

# 2024 Course Descriptions

(Additional abstracts will be listed as they are received)

## RVS Training

### Introduction to RVS Rehab

*Toni O'Neil*

Do you want to rehab RVS? This presentation provides an overview of RVS rehab including the permit application procedure, an introduction to the disease, and a look at some of the pros and cons for rehabbing RVS. This session is designed for rehabbers who are trying to decide if they want to rehab RVS. It also provides the basics for those rehabbers who aren't planning to rehab RVS. (RVS Rehabilitators, Vet Tech CE)

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### Wildlife Rehabilitation RVS Regulations

*Falyn Owens, NCWRC*

RVS regulations, permit application requirements and procedures, rehabilitator responsibilities, care restrictions, release restrictions, and transport protocols are covered in this session. (RVS Rehabilitators, General, Vet CE, Vet Tech CE)

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### Rabies the Disease

*Dr. Carl Williams, Department of Health*

Rabies, vectors, vaccination, titers, testing procedures, and more are covered in this session. (RVS Rehabilitators, General, Vet Tech CE)

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### Raccoon Rehabilitation

*Ruby Davis*

Raccoons: Should YOU rehab raccoons; why or why not? The reality of rehabbing raccoons; the basics and more! (RVS Rehabilitators, General, Vet Tech CE)

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### Bat Rehabilitation

*Linda Bowen*

#### Bat Rehabilitation: Part 1

### Anatomy and Species ID

Learn the unique anatomy of our only flying mammal along with specific, often time subtle features, that will be used to identify the 17 species of bats found in NC

**Adult Husbandry**

Housing, care and handling of healthy adult bats.

**Bat Rehabilitation: Part 2**

**Injuries and Illness**

How to identify, stabilize and treat common injuries and illnesses found in bats.

**Raising Bat Pups**

Techniques for raising orphaned pups for release into the wild. From formula to flight cage training.  
*(RVS Rehabilitators, General, Vet Tech CE)*

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**Skunk Rehabilitation**

*Ruby Davis*

This presentation will discuss natural history as well as simple and successful methods for rearing striped skunks, one of the more common rabies vector species admitted to North American rehabilitators. Topics will include diet and feeding, housing, husbandry, behavioral and developmental considerations and release criteria.

*(RVS Rehabilitators, General, Vet Tech CE)*

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**Bobcat Rehabilitation**

*Traci Keller*

Learn about raising orphaned bobcats and the many components associated with the rehabilitation process during their first year. This session will cover care and feeding of young kittens, their growth and development, the caging requirements, and safety protocols to keep handlers and rehabbers safe while in rehabilitation. Also, includes some case studies and success stories.

*(RVS Rehabilitators, General, Vet Tech CE)*

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**Veterinarian Lectures**

**Chelonian Anatomy, Husbandry, & Triage**

*Dr. Jessica Buchy*

In North Carolina turtles are common wildlife rehabilitation patients that require special care and husbandry that differs from our mammal and avian cases. In this lecture Dr. Buchy will give an overview of turtle anatomy, basics of husbandry/care, and how to triage/examine various species of turtles.

*(General, Vet CE, Vet Tech CE)*

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**Curious, Creepy & Common Cases in Wildlife Rehabilitation**

*Dr. Renee Schott*

*(General, Vet CE, Vet Tech CE)*

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**Welfare and Placement of Non-releasable Raptors**

*Kristin Dean*

When raptors are deemed non-releasable, we are often faced with a choice between euthanasia or seeking permanent placement. Raptors are commonly utilized as ambassadors in educational and zoological facilities. However, not all raptors make suitable candidates due to conditions that can negatively impact their physical, mental and emotional states. This presentation will discuss raptor welfare as a continuum and considerations rehabilitators can make to evaluate their potential as an ambassador.

*(Avian Rehabilitators, Vet CE, Vet Tech CE)*

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**Behavior Evaluation and Training Strategies for Education Ambassador Candidates**

*Colleen Hartman*

When a non-releasable raptor is considered an ideal candidate for education placement, understanding bird behavior, and applying basic training techniques can help set them up for success for their life under human care. Becoming increasingly aware of bird behavior, changing how food is offered, and modifying the environmental set-up can have a positive impact on the ambassador candidate. The sooner we can implement these changes, the more likely we can create meaningful relationships between human and animal and have a positive impact on their future welfare.

*(Avian Rehabilitators, Vet CE, Vet Tech CE)*

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**Birds! And Other USDA Updates**

*Mary Ann McBride*

This session will provide a brief overview of what combination of animals and activities constitute USDA-regulated activities for wildlife rehabilitators and captive permit holders. A brief introduction regarding new bird regulations will be provided. Time will be available for Q&A with participants.

