



## **Symposium Recordings and Instructions for Member Access on Animal Professional**

Beginning in 2018 NWRA began recording select Symposium Sessions for view by all NWRA members. **There are currently 65+ presentations available to view with your NWRA membership.** If you have not checked out this benefit, please do!

### How to View Content

To access Symposium Lecture Session videos from select Sessions of Symposium 2018 and 2019 click [here](#). Choose NWRA from the Member Content header drop down list on the Animal Professional site and login to view content. You will login with the email address you use for your NWRA membership and password you received from Animal Professional. If you need support logging into recordings website please contact their team at [support@animalprofessional.com](mailto:support@animalprofessional.com).

### What Content is Available

The following is a complete list of recorded sessions and abstracts available for members to view online.

### **Symposium 2018 Recorded Content**

#### **Keynote Speaker -- Dr. Patricia Pesavento, DVM, PhD**

**Abstract:** Somewhere between domestic and truly wild animals are the synanthropic species that live with, but are not controlled by, humans. Suburbia is a rich stomping ground for animal species diversity and success that has created a potential for viral persistence and emergence of infectious diseases. Viruses that have evolved with a single host species for millions of years suddenly have intimate access to numerous potential hosts. What is the potential for viral evolution and subsequent disease? Dr. Pesavento looks at these questions, discussing viruses, changes in host susceptibility, and genetic bottlenecks, using examples of viral associated cancer outbreaks and viruses shared by multiple species.

#### **Workshop Lecture**

- **Patient Assessment & Fluid Therapy in Wildlife Medicine**

**Abstract:** Patient Assessment & Fluid Therapy in Wildlife Medicine Providing fluids to wildlife patients is essential! Become familiar with fluid types and when to use them, fluid dose calculations, and routes of administration in multiple species. This lecture is a prerequisite for the patient assessment and fluid therapy workshop.

#### **Administration Session**

- **Networking for Wildlife**

**Abstract:** Networking is often overlooked by wildlife rehabilitators. This presentation discusses the importance of networking, various means of networking, and the positive results this can bring to your rehabilitation program and fundraising.

- **Grant Writing**

**Abstract:** Writing grants can sound a lot scarier than it actually is. If you are passionate about a cause (wildlife rehabilitation!), it can be much easier to write grants because you are writing about what you know. Your passion can engage grant review committees, which is crucial. Grant funding is essential to operating a nonprofit organization. In this presentation, learn the basics of

grant writing, tips on how to organize applying for grants, where to find grants for which you can apply, and how to go the extra mile to ensure you receive funding.

- **Succession Planning: Transitioning from a Founder-driven Organization**

**Abstract:** Many rehabilitation facilities across the country still are being led by the founder. These organizations typically have not had time to think about what happens when the founder, one way or another, leaves. This lecture outlines the experience of the Wildlife Center of the North Coast after long-time director and founder, Sharnelle Fee, unexpectedly passed away - with no succession plan in place. Josh draws from basic research he did on succession planning, as well as his personal experience through WCNC's situation. The goal of this lecture is to get other rehabilitation facilities thinking about succession planning for the sustainability of the organization.

### **Urban Wildlife Conflict Session**

- **Out of Control Wildlife Control: More Humane & Effective Approaches**

**Abstract:** The wildlife control industry in the US has come a long way from its origins in recreational trappers helping overburdened wildlife agencies with wildlife control requests. Now a multibillion-dollar industry, the methods of control have not come as far as the market has. Advancements in understanding conflicts with wildlife and improved use of existing tools increases both effectiveness and humaneness, reduces the number of animals killed, and resolves conflicts for longer times. Employing these tools and methods in the context of 'nuisance' wildlife control services represents an opportunity for significant progress that can help millions of animals each year, and the communities experiencing conflicts and looking for resolution. This presentation reviews animal damage management in the context of the call to establish humane and effective standards by animal protection and welfare agencies around the world, the public, and increasingly by the scientific community. This presentation also provides an overview of the state of humane wildlife control today and serves as an introduction to the related talks in the session.

