

# Paper Abstracts and Presenter Bios

## Mammal Track

### **Coyote Rehabilitation Enclosure Design**

**Ali Crumpacker, Director, The Fund for Animals Wildlife Center [acrumpacker@hsus.org](mailto:acrumpacker@hsus.org)**

Coyote rehabilitation, particularly the rearing of orphaned young, requires specific enclosure arrangements that allow for the proper care of the animals while minimizing human contact. Finding the balance in this set-up takes a lot of trial and error as well as thinking like the coyote itself.

The FFA Wildlife Center in Ramona, California has been rehabilitating coyotes for over two decades, averaging 40 coyotes annually, and has used many enclosure designs. Each new design attempts to address a behavioral, safety, or health factor noted in earlier designs that may cause a delay or failure in the successful rearing of the orphaned young.

A brand new enclosure is being used for the 2011 season. The layout used this season plays upon a coyote's natural instinct to den and will attempt to teach the young coyotes to run and hide in the safety of this den whenever a human approaches. The den also serves as the capture and transfer container when the coyotes are ready to be released, minimizing the stress on the animals during this phase of rehabilitation.

A component of this presentation is a comparison of coyote enclosure designs used at other facilities (as well as designs employed in the past at the FFA) and the pros and cons to the worker as well as the animal.

### **About the Author:**

Ali Crumpacker is Director of the Fund for Animals Wildlife Center, one of the animal care centers owned and operated by The Humane Society of The United States. Previously the Director of Wildlife Services with Project Wildlife and Animal Curator with the Cayuga Nature Center, she has also volunteered with the Endangered Wildlife Trust in South Africa. Ali has presented at the National Wildlife Rehabilitator's Association and the California Council of Wildlife Rehabilitators.

### **Neonatology and Pediatrics in Orphan Raccoons**

**Karen Bailey, CWR, IWRC Instructor**

The majority of intakes in the rehabilitation setting are orphans ranging in size from newborn to juvenile. There are special considerations based on age that must be addressed in order to provide appropriate care. Neonate animals differ from their adult counterparts in key physiologic aspects, and these needs must be met in order to ensure survival. Management of both the healthy and critical patient will be covered including pathophysiology and treatment of the most common causes of neonatal mortality: septicemia and pneumonia. In addition, the rehabber must be able to recognize and treat dehydration, hypoglycemia, hypothermia, and shock. Drug therapy in neonates is discussed due to their different physiology and immature systems. After the neonatal stage, infants and juveniles have their own set of considerations. Nutrition and infectious disease management are key components to raising healthy animals for release. Vaccine theory and protocol, maternally derived antibodies, and shelter medicine

are addressed. Pathophysiology, prevention, and treatment protocols of common infectious diseases, canine distemper and parvovirus, are covered in depth. The goal of this presentation is to provide the rehabber with the tools necessary to develop a multi-faceted approach to raccoon rehabilitation.

**About the author:**

Karen Bailey is president and founder of Central Kentucky Wildlife Rehabilitation, Inc. in Georgetown, Kentucky. They specialize in neonatal and critical care of orphan raccoons, but accept all native mammals. One of the key components of our mission is to advance wildlife rehabilitation through scientific research and education. She is a licensed wildlife rehabilitator with the Kentucky Department of Fish and Wildlife Resources and possesses a USDA permit. She is also a Certified Wildlife Rehabilitator (CWR) with the IWRC, a Board member of the Kentucky Wildlife Rehabilitators Association, and has a Masters Degree in Business Administration (MBA) from Vanderbilt University.

**Rehabilitation and Release of the Eastern Cottontail - Revisited  
Diane Leggett Wild Rescue Inc and Rabbit Rescue**

Hop into the world of long ears, fluffy tails, and disapproving stares as we discuss current trends in cottontail and hare rehabilitation. Learn about cutting-edge as well as tried and true methods of housing, medical and drug protocols, formulas, regionality, and release criteria. Discover what in the world a “binky” is and why you know you’re doing it right if you see them. We will revisit my original presentation from 1999 and see how cottontail rehab, western and complementary medicine, and our world view has evolved. Come with an open mind and leave with a better understanding of these fragile, challenging, and so very rewarding mammals.