*(General, Vet CE, Vet Tech CE)*

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**Interpretation of Small Mammal and Bird Radiographs**

*Dr Tracey Ritzman*

Radiography is one of the most common and useful diagnostic tests available to wildlife rehabilitators and veterinarians providing medical care to wild and domestic animal patients. This testing modality is one of the most frequently used to evaluate animal patients for health, injury and possible disease. The findings from radiography also help guide treatment decisions and planning for our patients. This testing is also useful for monitoring response to treatment and healing related to orthopedic injuries.

This lecture will be presented in a case based format and will show small mammal and avian radiograph

images. Discussion of how to evaluate radiograph images properly and how to use radiography as a key diagnostic tool for patients will be discussed. Case examples will be presented of some of the more common conditions in mammals and birds.

*(General, Vet CE, Vet Tech CE)*

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### **Analgesia**

*Dr. Sam Young*

The experience and perception of pain in avian species is largely not understood. This lecture is not designed to further elucidate this vast and complicated topic. As wildlife rehabilitators and wildlife veterinarians, however there are many ways, outside of meloxicam, that we can manage patients we are assuming are experiencing physical discomfort and pain.

*(General, Vet CE, Vet Tech CE)*

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### **Reptile Husbandry**

*Dr. Sam Young*

Wildlife rehabilitators are presented with a myriad of presenting injuries and illnesses in native reptile species. While we often focus extensively on these ailments, fact-based, quality, and species-specific husbandry practices can be just as if not more important to a positive overall case outcome. This lecture aims to provide a broad overview of 'best practices' to help them make more informed decisions.

*(Reptile Rehabilitators, Vet CE, Vet Tech CE)*

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### **Acupuncture**

*Dr. Tara Reilly*

The practice of acupuncture is becoming increasingly popular in both human and veterinary medicine, especially as a method of providing pain relief. Recent experimental and clinical studies have shown both biological effects and measurable clinical benefits of acupuncture in both human and animal patients. Scientific mechanisms of action for acupuncture as a pain-relieving modality have recently been elucidated; acupuncture points allow access to multiple regions of the body via the peripheral nervous system and its connection with the central nervous system. This seminar will introduce aspects of integrating acupuncture in wildlife patients including a basic introduction of principles, common uses, and methods. This is intended to be an introductory session, advanced training information on these topics can be sought through other programs, which will also be presented.

*(General, Vet Tech CE, Vet CE)*

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### **Laws Regarding Wildlife & Exotics**

*Dr. Greg Lewbart*

North Carolina has specific regulations governing the ownership and possession of exotic and wild animals but the state leaves most of the regulating to counties, cities, and townships (via ordinances). Please note that laws and regulations can change over time, so it's essential to consult the most current sources, such as the North Carolina Wildlife Resources Commission's website or legal counsel, to ensure compliance with the latest regulations regarding the ownership of exotic animals in North Carolina.

Additionally, if someone is considering owning an exotic animal, it's advisable to thoroughly research the specific requirements and responsibilities associated with the animal's care and consider the ethical implications of exotic pet ownership.

*(General, Vet CE, Vet Tech CE)*

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### **Head Trauma**

*Dr. Antonia Gardner*

Head trauma is one of the most common injuries seen by wildlife rehabilitators and veterinarians. It is usually seen along with other comorbidities and is associated with a widely variable prognosis. This session will discuss some presentations of head trauma in avian and mammal patients, the pathophysiology of head trauma, and the differential diagnoses that should be considered. Concurrent injuries and their long-term consequences will be discussed, as well as the general considerations for handling and treatment of these patients, and assessment for eventual release. Although ultimately, we are limited in how much we can affect the outcome of many of these cases, the session strives to give recommendations for how the triage and management of head trauma, especially in the first 48 hours after presentation, can optimize outcomes and minimize patient suffering.

*(General, Vet Tech CE, Vet CE)*

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### **Zoonoses**

*Dr. Antonia Gardner*

According to the CDC, the majority of emerging diseases are zoonotic or vector-borne. This number is likely rising as human proximity to wildlife, the spread of global travel and commerce, and human impacts to the environment increase. Those of us working with animals, especially wildlife, are more vulnerable to these diseases than the general public. We also have a responsibility to educate ourselves and the public about zoonotic disease. With that in mind, this session's goal is to discuss the sources and risk factors for zoonotic diseases and routes of transmission. Preventative strategies to reduce the risk of transmission of zoonotic diseases to veterinarians, rehabilitators, and volunteers are also discussed. Finally, this presentation gives an overview of specific zoonotic diseases, their pathophysiology, routes of transmission, diagnosis, and treatment.