- **Resolve Wildlife Conflicts Over the Phone & Prevent Unnecessary Orphaning!**

**Abstract:** This presentation demonstrates how timely and properly diagnosed phone advice can help resolve caller's wildlife dilemmas in a matter of minutes-and prevent many wild animals from becoming orphaned and filling your facility to capacity. Many people think wildlife conflict calls need to be referred to 'nuisance wildlife control operators,' with the result all too often being the death of the parent(s) and orphaning of the young. We show how the majority of those 'nuisance' calls can be resolved with some simple step-by-step advice, which preserves the family unit but also resolves the caller's problem-and teaches them how to coexist with wildlife in the process. A phone advice manual is given to lecture attendees.

- **Teach the Tormentor to Be Tolerant: Humane Harassment in Outreach**

**Abstract:** There is a groundhog eating my garden, how do I kill it? I have a raccoon in my trash, can you trap it? Rehabilitators are overwhelmed with animals in care and forget we also can help those that never need darken our doorstep. Studies have proven that trapping/relocating does not work and lethal options are often inhumane. By teaching simple techniques, lives can be spared and intake numbers decreased. A humane harassment program can be as simple as having tips posted by the phone or as elaborate as offering public programming. This presentation goes over implementation of a humane harassment program, where to find good tips, and what the public has responded to at our center.

- **Urban Wildlife Conflict Panel Discussion**

### **Education Session**

- **Effective & Engaging Presentations**

**Abstract:** Engaging an audience is probably the most critical step in delivering an effective educational presentation. Too often we wrestle with fear of public speaking, do not know how to

connect with a particular audience, or feel we are too busy to attend to presentation details. Techniques for creating and delivering effective presentations are discussed, including use of visual aids, storytelling, and body language. We also discuss ways to deal with stage fright and how to change your presentation techniques for different ages and audience sizes. The presenter uses her experience in education, theatre, and music performance to offer tips and tricks of the trade.

- **Rehabilitator Training through Hands-on Workshops**

**Abstract:** Developing hands-on skills is an essential component of being a successful wildlife rehabilitator. The task of organizing hands-on opportunities, however, can be challenging to any rehabilitator whether the training is for volunteers of a particular organization or at a state conference or meeting. This lecture provides in-depth information about the various components necessary to organize hands-on training opportunities for rehabilitators.

- **Teaching the World: Virtual Programs & Other Adventures**

**Abstract:** Today's technology allows wildlife educators to have a much broader reach-no longer are we confined to local programming by travel costs or state boundaries! A number of online programs are available for educators to teach wildlife enthusiasts of all ages around the world, all without leaving your home or educational center. This lecture highlights some of the platforms that are worth tapping into, and discusses the pros, cons, and additional considerations.

### **Assorted Topics**

- **WRMD: Overview, Updates, New Features**

**Abstract:** There have been many changes over the past few years within WRMD, mostly thanks to our users' ideas and suggestions. We cover new features and proposed features for the future. This is a great opportunity to ask questions, view demonstrations, or get clarifications. WRMD also has been involved with a few projects within California that we briefly share. In 2016, WRMD launched a pilot program with help from the Department of Fish and Wildlife and the UC Davis Wildlife Health Center to survey what is affecting California's wildlife in real time. This program has been invaluable to the state and to our community.

- **Incubating & Hatching Reptile Eggs: It's Not Like Birds!**

**Abstract:** Hatching reptile eggs-the concept is simple but many wildlife rehabilitators struggle with successfully hatching an egg or are unsure how to begin. Becoming a proud herptile parent can be the easiest parenting job you ever will have with a step-by-step guide to incubator setup, egg monitoring, viability, egg anatomy, first cracks, transition enclosures, and final prerelease enclosures. Presentation is based on the successful hatching of 13 Texas horned lizards, 8 red-eared sliders, and 4 river cooters in one season.

- **Traditional Chinese Veterinary Medicine for the Wildlife Patient**

**Abstract:** Traditional Chinese Veterinary Medicine (TCVM) has been practiced for over 3500 years and encompasses a variety of therapies, including food, acupuncture, herbal, and Tui Na (a type of massage/physical therapy). An increasing number of scientific studies are proving the efficacy of TCVM. Several wildlife facilities have been utilizing an integrated approach for their wildlife patients for a number of years now and have relayed stories of wildlife patients presenting with severe injuries, including spinal trauma, making full recoveries with a combination of medicinal and therapeutic treatments. This presentation covers assessing a patient for an integrated approach, finding a Certified Veterinary Acupuncturists, and successful stories from the field.