**About the Author:**

Diana Leggett has been involved with cottontail and hare rehabilitation for 25 years. She is the president of WildRescue, Inc./Rabbit Rescue and is the primary eastern cottontail rehabilitator for the north Texas area. WildRescue, Inc. takes in close to 1,000 orphaned, injured and nestnabbed cottontails annually. Diana has served as the wildlife manager for the HSUS Cape Cod Wildlife Center, assistant to Dr. Katz of In Defense of Animals, and is the moderator for Wildbuns, a national wildlife list open to all cottontail rehabilitators. Diana runs a full-scale domestic rabbit sanctuary and rescue in addition to her wildlife rehabilitation center in Denton, Texas.

**Rehabilitation and Release of Jack Rabbits  
Regina Whitman and Dr. Dana Krempels**

Identifying the species brought to us for care is the first thing we all do. If we do this incorrectly, it can cost the animal its life. An animal's natural history (physiology, anatomy and behavior in the wild) should dictate the protocols and facilities used in its rehabilitation. By understanding the differences, as well as the similarities, between jacks and cottontails, it can increase the success rate of captive raising and releasing bunnies and leverets. This interactive seminar will demonstrate the subtle nuances that help these animals thrive in a rehabilitation situation and

prepare them for reintroduction to the wild life they were born to live.  
Topics to be covered are: neonate care, pre-release conditioning, medical protocols, diet, facilities design.\*

### **About the Authors:**

Dana (pronounced DONNA) Krempels, Ph.D. is Senior Lecturer in the Department of Biology at the University of Miami. She teaches courses in Evolution, Genetics, Zoology, Comparative Physiology and would love to be able to teach a course in Lagomorphology. Dana's life-long fascination with Lagomorphs combined with her background in biology resulted in her becoming involved in domestic rabbit rescue since 1994, and has rehabilitated both domestic and wild species (cottontails and jackrabbits). In 2003 she became involved in wild Lagomorph rescue, when the Miami International Airport threatened to kill its resident population of exotic Black Tailed Jacks. Dana is currently the CEO of H.A.R.E., Inc. (HouseRabbit Adoption, Rescue, and Education), which is the Miami Chapter of the House Rabbit Society. Dana has worked with Rabbit Savvy veterinarians for more than a decade and has published an article on the treatment of ileus in a veterinary journal. Dana answers hundreds of questions via [www.AllExperts.com](http://www.AllExperts.com) and the House Rabbit Society website [www.health@rabbit.org](http://www.health@rabbit.org).

Regina Whitman Has been involved in Wildlife Rehabilitation for over 35 years. Her career as a Licensed Veterinary Technician was cut short in 1991 by an on-the-job injury. In 1993, Regina moved to Arizona and founded Desert Cry Wildlife, Inc., a facility for the rescue and rehabilitation of Native Wild animals. Regina has been recognized as an expert in the husbandry and rehabilitation of Jackrabbits (Hares). Over the last 17 years, she has established accepted protocols their captive care, published papers on the subject and is contacted for advice from across North America and Britain. Regina has previously been a presenter/lecturer at both the National Wildlife Rehabilitation Assoc. and the International Wildlife Rehabilitation Council and has served on the review committee for the Minimum Standards for Wildlife Rehabilitation since 1999.

## **Disaster Planning Track**

**Monitoring Northern Gannets: is there an impact from the Deepwater Horizon spill on this migratory species?**

**Lynn Miller**

Northern gannets breeding in eastern Canada, overwinter in many regions, including the Gulf of Mexico. Gannets also offer a great opportunity to monitor the potential long term impact from the Deepwater Horizon spill. This highly pelagic species returns the same nest annually allowing us to follow individuals over many years. There are several research projects involved; from nest success to over wintering patterns to physiological changes that indicate toxic impact. My research offers insight into the physiological processes in these birds through changes in the protein profiles. Oil impacts birds at many levels quite apart from the obvious oiled plumage and loss of water proofing, dehydration and starvation.

