlive their wild counterparts.

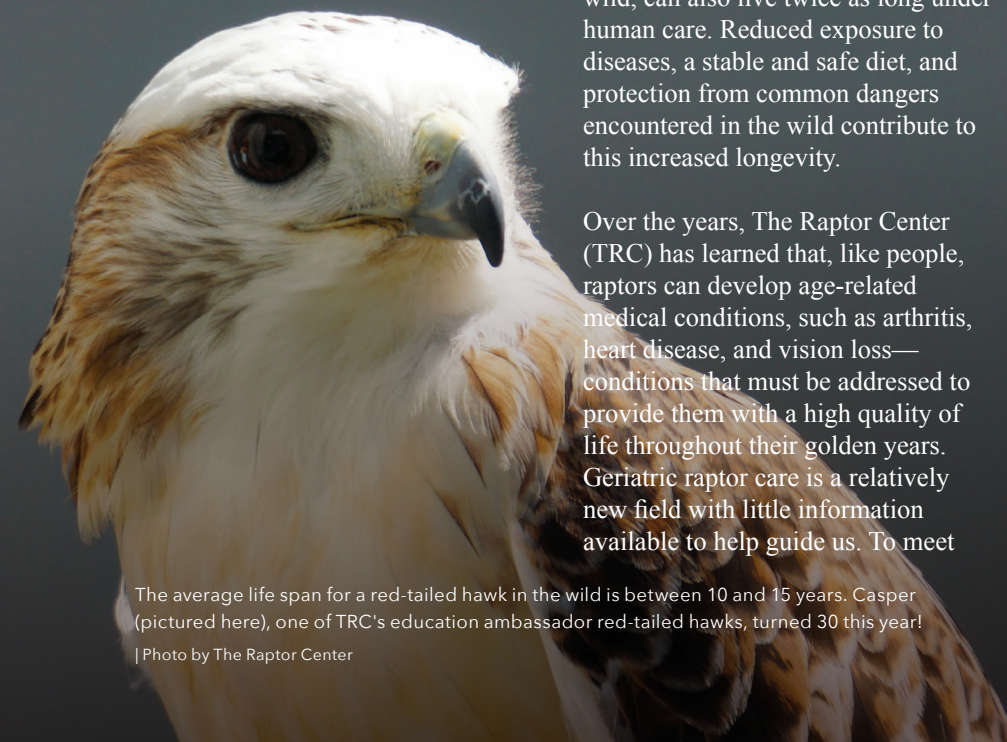
Bald eagles, which sometimes live 15 to 20 years in the wild, can make it to the ripe old age of 40 to 50 in captivity. Northern saw-whet owls, living an average of 7 years in the wild, can also live twice as long under human care. Reduced exposure to diseases, a stable and safe diet, and protection from common dangers encountered in the wild contribute to this increased longevity.

Over the years, The Raptor Center (TRC) has learned that, like people, raptors can develop age-related medical conditions, such as arthritis, heart disease, and vision loss—conditions that must be addressed to provide them with a high quality of life throughout their golden years. Geriatric raptor care is a relatively new field with little information available to help guide us. To meet

this challenge, Dana Franzen-Klein, DVM, MS, TRC's medical director, has established annual wellness exams for TRC's educational ambassadors and for other raptors maintained in captivity throughout Minnesota.

These exams involve various diagnostic tests tailored to the individual and complement routine behavioral assessments conducted by raptor caretakers. Together, this testing regimen monitors the physical and mental health of an ambassador throughout its lifetime.

As geriatric conditions develop, Franzen-Klein expertly prescribes medications for pain control and recommends diet and other husbandry changes to improve a raptor's comfort. The information gained from this wellness program will contribute to the body of knowledge in a growing field and help others to provide higher quality care for their aging ambassadors.



The average life span for a red-tailed hawk in the wild is between 10 and 15 years. Casper (pictured here), one of TRC's education ambassador red-tailed hawks, turned 30 this year!

| Photo by The Raptor Center

Join the flock and help us provide expert animal care all year round

by Steve Turnbull

The Raptor Center is leading the way caring for raptors in need thanks to our outstanding community of supporters. Our innovative medical and rehabilitative techniques and our teaching and education efforts are

all driven by your generosity. We are so grateful to our community for supporting our mission to save raptors and ensure the health of our shared environment.

We want to give a special thank-you to our monthly sustainers. From orphaned baby raptors in the spring to injured migrating birds in the fall, these steady gifts ensure we can provide the highest quality care all year round. Regardless of size, monthly gifts have a lasting impact on our Center.

As an added bonus, becoming a sustaining donor means less paper waste and postage costs, and makes giving more convenient for you. Our monthly donors also get special

access to news and events! If you're interested in increasing your impact to help save raptors and benefit our environment, join our flock and become a monthly donor today.



Thank you for helping raptors at all life stages, like this baby great horned owl! | Photo by The Raptor Center



From summer to winter, your support means we can keep releasing raptors like these two bald eagles all year round. | Photos by The Raptor Center

Beyond raptors: P4W and the expansion of excellence

by Rob Kulhanek

The Partners for Wildlife (P4W) grant-funded initiative, founded at The Raptor Center (TRC) in 2018, holds excellence in animal care as its core mission and aims to spread that mission beyond TRC and its avian patients.

The initiative seeks to improve standards of care for all wildlife undergoing rehabilitation, no matter the species, and does so through building knowledge, skills, and abilities in rehabilitators and veterinarians; expanding organizational capacity to meet their mission; and promoting community engagement for greater collaboration, communication, and professionalism. Each of these measures is aimed at ensuring that the animals' best interests are the focus of decision-making and achieving the best possible outcomes for all patients.

To bolster excellence at all levels, P4W works closely with rehabilitators and wildlife care centers to provide mentoring, expand training, and increase access to resources to improve animal care. Whether an independent rehabilitator needs better medical supplies, a small center needs improved veterinary contribution, or a top-tier facility needs cutting-edge equipment, P4W is there to support the changes required to improve wildlife care and strengthen organizations across the wildlife rehabilitation network.

These collaborative activities are not the only area in which P4W focuses on excellence. Its community-focused programming, including annual fellowship and veterinary internship programs, explicitly spotlights animal welfare in its philosophy and teaching to activate ground-up momentum on reaching new standards of quality care.



P4W's research assistant Annette Ahlmann, DVM leads the way in world-class animal welfare. | Photo by Partners for Wildlife

P4W is actively developing new opportunities to support excellence in wildlife rehabilitation. In addition to expanding one-on-one work with wildlife rehabilitators, the upcoming rollout of a new virtual platform will allow experts and novices from across the industry to share advice and confirm best practices. Increased efforts to engage veterinary professionals and students will bring greater medical expertise into the sector as well. Building on TRC's leading expertise, P4W will continue to sustain and advance excellence in animal care across all of wildlife rehabilitation.

Contact us

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