### **Release & Survival Session**

- **Fostering for Survival**

**Abstract:** Yvonne and Marge have worked with dozens of species of wild birds as surrogate parents for orphaned and injured young wild birds in captivity. This presentation provides a framework for a successful fostering program and provides species-specific information for waterfowl, raptor, and songbird species based on decades of experience.

- **Release Considerations Revisited**

**Abstract:** In the field of wildlife rehabilitation, there is much focus on all aspects of the rehabilitation process, including housing, medical care, diet, nutrition, and enrichment. While this is all very important, the release plan is often the most important part. Sadly, it is very common for us to spend hundreds of hours caring for patients with the result of very poor postrelease survival. Much time and energy is spent caring for patients, rearing them or assisting in their recovery, only to just 'let them go' or to simply open the door of their cage to allow a softer release. Captive-reared animals and adults with no defined territory are very vulnerable as they enter or reenter their wild home. With the goal of postrelease survival, this presentation discusses some of the considerations for releasing common species, as well as case studies on patients with more complicated concerns.

### Symposium 2019 Recorded Content

#### **Keynote Speaker** - Sharon L. Deem, DVM, PhD, Dipl. ACZM

**Abstract:** We are living in the Age of the Anthropocene, an epoch defined by human-driven planetary changes. From climate change to resource depletion and the loss of biodiversity, we are altering the qualities that make Earth the only planet known to support life. These human-created challenges have increasingly clear impacts on the health of all species. Exponential human population growth has increased interaction between wild and domestic animals and the movement of pathogens around the globe, fueling emerging infectious diseases detrimental to human and non-human animals alike (e.g. Ebola, white nose syndrome, avian influenza). Climate change brings a suite of additional health impacts through temperature shifts and extreme weather events as can be seen in the wild fires throughout California and the mass death of flying foxes during the recent Australian heat waves. Be it an increase in harmful algal blooms or the effects of endocrine-disrupting compounds (e.g., BPA), pollution and plastic waste also similarly take a toll on all life in our shared ecosystems. How does this new Age influence the work of the NWRA community? We know that the health of wildlife populations is increasingly threatened by anthropogenic changes, from habitat degradation and fragmentation, conflict with domestic animals, to shared infectious diseases. These threats to wildlife health and conservation, which are extensive and appear to grow annually, are both a curse and an opportunity. With the growing One Health initiative and the understanding that the health of animals, humans, and ecosystems are all interconnected, we are better poised to confront today's wildlife health challenges. In this talk, we consider the Anthropocene, the One Health initiative, and the role that wildlife rehabilitators play in ensuring the health of animals, people, and the planet.

#### **Setting Limits Session**

- **Chronic Case Management: When to Call it Quits**

**Abstract:** Chronic case management can be one of the most frustrating aspects of wildlife rehabilitation. Even the most objective individuals can become attached to cases, especially those that have required numerous treatment plans. In these instances, it can be difficult to not only draw the line but determine when that line needs to be drawn. Discussion includes chronic case management and how/when to set goals and timelines, as well as how to approach euthanasia when these goals are not met.

#### **Animal Welfare Plenary**

- **Perspectives from a Human Primate**

**Abstract:** Welfare. We use this term in many different ways. It can define how we look and manage others, as well as ourselves. When it comes to animals, and we should include ourselves,

how we define welfare can affect how we care for our patients and our own work-life harmony. It is important for us to take a moment to evaluate our approach and opinions on welfare using evidence-directed data to ensure we are meeting our potential as caretakers of the wildlife and humans in our society. The purpose of this presentation is to remind us of this importance.

- **Consideration in Wildlife Rehabilitation Practices**

**Abstract:** What are the criteria to consider ensuring animal welfare in your care? This discussion covers best practices in animal welfare: intake, rehabilitation, medical care, pre-release conditioning, and release. What factors should you be thinking about, what factors should you be taking action on and what should you never lose sight of?

- **Best Practices in Accepting Non-releasable Wildlife for Ambassador Programs**

**Abstract:** How can we use best practices accepting non-releasable wildlife into an ambassador program? How can using animal welfare set ourselves and the animals in our educational programs up for success from the start? This discussion is an overview of criteria to assist you in making these important life-long decisions.

### **Working Together Session**

- **Federal Rehabilitation, Education and Eagle Permits, Migratory Birds and You!**

**Abstract:** USFWS permit staff present the most current information on the regulations for rehabilitating migratory birds and possessing migratory birds and eagles in captivity for educational purposes, permit resources available, and items of possible impacts and interest to current permittees.