Research on mallards shows oil targets the liver, the gonads and most worrisome, the brain, impacting reproductive behaviors. Long term monitoring of the gannets may ultimately offer

rehabbers greater tools in oil spill triage programs, ensuring we identify and support those birds able to make a full recovery and continue their lives.

#### **About the Author:**

Lynn began life in New Zealand, but her passion for wildlife and conservation lead to Summer School at Jersey Wildlife Preservation Trust and a stint at London Zoo. During a holiday in France, she meet a gorgeous French Canadian chap, which led her life to Quebec. While attending McGill University's MacDonald College, Ste-Anne-de-Bellevue, near Montreal, she began working with birds of prey at the Macdonald Raptor Research Centre. Of course, the raptor specialty did not deter people from bringing in ducklings, song birds, herons and pigeons. The mistake was to take these birds to her home, or was it? That was 25 years ago. Since then, Lynn founded Le Nichoir in 1994, become an IWRC instructor some 7 years ago, joined the IWRC board, and is now the current president of IWRC. She also completed her PhD in Environmental Toxicology in 2011. This year is a busy one with continued research into the impact of oil in birds, especially the northern gannets that migrate south to Florida and the Gulf of Mexico through her research position in the Chemistry department at Concordia University. She is also under contract to the HSUS working with their wildlife rehabilitation programs.

#### **Saving Penguins from Oil Spills: important lessons from successful and failed efforts Dyan deNapoli, The Penguin Lady**

At 3:30 am on June 23, 2000, an iron-ore carrier named the MV Treasure sank off the coast of Cape Town, South Africa, spilling 1,300 tons of oil and threatening the lives of 75,000 African penguins breeding on nearby islands. Before long, 19,000 of these now-Endangered penguins were covered with oil and another 19,500 penguins were moved from the path of the encroaching oil slick. Thousands of abandoned chicks were rescued as well. After a grueling three-month effort, 95% of the penguins were saved in what has been hailed as the largest and most successful rescue of animals ever undertaken.

Fast forward eleven years. At 4:30 am on March 16, 2011 a soya-bean carrier named the MS Oliva ran aground at Nightingale Island in the Tristan da Cunha island group. As with the Treasure, approximately 1,300 tons of fuel oil spilled, oiling an estimated 20,000 Endangered Northern Rockhopper penguins. This time, however, only 10% of the oiled penguins survived. Why were the outcomes of these two oil spills so vastly different, and what can be done to ensure successful rescues of oiled penguins in the future? These two events will be examined, and suggestions for changes in oiled wildlife response will be discussed.

#### **About the Author:**

Dyan deNapoli is a penguin expert and former Senior Penguin Aquarist from Boston's New England Aquarium. She recently authored the award-winning book, *The Great Penguin Rescue*, which chronicles her experiences as a rehabilitation supervisor during the historic rescue of 40,000 penguins from the Treasure oil spill in South Africa. In 2006, after working directly with penguins for nine years, she founded her company, *The Penguin Lady*, to teach audiences worldwide about these unique seabirds. Over the last fifteen years, she has shared her passion for protecting penguins with approximately 250,000 people. Dyan speaks at conferences, schools, libraries, and museums; and has been the guest lecturer on nature cruises to Antarctica and the Galapagos Islands. She has been the featured guest on many television and radio programs in the US and abroad, including CNN's Situation Room, BBC Radio, CBC-Radio Canada and Sierra Club Radio. She was honored to be a TEDxBoston speaker in June 2011.

Published by Simon & Schuster in October 2010, *The Great Penguin Rescue* was selected as "One of the best sci-tech books of 2010" by Library Journal, was named a "Must-Read" book in the 2011 Massachusetts Book Awards, and was a Silver Award Winner in the 2011 Nautilus book awards. Dyan's lifelong mission is to raise awareness and funding to protect penguins. To that end, she donates 20% of the proceeds from her book and from every public appearance to penguin rescue groups.