*(General, Vet Tech CE, Vet CE)*

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### **Spinal Trauma**

*Dr. Karra Pierce*

Spinal trauma is a common reason for presentation in wildlife patients. While these cases can be rewarding to treat, understanding the anatomy and physiology, physical exam parameters and how to determine which cases to proceed with is essential to success. This lecture aims to provide a comprehensive overview of spinal trauma in wildlife, focusing on its causes, underlying physiology, treatment and important triage criteria.

*(General, Vet Tech CE, Vet CE)*

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**Vital Signs Reference Range in Wild Reptiles**

*Nia Powell, Alyssa Casillas-Michel, Gregory A. Lewbart MS, VMD, Dipl ACZM & ECZM, Sarah M. Ozawa DVM, DACZM*

The purpose of this retrospective study was to 1) establish correlations between vital signs and body temperature, and 2) determine reference ranges for healthy wild populations of Galápagos and Turks and Caicos reptiles. We evaluated 916 animals that represented seven different species: five species of lizards and two species of chelonians. Each animal was opportunistically sampled as a component of previous research studies. Physiologic data including body weight, doppler heart rate, infrared thermometer obtained temperature, and respiratory rate were evaluated from each animal. There was a significant correlation between heart rate and temperature when all reptiles were evaluated together (r = 0.638, p =

*(Reptile Rehabilitators, Vet Tech CE, Vet CE)*

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**Labs and Workshops**

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**Turtle Shell Repair Lab**

*Dr. Gregory Lewbart*

This lab covers different shell repair techniques using shell models.

*(Vet CE, Vet Tech CE, Turtle Rehabilitators)*

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**Avian Physical Exam Lab**

*Betty O'Leary*

This lab covers the basics of avian external anatomy and examination. Student are supplied with bird cadavers and an examination form to practice during the class.

*(General, Vet Tech CE)*

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**Large Bird Bandaging Lab**

*Sunny Cooper*

This lab will focus on learning to properly place the most common bandages and splints used in large bird species including raptors. Using cadavers, each student will learn how to place a figure-8 wrap with and without a body wrap, as well as to place splints for fractures of the lower leg tibiotalarsus, tarsometatarsus and digits). Guidelines for when to use each wrap and splint will be covered.

*(Vet CE, Vet Tech CE, Avian Rehabilitators)*

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**Fluid Therapy Lab**

*Dr. Karra Pierce*

Subcutaneous injections are a common route for rehabilitators to give many medications and fluid therapy to the animals in their care. Here's your chance to learn the techniques, common locations, and gain some practice for subcutaneous injections of wild birds and mammals. The lab is part of the beginner track, is appropriate for intermediate rehabilitators who want to learn the technique and is approved for Vet Tech CE.

*(Beginner Track, General, Vet Tech CE)*

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### **Mammal Physical Exam Lab**

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In this class, participants will learn the basic principles and importance of performing a physical examination on small mammals. Attendees will have the chance to practice their physical exam skills on cadavers.

*(Beginner Track, General, Vet Tech CE)*

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### **Possum wheel Workshop**

*Linda Veraldi*

Participants will build an opossum wheel to take home.



*(General)*

## **General**

### **Professionalism in Wildlife Rehab**

*Halley Buckanoff*

The US Department of Labor says, "Professionalism does not mean wearing a suit or carrying a briefcase;

rather, it means conducting oneself with responsibility, integrity, accountability, and excellence. It means communicating effectively and appropriately.... “ So, what does that mean for us as wildlife rehabilitators? How can being unprofessional impact our finders, our patients, and our fellow rehabbers? How can we help each other help this field grow in Professionalism? This talk will explore some of these concepts.

*(General, Vet Tech CE)*

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### **Triage in Adult Mammals**

*Halley Buckanoff*

What are the common species and reasons adult mammals come into wildlife rehabilitation? This session will cover how to properly handle, house, triage and provide supportive care to some of the more common adult mammals we may come across and considerations we may need to properly care for them.

*(General, Vet Tech CE)*

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### **Ethics in Wildlife Rehabilitation**

*Andrew Baughman*

Whether you're brand new to the field, or a seasoned wildlife rehabilitator; ethics guide us through and through and ensure we stay on the right path when assessing and treating our wildlife patients. This session will cover NWRA's code of ethics and start the conversation on what ethics are and why they matter in a rehabilitation setting.