### **Avian Veterinary Topics Session**

- **Management of the Post-surgical Avian Patient**

**Abstract:** This lecture focuses on the management of post-surgical avian orthopedic cases with an emphasis on developing a physical therapy regimen. Maintaining appropriate range of motion and muscle mass during the recovery process can be just as important as the original surgery, and a vital part of the rehabilitation process. Topics include active and passive range of motion exercises, use of goniometry, and adjunct modalities such as cold laser therapy, as well as expected timelines of improvement and criteria for release.

- **Bird's Eye View: Basic Intro into Avian Ophthalmology**

**Abstract:** This lecture covers basics of avian ophthalmology from a wildlife rehabilitation perspective: basic anatomy, terminology, care that wildlife rehabilitators can do, when to go to a veterinarian, and what a veterinarian can do for rehabilitators.

### **Workshop Lecture Session**

- **Basic Diagnostics**

**Abstract:** Baseline diagnostic tests can provide a tremendous amount of information in terms of what might be going on with an animal, and to provide some idea of prognosis. This workshop lecture reviews basic laboratory analysis to help contribute to the animals' health and well-being. Performing these tests help you and your veterinarian determine the best course of treatment for the patients in your care.

- **Basic Parasitology**

**Abstract:** Wild animals can present to a rehabilitation setting with a variety of internal and external parasites. Many of these can be easily diagnosed with the aid of a microscope and some basic supplies. Topics covered in this lecture include ectoparasite testing (tape preparations, impression smears, and skin scrapes) and endoparasite testing (wet mounts and fecal flotations). Participants learn how to acquire samples, prepare slides, and use the provided microscopes to interpret results.

### **Volunteers Session**

- **Volunteer Management: Proven Ways to Use Your Best Resource**

**Abstract:** Most wildlife centers use volunteers in some capacity, but are you using them to their full potential? Taking time to evaluate your program can make a world of difference for both the

people and the animals. The plan and design of your program are imperative to its success. Recruitment, screening, training, and recognition are all steps that lead to retention. Discussion includes details on the volunteer program at Humane Animal Rescue and includes topics that are useful to a program of any size.

- **Recognition & Retention Opportunities for Volunteers & Interns**

*Abstract:* Well-trained and engaged volunteers are essential to the wildlife rehabilitation process and the smooth running of a wildlife facility with limited staff. While recruitment is important, and we are always looking to add additional volunteers, a primary focus should be on recognizing current volunteers for their efforts and providing enriching experiences and continuing education opportunities to keep them interested in the field and the organization. This lecture focuses on efforts PAWS has made in these areas for both volunteers and unpaid interns, while providing examples of creative ways we engage them in our work.

- **Working with Volunteers of All Abilities**

*Abstract:* Today's technology allows wildlife educators to have a much broader reach-no longer are we confined to local programming by travel costs or state boundaries! A number of online programs are available for educators to teach wildlife enthusiasts of all ages around the world, all without leaving your home or educational center. This lecture highlights some of the platforms that are worth tapping into, and discusses the pros, cons, and additional considerations.

- **Getting the Most out of Eagle Scout & Gold Award Service Projects**

*Abstract:* This presentation highlights all of the steps involved in having an Eagle Scout or Gold Award candidate complete a service project to benefit your operation. Discussion includes examples of suitable projects, timelines, communication, and realistic expectations. While working with younger individuals presents challenges, with the right guidance and preparation, the potential to have useful and long-lasting projects implemented can be a reality for you and your facility.

- **Online Training: Improving Staff & Volunteer Knowledge**

*Abstract:* Obtaining proficiency and expertise in the field of wildlife rehabilitation requires intensive study, practice, and training. Wildlife rehabilitators are largely dependent on staff or volunteers to manage larger centers or home-based operations. Training people through the use of oral presentations, written manuals, or hands-on instruction takes significant time and effort. In 2016, DCHS's Wildlife Center created individual wildlife training courses using a free, online platform: Open Learning Management. Since then, it has improved volunteer skills, increased personnel knowledge and retention, and saved significant amounts of time and money.