### **Factors affecting the welfare of rehabilitation of oiled guillemots in England and Wales, UK**

**Grogan A1, Pulquério MJF1, Cruz MJ1, Oaten P1, Thompson R1, Grantham M2, Thomas T1, Atkinson R1 and Kelly A1**

1Royal Society for the Prevention of Cruelty to Animals, Wilberforce Way, Southwater, Horsham, West Sussex RH13 9RS, UK;

2British Trust for Ornithology, The Nunnery, Thetford, Norfolk IP24 2PU, UK.

Worldwide, organizations have developed animal rescue and rehabilitation protocols to minimize the negative impacts of oil spills on individuals and populations of the species affected. However, there is little understanding of the factors that contribute to rehabilitation success. Here, we present a unique analysis of factors affecting the rehabilitation of guillemots or common murre (*Uria aalge*) found oiled by the Royal Society for the Prevention of Cruelty to Animals (RSPCA) around the coasts of England and Wales, UK. This is the first rigorous study on factors affecting the rehabilitation of oiled guillemots. We analyzed data taken from 3,798 oiled guillemots rehabilitated at RSPCA centers between 1998 and 2007, which included casualties of chronic oiling and three major UK oil spills from ocean-going vessels. Factors considered related to the guillemots' condition at capture, oil spill characteristics and the rehabilitation procedure. We used binary logistic regression analysis to assess the effect of each factor on the rehabilitation outcome (released or euthanized/died). Results showed that larger, fully molted guillemots that arrived at rehabilitation centers quickly and in better condition had a higher chance of being released back into the wild. Moreover, a fast and efficient search and rescue operation is critical for the successful rehabilitation of oiled guillemots, as are early medication and pre-washing.

#### **About the Author:**

Adam Grogan has worked with the RSPCA for 11 years. During this time he has worked with the Society's four wildlife centres to develop a programme of research into wildlife rehabilitation. This programme has concentrated on survival of released animals, but other projects have looked at the effects of captivity on stress or development. Before joining for the RSPCA ten years ago, he worked at the Wildlife Conservation Research Unit on a variety of mammalian conservation and research projects. He is still involved in many such projects and is currently vice-chair of The Mammal Society of Britain and Ireland.

#### **Disaster Planning and Response for Wildlife Rehabilitators and Facilities**

**Laura Bevan, Director, Eastern Regional Office, The Humane Society of the United States & Melissa Forberg, Consultant, The Humane Society of the United States**  
**[lbevan@humanesociety.org](mailto:lbevan@humanesociety.org); [mforberg@humanesociety.org](mailto:mforberg@humanesociety.org)**

Wildlife rehabilitators are responsible for the lives of hundreds to thousands of animals a year. They are also often located in areas prone to disasters, such as wooded areas or along the

coasts of the United States. Therefore, it is important that all rehabilitators and their facilities have plans to take care of themselves, their families and the animals in their care. This interactive workshop will assist participants in developing personal plans and facility plans, and promote the involvement of wildlife facilities in local and state emergency plans. We will also discuss what to do after the disaster strikes, how to implement their own plans, and respond as part of a community effort.

#### **About the Authors:**

Laura Bevan began her disaster response efforts with Hurricane Andrew in 1992. In 2004, Laura coordinated companion animal response efforts for the state of Florida during the four storms that hit the state within a six week period. In 2005, she was team leader for The HSUS' Hurricane Katrina response in Mississippi. Laura served on an ad hoc committee that developed Florida's disaster plan for animals, was on the national committee that wrote the Federal Emergency Management Agency's handbooks on disaster planning for animals, is a co-founder of Disaster Animal Response Team (DART) training, and is the primary author of The HSUS' Disaster Planning for Animals manual. In 2008, Laura was honored as Humanitarian of the Year at the Florida Governor's Hurricane Conference for her work developing and promoting disaster planning for animals.