*(Beginner Track, General)*

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### **Cottontail Rehab 101 – For the Love of Buns!**

*Paige Person & Stefanie Boros*

Cottontails are notoriously difficult to get all the way from intake to release. They are delicate and yet have been successful for millions of years. This class is taught by two seasoned cottontail rehabbers that have worked closely together for years and have found some common denominators that have allowed them to explore different paths to success. Their methods are derived from an understanding of cottontail natural history which they always come back to when troubleshooting. The class is really called “It Depends” because there are many avenues to get these beautiful animals to grow and thrive! This presentation will discuss handling calls from the public and reneating as well as touching on a new method to reconstitute formula powders. Natural history, intake protocol, feeding, housing, handling and when to make difficult decisions will be covered in this 101 class. We need more people willing to help with the hundreds of baby bunnies that come in every season. If you are new to cottontails or a seasoned cottontail rehabber this class is for you!

*(General, Vet Tech CE)*

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### **Compassion Fatigue**

*Linda Bergman-Althouse*



In our chosen field of wildlife rehabilitation, we can easily become more than tired, but we still press on because there are lives to save, and because we know what needs to be done! Let's face it, there aren't that many experienced and licensed wildlife rehabilitators in North Carolina to cover the vast areas we cover. So, we shift into autopilot and keep on keepin' on! This, my friends, can very well culminate in Compassion Fatigue, or what some call "burn-out," which can be debilitating despite being the excellent, seasoned and "God-Sent" rehabilitator you are. Yes, we know what CF is, but most of us do not dare speak of it because we are strong, capable, we can manage whatever we need to, so that won't happen to us. Truth be told, it can, so let's talk about it. This segment of training explores what can lead to Compassion Fatigue, how to recognize it, resources to help you move through it and what behaviors and steps we can take to prevent it.

*(General, Vet Tech CE)*

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### **Squirrel Ailments**

*Linda Bergman-Althouse*

When Rocky is down for the count, it can be anything from infected "ANT" bites to the "POX" and everything in between. Although fast and furious, a squirrel can find him or herself in some precarious situations that demand immediate medical attention. Squirrels presenting with aspiration, burns, emaciation, car collision, cat attack, concussion, cuterebra emasculator, dehydration, hypothermia, mange, MBD, malocclusion, pneumonia, poisoning, pox or even just an intense flea problem are dependent upon us to put a treatment plan together to give them the best chance of survival. This class will help you recognize an ailment and devise a treatment plan with varying options to treat or not to treat in some cases. Let's be ready for every ailing squirrel carried through our doors!

*(General, Vet Tech CE)*

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### **Is Mentoring for You**

*Tonya Weil & Rebeka Kriston*

Training the next generation of wildlife rehabilitators is quite a responsibility, and our state needs experienced and seasoned wildlife rehabilitators with the expertise to do just that. If you have been a rehabilitator for a while and would like to pass your knowledge and skills on to others, we need you, North Carolina wildlife needs you and potential wildlife rehabilitators need you! So the question is, would you like to be an invaluable mentor? Do you qualify? Learn about North Carolina's new wildlife rehabilitation apprenticeship requirement to help you decide. If you're considering mentoring an apprentice, this class will help you see if your toolbox is equipped with the right background and teaching tools to do that!

*(General)*

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### **Natural History of Small Mammals**

*Melisse Hopping*

It is essential to know the natural history of the animals we rehab to give them proper care. This presentation covers the natural history of the 3 small mammals rehabbed by beginners in North Carolina: squirrels, opossums and cottontails. It covers their characteristics, habitats, activity patterns,

feeding habits, ecology, population dynamics, behavior and social organization.  
(Beginner track, General)

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### **Box Turtle Facial Inflammation Syndrome**

*Juniper Russo*

Most reptile rehabilitators will encounter many box turtles presenting with infections or inflammation in the eyes, ears, and/or nose. Learn about how this condition relates to pesticide exposure and vitamin A deficiency, and the best practices for treating and managing this condition.  
(Reptile rehabilitators, Vet Tech CE)

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### **Coping Beaks, with demo**

*Betty O'Leary*

Making of a Beak. This presentation covers beak anatomy, injuries, and coping. A demo of coping on a bird cadaver will be done after a power point presentation. Students will be able to take turns and practice after the demo as time allows.  
(Avian Rehabilitators, Vet Tech CE)

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### **Everything Bird**

This course provides the basics of bird rehab. Bird categories, permitting, resources, husbandry, enclosures, assessment, and triage is covered.  
*Tonya Weil & Rebekah Kriston*