## **Reptiles Session**

- **Snake Care 101**

*Abstract:* Snakes are some of the most misunderstood animals. It is amazing and inspiring to witness interest and caring increase for these unique species. Woodlands Wildlife Refuge is permitted to care for snakes, including venomous species, and we have seen a major increase in snake rehabilitation needs since 2013. There are 23 species of snakes in New Jersey including two venomous species. Not all reptiles are the same. Snakes have specific needs per species, age, and injury when it comes to housing, nutrition, lighting, temperature control, and more. This session covers basic care and housing for common snake species, common intake reasons, and interesting cases.

- **Turtle Shell Repair: Let's Get Crackin'**

*Abstract:* Topics include turtle basics from intake to endpoint. This overview includes an exam of the turtle at intake for assessment of overall health and severity of injuries to determine prognosis. Triage priorities are covered -- hydration, pain management, wound care and antibiotic usage. Anesthesia protocol options are briefly mentioned, as anesthesia is required for the more invasive shell repair methods. Discussion includes a comparison of several shell repair techniques step-by-

step with pros and cons of each and provides a list of recommended supplies, equipment, and reference resources.

- **The Approach to the Head Trauma Turtle**

**Abstract:** Head trauma is one of the most common injuries wild turtles experience after being struck by a vehicle. A full assessment of the patient's neurological status, soft tissue and skeletal trauma of the head and face, and feasibility of repair must be made on admission or shortly thereafter. This lecture discusses the most common presentations of the head trauma turtle, how to perform a neurological exam, fracture and wound assessment, and euthanasia recommendations. Basic facial fracture repair techniques are also discussed.

- **Turtle Workshop Lecture**

**Abstract:** This lecture provides participants with an overview of basic turtle rehabilitation skills, including how to complete a thorough physical examination, develop a differential list, and institute appropriate therapy. Specific reviews of infectious diseases of chelonians, therapeutic planning (fluids and other medications), and nutrition for captive chelonians (esophagostomy tubes) are discussed.

### **Disease Session**

- **West Nile Virus: A Very Difficult Definitive Diagnosis**

**Abstract:** West Nile Virus (WNV) infection is common in many wildlife species. However, a definitive diagnosis is difficult to achieve. Several diagnostic tests are available but each has advantages and disadvantages. Thirty cases in various raptors with confirmed or suspected WNV infection were included in this study. Various diagnostic tests were run and the results were compared using histopathology of the brain as the gold standard. Ante-mortem diagnosis is rare. While most tests are relatively specific, the sensitivity is low so a negative result has very poor diagnostic value. All suspect cases should be treated early and aggressively.

- **Mange in Foxes: Following the Evolution of an Epizootic**

**Abstract:** Sarcoptic mange has probably always been present in the fox populations on Cape Cod; however, the region appears to have been experiencing an epizootic event over the past four years. The impact is seen on many levels, with unexpected issues affecting wildlife rehabilitation. This presentation explores all the aspects of this event from the impact for wildlife, pet dogs, and human welfare to species level issues and a novel treatment.

- **A New Approach for Treating Avian Botulism**

**Abstract:** In August and September 2018, Klamath Basin National Wildlife Refuge Complex responded to an avian botulism (*Clostridium botulinum*) outbreak that affected thousands of birds. Bird Ally X (BAX) was contacted shortly after to manage the rehabilitation of live birds collected. When staff initially arrived at the remote field outpost, there were already birds on site and few supplies available. With a response staff of two, support from refuge staff, and the assistance of volunteers and interns, BAX staff were able to create a functional wildlife hospital and treated 474 birds, successfully releasing over 80% of patients that survived the first 24 hours. This required modifying standard botulism treatment plans to a more hands-off approach where birds were allowed to self-hydrate in pools. This system proved extremely successful and resulted in reduced handling and stress for patients and a more manageable workload for staff.

### **Reuniting Session**

- **Reuniting & Wild-fostering Birds**

**Abstract:** When healthy young birds are accidentally separated from their parents, wildlife rehabilitators can best help by reuniting them with their own parents, or by wild-fostering them to another breeding pair of the same species. Success is based on an understanding of the nesting behavior of the particular species. Cavity or open-cup nest? Territorial or colonial breeder? Precocial or altricial? How long are the young birds dependent on parents? Examples of reuniting

methods for raptors are presented to demonstrate the basic techniques of reuniting, along with brief discussions of strategies for reuniting passerines and waterfowl.