Melissa Forberg is a consultant for the Humane Society of the United States. She has responded to over 60 disasters and emergencies since 1999 including hurricanes, wildfires, floods, tornados, the 2005 tsunami in Thailand, and a volcano eruption in Chile. Her animal experiences over the past 30 years include wildlife rehabilitation for over 6 years, zoo and exotic animal care and rescue and cruelty investigation. She is active on local, state and national levels in disaster planning and response. Her companion animal experience ranges from puppy mills to hoarding cases and to field rescue and temporary sheltering in multiple disaster and emergency situations.

## **International Track**

### **An Overview of Wildlife Rehabilitation in Southeast Queensland, Australia: Challenges Down Under**

**Marianne C. Dominguez [mariannedominguez@gmail.com](mailto:mariannedominguez@gmail.com)**

This is a general presentation that will give the perspective of a young American wildlife rehabilitator who intended to work with seabirds in Southeast Queensland but became involved in caring for other native Australian wildlife. A handful of wildlife rehabilitation groups caring for birds, bats, and mammals are presented, with case studies for each group elucidating rehabilitation techniques, local issues and challenges Australian wildlife rehabilitators have to face. Wildlife hospitals, set-ups for home-based rehabilitators, the dynamics between different groups, training and educational opportunities, as well as local wildlife laws are discussed. The effects of the record-breaking natural disasters that wrecked havoc on the east coast of Australia at the end of 2010 are also mentioned. The second part of the talk will focus on

seabird rehabilitation efforts by a seabird group based in Southeast Queensland, before briefly showcasing other groups in the other eastern states of New South Wales and Victoria.

#### **About the Author:**

Marianne C. Dominguez, CWR, has worked as a licensed wildlife rehabilitation technician for the SPCA Wildlife Center in Monterey, California for 3 years before flying off to Australia to experience the realities of wildlife rehab in a different part of the world. As one of Wildlife Center's full time staff dealing with a range of wildlife species, she became one of the team leaders for seabirds and has always been open to learning different protocols to improve her knowledge in animal care, as well as meeting other international wildlife professionals who share her enthusiasm for wildlife rescue and rehabilitation.

#### **Saving wildlife in China**

**Kati Loeffler, Beijing Raptor Rescue Center, International Fund for Animal Welfare**

A wildlife rehabilitation center serves two key purposes: 1) to rehabilitate sick and injured wild animals for return to the wild; and 2) to reduce the causes that necessitate the rescue of wild animals. The majority of adult raptors rescued by IFAW's Beijing Raptor Rescue Center (BRRC) come from illegal captivity, wildlife trade or direct harm inflicted by humans. This differs markedly from causes of raptor rescue in Europe and North America.

Toward the first purpose, BRRC provides veterinary care and rehabilitation to rescued raptors at international standards of practice, and under firm principles of animal welfare and wildlife conservation. As such, BRRC serves as a model for the humane and professional care of rescued wildlife in China.

The second is an issue that has escalated in the past decade to the extent that wildlife populations are decimated globally to feed Asian consumer demand. Due to weak laws and poor law enforcement, very few of the animals that enter the wildlife trade are rescued, must less rehabilitated. In addition, nearly all captive wildlife facilities in China, including so-called wildlife rescue centers, breed animals for trade. Captive-bred animals are sold for the entertainment industry (which includes zoos and safari parks), traditional Chinese medicine, restaurants and luxury items. Wildlife breeding escalates consumer demand for wildlife products, and therefore drives poaching. As there are no laws or standards in China to ensure the humane care of captive wildlife or to protect animals from abuse, captive animals in China also suffer violations of every tenet of animal welfare.

For global wildlife conservation, and for rehabilitation to play an effective role in the conservation of species, the need to control wildlife consumption in China is as critical as the need to reverse the destruction of habitats.