## **Beginner**

### **Introduction to Wildlife Rehabilitation**

*Tara Frost*

Want to start Rehabilitating Wildlife? There are a few things you need to know to make sure wildlife rehabilitation is for you. This presentation covers the basics of rehabilitation, such as pros and cons, basic care, and expectations, to prepare beginners for what rehabilitation involves.  
(Beginner Track)

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### **Applying for an Apprentice Permit**

*Rebeka Kriston & Tonya Weil*

The NCWRC has a new online procedure for applying for permits. Applying for your first permit as an apprentice can be very confusing. This presentation will go through the procedure step by step.  
(Beginner track)

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**Basic Medical Terminology and Math for Beginners**

*Jean Chamberlain & Ann Rogers*

Have you ever been to pick up an animal from a veterinarian and feel like you are hearing a different language as they go through the patient’s condition and prognosis (likely outcome or future for patient)? Well, medical terminology is like a new language for many new, or non-medical rehabilitators. This lecture aims to teach some of the more common terminology, used in caring for wildlife in the rehabilitation and veterinary settings. This session will also explain the basics of all things “number-related” in the rehabilitation of wild animals. The target audience is the novice rehabber, but even many seasoned rehabbers need help in understanding how to do drug calculations. We will try and make this easy to understand!

*(Beginner Track, General)*

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**Zoonosis: Sanitation/Keeping it Clean**

*Carla Johnson*

This presentation covers the causes, modes of transmission, description of common zoonoses, symptoms of infection, and most of all, prevention.

*(Beginner Track, General, Vet Tech CE)*

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**Handling Wildlife Calls**

*Carla Johnson*

'My dog has brought me a baby bird.' 'I don't think the mother rabbit is feeding the young in the nest in my back yard.' 'There's a bat in my chimney.' Carla covers many of the calls frequently received by rehabilitators and vet offices.

*(Beginner Track, General, Vet Tech CE)*

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**Capture & Restraint of Small Mammals & Birds**

*Toni O’Neil*

Learn how to safely plan the capture of injured birds and animals that reduces the chances of capture myopathy and the serious effects of stress during restraint. Each species reacts differently when approached and you can use their natural history to develop the most effective method to quickly contain them. Safe handling techniques prevents harm and damage to both the wildlife and you. PPE and safety equipment will be demonstrated and tips shared about proper holds for songbirds, raptors, reptiles, and different mammals.

*(Beginner Track, General)*

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**Opossum Rehabilitation**

*Andrew Baughman*

Are you interested in learning more about raising opossums? This session is for you! This session will cover natural history, development, hand rearing, diet, and housing, and release criteria for the Virginia Opossum.

*(Beginner Track, General, Vet Tech CE)*

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### **An Introduction to Feeding and Caring for Young Squirrels**

*Cindy Bailey*

Feeding and caring for young squirrels involves a delicate balance of providing proper nutrition and mimicking natural conditions to ensure their optimal growth and development. We will look at key stages of milk feeding to the transition to solid food. We will discuss the housing needs and the transition to larger caging. We will briefly talk about a couple of medical issues to watch for while raising these babies.

*(Beginner Track, General, Vet Tech CE)*

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### **Enrichment or Codependency for your Squirrels**

*Cindy Bailey*

Enrichment is crucial for the well-being of captive animals, including squirrels, as it helps mimic natural behaviors and provides mental stimulation. However, if the enrichment provided is inadequate or inappropriate, it can indeed have negative consequences when the squirrel is released into the wild. We will look at some potential issues.

*(Beginner Track, General, Vet Tech CE)*

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## **Keynote Speaker Address**

### **Avian influenza and the threat to California Condors**

*Todd Katzner*

California Condors are critically endangered and their existence is due largely to massive field-based and captive conservation efforts ongoing since the 1970s. The condor population that occupies northern Arizona and southern Utah recently experienced a deadly Highly Pathogenic Avian Influenza (HPAI) outbreak that killed 21 birds and sickened a number of others. To protect condors from this threat, federal wildlife management agencies wished to deploy a commercially available HPAI vaccine developed for use in poultry. To ensure that the vaccine would not harm this critically endangered species, the USGS led a vaccination trial on black vultures at the Carolina Raptor Center, in Charlotte, North Carolina. In this talk, I will describe the vaccination trial and its affects on condor management. I will begin by describing the threat condors face from HPAI and the process that led to initiation of the vaccine trial. I will then describe the trial design, implementation, and preliminary results. Finally, I will provide an update on how these results have been used to adjust condor management.