- **Mother Knows Best: Reuniting Mammals**

**Abstract:** You want to reunite, but what if the mother won't take her baby back? Uncertainty about the strength of the maternal bond is one of the principal reasons given by wildlife rehabilitators for failing to reunite healthy juveniles. The presenters have had many years of experience reuniting raccoons, skunks, opossums, and squirrels in an urban setting, and show, through videos, the amazing persistence and determination of the maternal bond in a variety of species. These video clips also demonstrate basic reuniting steps as well as critical considerations for successful reunions. Discussion includes some of the factors that affect the maternal behavior of different mammal species, especially those related to successful reuniting and wild-fostering.

- **Organizing Your Program to Make Reuniting Your Priority**

**Abstract:** What does it take to change rehabilitators' attitudes about reuniting so it is a priority during baby season? Besides the critical benefits to the young animals, reuniting provides real benefits for over-loaded rehabilitators, allowing them to focus their skills and resources on animals that truly need their help. The presentation offers detailed recommendations for creating a practical reuniting program, both for centers and for individual rehabilitators. The presentation offers effective psychological approaches, plus vital problem diagnosis and persuasion tips that help attendees turn around even that most stubborn caller clutching a newly kidnapped wild animal in her arms. We need a new paradigm where rehabilitation success is measured not just in terms of intake/release statistics, but also in the number of animals successfully reunited and kept out of rehabilitation facilities.

- **Technology to the Rescue: Essential Tools for Successful Reuniting**

**Abstract:** When you are reuniting wildlife, you need special equipment, tools, and technology to make sure the infants are safe and healthy while waiting for the mother to return, and to monitor the reunion process. This interactive workshop offers participants a chance to see and handle a variety of reunion nests and nest boxes for raptors and songbirds, as well as reunion boxes for mammals, heaters, and other reuniting aids. Information about how to make inexpensive but reliable equipment is also offered. Participants can examine various game cameras and closed-circuit TV cameras for follow-up observation to make sure reunions really do succeed.

### **Post-release Session**

- **Innovations in Wildlife Rehabilitation: Bird Banding, Research, & More!**

**Abstract:** To improve upon our care for our wildlife patients it is important to participate and/or conduct research. Knowledge gained from research is beneficial in understanding veterinary medical care, husbandry, and nutrition, as well as the potential for post-release survival. This presentation reviews how to find out what studies are currently being done, how to reach out to other institutions/facilities/universities to participate in research, what some recent studies have helped us to understand, as well as an in-depth discussion regarding bird banding in wildlife rehabilitation.

- **Post Release Monitoring & Its Potential Effects on Rehabilitation**

**Abstract:** While everyone loves a happy ending, knowing what happens to that bird you have invested time and energy in rehabilitating and releasing is incredibly important. Post-release monitoring through banding and then examining band return data can provide useful information that can be applied to rehabilitation. Discussion highlights two species whose band return information was instrumental in changing rehabilitation and release techniques for success!

- **Releasing Wild Animals & Considerations for Post-Release Survival**

**Abstract:** In wildlife rehabilitation, there is much focus on all aspects of the rehabilitation process but very little focus on the release plan. Captive-reared animals and adults with no defined territory



are very vulnerable as they enter or re-enter their wild home. With the goal of post-release survival, this presentation includes new data and discusses some of the considerations for releasing our common species as well as case studies on patients with more complicated concerns.

- **Post-release Monitoring of Oiled Wildlife: Novel Technologies Workshop Lecture**

**Abstract:** Technology has come a long way since scientists first started using transmitters and data loggers 40+ years ago. This lecture provides an overview of the types of devices currently on the market, considerations for choosing the right equipment, and what information each unit can provide for monitoring rehabilitated oil spill patients. We also discuss different attachment methods and placement locations of equipment, including their pros and cons. This lecture is a prerequisite for the Post-release Monitoring workshop.

- **Post-release Survival of Oiled & Non-oiled Aquatic Birds**

**Abstract:** International Bird Rescue has been banding both oiled and non-oiled rehabilitated aquatic birds in California since the 1970s. In this study we examined post-release re-encounter information from birds banded during 1997-2011, with re-sightings included through October 2017. During the study period, 23,061 bands were applied to 123 aquatic avian species. Fifty-eight species returned 1 - 725 re-encounters and 65 species showed zero re-encounters. There were 1,923 re-encountered individual birds from the 58 species, 205 were petroleum oiled, 1718 were non-petroleum oiled birds that were rehabilitated for other reasons, and one was of unknown oiling status. Twenty percent of re-encountered birds were alive at the most recent encounter. This talk explores longevity by species and oiling status.