#### **About the Author:**

Kati Loeffler, DVM, PhD is experienced in the veterinary care, welfare and conservation issues of a variety of domestic animals and wildlife internationally. She has been working in China since 2002 in wildlife health research, veterinary medicine, capacity training for veterinarians and animal caretakers, and wildlife rehabilitation. Dr. Loeffler currently serves as the veterinary advisor for the International Fund for Animal Welfare in that organization's Beijing office ([www.IFAW.org](http://www.IFAW.org)).

#### **Tourism and Wild Animal Rehabilitation in Chile: New Perspectives**

**Francisca Astorga fran.astorga.vet@gmail.com**

The destiny of non-releasable animals it is not a simple or straightforward process, where decision is based in species conservation, minimum risks, animal welfare and economic resources, and also ethical issues. The use of those non-releasable animals for touristic and education proposes have not being widely used in Chile. Cascada de las Animas Wild Animals Refuge (CDA) it's a private rescue center for confiscated animals located in the Andean area of Central Chile, 40kms from Santiago. The CDA is placed within a protected Natural Sanctuary administrated by the Cascada de las Animas Eco-Touristic Center, which receives more than 10.000 visitors by year and offers several outdoors activities. In the last months, the CDA has developing enriched enclosures near trekking paths, with visual access to visitors, enabling face to face encounters of visitors with wild animals within a natural environment. These encounters together with education programs might be a financing support for these animals in developing countries as Chile, where specimens can play an educational role for species conservation. In this presentation, we discuss the benefits and drawbacks of these initiatives and we review the context of the confiscation and rehabilitation activities in Chile.

**About the Author:**

I'm a veterinary professional with experience in zoo & wild animal medicine, management and conservation. Currently, I'm a Doctorate candidate in the Conservation Medicine Doctorate Program of Universidad Andrés Bello, where I'm also an assistant professor. I have being working in the Cascada de las Animas Wild Animal Refuge since 2003, where I have supported veterinary activities, husbandry and financial support.

**Using our Rehabilitation Experience Internationally**

**Walter C. Crawford Jr., Executive Director World Bird Sanctuary**

The World Bird Sanctuary has utilized its wildlife rehabilitation experience to assist other countries with caring for their injured and confiscated wildlife. This presentation will cover one of the biggest seizures of smuggled wildlife ever. Occurring in Grenada birds, monkeys, and reptiles were seized in a smuggling sting operation and the World Bird Sanctuary was brought in to care for and transport all of them to safety. In addition we have worked in Ecuador, Grenada and Guyana assisting their governments in developing wildlife laws to protect their natural resources. Working hand in hand with locals we were able to insure the passage of legislation and enforcement of existing laws to prevent the capture and sale on the open market of their local wildlife. Those attending this presentation will see the dark side of animal exploitation.

**About the Author:**

Walter Crawford, a Vietnam veteran, received a bachelor's degree from Southeast Missouri State University and a master's degree from Mississippi State University. With the blessing and support of the Zoo's Director Emeritus, Marlin Perkins, in 1977 Crawford founded what eventually came to be known as the World Bird Sanctuary. Under Crawford's direction the World Bird Sanctuary is headquarters for an exciting combination of rescue, rehabilitation, research and education.

## **Tools of the Trade Track**

## **WILD-ONE; A progressive new rehabilitation tool for providing quality animal care and for monitoring wild animal health**

**Dr. Dave McRuer – Director of Veterinary Medicine, Wildlife Center of Virginia**

There is currently no comprehensive system for monitoring wildlife health in North America. Challenges to creating an effective system for such monitoring include case acquisition and sampling strategies. Wildlife care centers represent an untapped source of health data on a diverse array of wild animals, providing a unique "window" into wildlife health.

In the United States, wildlife rehabilitation generally requires state and/or federal permits in addition to annual reports documenting the inventory of species and health issues encountered. However, since the several federal agencies and 44 state agencies that require such reports do not use standardized data sets or terminology, or an electronic format, it is nearly impossible to access, let alone compile and analyze the wildlife health information collected by wildlife care facilities.

More than 5,000 permitted wildlife rehabilitators, in the United States alone, treat an estimated half-million wild animals each year. This represents an extremely valuable, but currently untapped source of wildlife health data. WILD-ONE (Wildlife Incident Log/Database Online network) is a free online system patient management system designed specifically for wildlife rehabilitators. With this program, wildlife care centers can create patient prescriptions, record medical notes, generate daily treatment sheets, produce annual state and federal reports, manage contacts, and much more! While general patient records are proprietary to the user, specified admission fields will be added to a collective database in order to monitor regional and national wildlife health trends. This presentation will walk participants through the new software program and discuss the benefits for organization and to the entire wildlife rehabilitation community.

### **About the Author:**

Dave is from Nova Scotia, Canada and has a long-time interest in population biology/ecology, natural history, public health and wildlife medicine. He obtained a B.Sc. in Biology at Mount Allison University in Sackville, New Brunswick (1999), and then a M.Sc. in Ecology and Evolutionary Biology from Carleton University in Ottawa, Ontario (2001). From 2001-2005, Dave attended the Atlantic Veterinary College and acquired his veterinary degree. After graduating, he conducted an internship in Zoological Medicine, Exotics, and Wildlife from the Western College of Veterinary Medicine in Saskatoon, Saskatchewan (2005-2006). Dave completed a residency at the Wildlife Center of Virginia starting July 2006 specializing in Preventative Medicine/Veterinary Public Health. Dave became a Diplomate in the American College of Veterinary Preventative Medicine in July 2009, a specialty that includes public health, toxicology, food safety, infectious disease, and epidemiology. Dave has served as the Director of Veterinary Services at WCV since 2007 and his research interests include zoonotic diseases, infectious diseases of wildlife, and avian medicine and surgery.

### **Ethics in Wildlife Medicine**

**LoraKim Joyner, DVM, MPVM, MDiv, Lafeber Conservation and Wildlife, One Earth Conservation, Gainesville, Florida**

Component wildlife ethics includes two aspects: an understanding of ethical principles, and skills in ethical deliberation. Ethical principles reviewed here include utilitarianism, deontological ethics, environmentalism or respect for nature, virtue ethics, relational ethics, care ethics, and

reverence for life ethics. Other processes and tools that take into account human sociology, behavior, and subconscious functioning in moral decision making include narrative ethics, socioscience, listening and communication skills, and needs-based ethics. By instituting ethical practices and programs within our wildlife and conservation management plans and organizations we improve our ability to care for ourselves, other humans, wildlife, and ecosystems.

### **Human Dimensions of Avian Conservation** **LoraKim Joyner, DVM, MPVM, MDiv**

Conservation teams are increasingly focusing on the human dimensions of avian conservation. Research in and application of human dimensions include conservation psychology, ethnoornithology, and social and emotional intelligence. Conservation psychology takes into account the science of human behavior and then coaches people to care by integration cognition, emotions, and behavior. Ethnoornithology studies the relationships between humans and birds, and uses this information to form more inclusive and effective conservation teams. Social and emotional intelligence emphasizes communication skills, empathy, and cognitive integration. Examples are given of all three fields used in the author's avian conservation practices. Though it is not possible for everyone involved in wildlife to become proficient with the sociological aspects of human and wildlife relationships, there is much merit in forming multidisciplinary teams that include social scientists or facilitators to help us navigate the complexity of human thinking and behavior.

## **Reuniting Track**

### **Session on Reuniting and Fostering Wildlife** **Session Moderator: Anne G. Miller, Birmingham, Alabama**

This Session is sponsored by the Humane Society of the United States

**Session Overview:** It is well known that most healthy young wild animals can and should be reunited with their mothers after a separation, and also that orphans can sometimes be fostered to another family in the wild. But many wildlife rehabilitators are uncertain about which species can be reunited, exactly how to reunite, and how to evaluate each individual case to decide whether or not reuniting or fostering will be successful. The purpose of the session is to offer the wildlife rehabilitator basic tools for making good decisions about reuniting and fostering birds and mammals of many different species, and also to encourage wildlife rehabilitators to make reuniting a top priority.