#### **Avian Session**

- **Can You Outsmart the Corvid in Your Care?**

**Abstract:** Corvids!!! Intelligent, resourceful, not so easy to rehabilitate. This lecture highlights the habits and natural history of the crows, ravens, magpies, and jays that you might encounter in your work as a rehabilitator. It also familiarizes you with the pitfalls of caring for the various corvid species.

- **Raising Orphaned Wood Ducks**

**Abstract:** Raising orphaned Wood Ducks (*Aix sponsa*) definitely presents its own special set of problems. Wood Ducks are very nervous and can be reluctant eaters. If conditions are not exactly perfect they will not settle down and eat and many simply starve to death. Over the past eighteen years, TreeHouse's Wood Duck release rate has consistently averaged around 80%. The initial setups are inexpensive and easy to clean, move, and store. This presentation covers basic husbandry procedures only. No medical treatments or procedures are addressed herein.

- **The Use of Tuning Forks to Aid Post-operative Physical Therapy in Raptors**

**Abstract:** Tuning forks can be used as an adjunct to traditional physical therapy in orthopedic cases. Low-frequency energy is applied via mechanical vibration and is similar to the use of therapeutic ultrasound or cold laser therapy. Fifteen cases in various raptor species with humerus fractures were included in this study. Traditional passive range-of-motion (ROM) exercises were augmented with a 128 Hz tuning fork. ROM was scored both subjectively and objectively with angles of extension recorded during each session. Of the 15 cases, 10 (67%) were noted to have probable or definite improvement after the tuning fork therapy was begun.

#### **Education Session**

- **Making Wildlife Education More Impactful**

**Abstract:** As wildlife educators, we can make a greater impact with a more hands-on approach. Students become immersed in a creative way, making wildlife education personable, and the lessons more memorable. Learn what all of this means, how to come up with activities, how to organize the lessons and make them marketable for schools, and discuss ideas to create the most impact.

- **Education Obstacles, Tips, & Rewards**

**Abstract:** An education program today involves contracts, insurance, fingerprinting, plus necessary tools to hold each student's attention. Our goal as educators is to make a lasting positive impression helping the public to coexist peacefully with their wild neighbors. This lecture gives insight into creating programs that both engage and satisfy grade level requirements through the use of props, mounts, puppets, photography, storytelling, and succinct appearances by wildlife ambassadors directly related to the subject matter discussed.

- **Camps for Kids: Day Camps for Humane, Wildlife, & Environmental Education**

**Abstract:** Many people think nostalgically back to when they went to summer camps. This presentation discusses the ways to start a camp at your facility. Camps are an excellent way to educate the next generation of animal protectors. During the last four years, Humane Animal Rescue has increased their camps to include eight weeks of camp plus day camps for more than 100 participants. Learn about teaching and activity space needed, schedule and lesson planning, and how to build a network of participants. Camps can take place at any time of the year, can last from one day to more than one week, and can quickly become an income generating program.

- **Celebrity Patients: Turning a Communications Burden into a Benefit**

**Abstract:** In August 2018, Tri-State Bird Rescue & Research received an eaglet from Washington, DC that had been watched for months by thousands of viewers on an online nestcam. The bird arrived in poor condition and was euthanized within a week, even though media had initially reported the eaglet would be returned and released. This presentation covers the highs, the lows, the pitfalls, and tips on how to navigate social media and how to manage your messaging when caring for a high-profile patient. In the end, Tri-State received a lot of positive feedback, exposure, and financial support with this case.

### **Training Ambassadors Session**

- **Food & Weight Management in Birds**

**Abstract:** Managing the food or weight of a bird is a useful tool to create motivation and shape behaviors. Learn about these management practices paired with the use of positive reinforcement training to improve the everyday lives of birds in captivity. Through careful management, the trainer is able to create a motivated, healthy, empowered animal. Topics include: how and when to deliver food, how food type can affect training, finding a healthy weight range for a highly motivated animal, factors affecting weight, and how to continuously evaluate and modify the weight of an individual.

- **Letting Go of the Leash: Empowering our Education Birds**

**Abstract:** Recent science data supports that choice is a primary reinforcer and giving our birds power over their environment is invaluable in creating trusting relationships and confident individuals. This talk not only covers the beneficial consequences of empowering our education ambassadors but also looks at ways that we as trainers can set up the environment for the desired choices to be made.

- **It's All About Choices**

**Abstract:** Bald Eagles are challenging subjects for training and use in education programs. This presentation details the training of one ambassador eagle through its many challenges as we successfully prepared it for education programs both on- and off-site. We'll talk about what worked and what didn't work, and the lessons we learned along the way that made us better trainers and handlers for all of our ambassador animals.

- **Revamping your Wildlife Education Program**

**Abstract:** Have you been inspired by Gail, Jackie, and Melissa's "empowering the animal" talks? Want to go back home and change everything your facility does, in order to keep up with the best-practice changes happening in the animal training field? Dive into what it really looks like to change your facility, techniques, mindsets, misconceptions, and discuss the outcomes so far.

### **Mammals I Session**

- **Over-wintered Flying Squirrels: Lessons Learned**  
Abstract: This lecture highlights lessons learned from over-wintering eight juvenile southern flying squirrels and includes post-release observations.
- **Cottontails: Commonly Admitted, Uncommonly Complicated!**  
Abstract: Cottontails! One of the hardest to rehabilitate, yet for many, the most common species admitted for rehabilitation. This interactive session needs you! Please come willing to share your experiences and learn from each other. Discussion follows a loose session plan to ensure we can cover the topics most important to cottontail rehabilitation, including nutrition (formula choices, weaning diets, probiotics and other supplements, feeding techniques); diarrhea (causes, prevention, treatments); and special considerations of neonates.
- **Cost Efficient Enclosure to Enhance Behavior & Welfare of Red Foxes**  
Abstract: Design, construction, and testing of a new enclosure to enhance behavior and welfare of red foxes were conducted in the winter, spring, and summer of 2017. Four red foxes were chosen in the testing of the enclosure to see its effectiveness. Analysis of structural materials was conducted and decided upon based off of price, properties, ease of acquiring, and safety for the animals. Structural integrity showed no signs of weakness and the foxes had no dependency on humans. The analysis suggests that further testing is required in order to cement the findings presented as each set of foxes are different.
- **Captive Rearing & Rehabilitation of North American Foxes**  
Abstract: Fox kits are very commonly admitted to wildlife rehabilitators in North America. This presentation discusses successful methods for rearing them in captive care. Natural behavioral development is emphasized as this is critical for post-release survival in these species. Topics include neonatal concerns, diet and feeding, housing, husbandry, medical considerations, and release criteria.

#### **Diets, Nutrition & Radiology Session**

- **Diet Doctors: Practical Skills for Treating Malfunctioning Diets Workshop Lecture**  
Abstract: With effects impacting all aspects of our patients' health and well-being, good nutrition is one of the cornerstones on which high-quality animal care is built. As wildlife professionals, we face special challenges when designing and assessing nutritional programs because of our patients' incredibly varied (and often understudied) natural histories. Since we can so rarely fully replicate wild foods and feeding methods, we must do our best to create an approximate alternative and then depend heavily on our own judgment and assessments to determine the success of our practices. This workshop lecture provides an opportunity for participants to review the basic tenets of wildlife nutrition and feeding and discusses theoretical approaches to the assessment and improvement of existing feeding practices. This lecture is a prerequisite for the Diet Doctors workshop.
- **Wild Foods Risks 4 Wildlife**  
Abstract: There are very good reasons why you might want to be that rehabilitator who takes the care and effort to incorporate foraged wild plant foods into your patients' diets. Yet there are serious risks associated with the top 50 wild plant foods that are eaten by wildlife—toxicological risks such as cyanide, nitrate, maple, or oxalate toxicities. Discussion covers where the greatest hidden risks might catch a rehabilitator off-guard, reasons why wild animals in captivity may be more susceptible to these plant poisonings, and reasons they stand to benefit from the increased use of natural comfort foods.
- **Avian Radiographs 101**  
Abstract: This interactive lecture reviews basic radiographic anatomy of birds to identify common lesions, including fractures, luxations, metabolic bone disease, bone infections, and soft tissue inflammation.