### **The Biology of Reuniting and Fostering – Anne G. Miller**

Understanding the biology of the species is the key to making good decisions about when and how to reunite or foster. The presentation underscores why wildlife rehabilitators need to consult the scientific literature as a basic aid in making decisions about reuniting and fostering and offers a comparative review of the breeding biology of a number of different species of birds and mammals, along with case histories demonstrating how behavioral differences between species affect outcomes.

### **Reuniting and Fostering Raptors – Rebecca Dmytryk**

Juvenile raptors that become separated from their parents are not necessarily orphans and can often be reunited with parents or fostered to another active nest. The program discusses the basics of reuniting and fostering juvenile raptors of all ages, including case histories demonstrating appropriate responses to particular species and situations.

### **Reuniting and Fostering Birds of the Land, Water, and Shore -- Elizabeth Hanrahan**

Most birds can easily be reunited with parents, or even fostered to another nest, but some species cannot be reunited or fostered because of risks to the individual juvenile or to others in the colony. The program describes methods of reuniting and fostering for common bird species, and discusses how the natural history of each species affects behaviors that will determine when reuniting or fostering will be successful

### **Reuniting and Fostering Ducks and Geese – Jay Holcomb**

Canada Geese are well known for accepting fostered goslings, as well as their own young. Reuniting and fostering Mallards and other ducks is more difficult, but new methods are being developed to raise the success rate even for ducklings. The program offers information on where, when, and how to reunite and foster common waterfowl species.

### **Reuniting in the “Nuisance” Wildlife Control Context – John Griffin**

Reuniting young with their parent(s) is a central component of the work done by Humane Wildlife Services, a company which specializes in humane wildlife conflict mitigation and solutions. This presentation will cover the techniques and strategies used by HWS in the wildlife control context, where animals are evicted and excluded from structures using methods that keep families intact, and eliminate conflicts. Protocols and methods will be reviewed that promote the successful reuniting of squirrels, raccoons, and various bird species using one-way doors and reunion boxes. The reuniting protocols employed by HWS can be adapted and utilized by wildlife rehabilitators to reduce unnecessary intake of healthy animals and help ensure long term survival of dependent young.

### **Reuniting and Fostering Fawns – Diane Nickerson**

White-tailed fawns are often separated from their mothers, but if they are healthy and the whereabouts of the mother is known, they can readily be reunited. The program offers information on how to assess each case and carry out successful reunions with the mother whenever possible. For cases where the mother is known to be dead, and the fawn is healthy, methods are described for fostering the fawn to another wild mother.

### **Psychological Aspects of Reuniting –Laura Simon**

Reuniting wild animals with their biological parents is the most biologically sound form of wildlife rehabilitation and ensures the greatest chance of survival for dependent young. However, it can be difficult to convince the public – and even fellow rehabilitators – that reuniting should be the absolute priority, wherever viable. This presentation will cover the human side of reuniting. What does it take to change your attitude towards reuniting from a rare event to a daily concern during baby season? The presentation will stimulate you to take the time and effort needed to make reuniting your number one choice for all healthy young animals, and will also give you effective psychological approaches, plus vital problem diagnosis and persuasion tips to help you turn around even that most stubborn caller clutching a newly kidnapped fawn in his arms. We need a new paradigm where rehabilitation success is measured not in terms of intake/ release statistics, but in the number of animals successfully reunited and kept out of rehab facilities.

# Disease Track

**The role of raccoons in the evolution of canine and feline parvoviruses.**

**Andrew B. Allison<sup>1,2</sup>, Justin D. Brown<sup>1</sup>, Mark G. Ruder<sup>1</sup>, M. K. Keel<sup>1</sup>, Carole Harbison<sup>2</sup>, Israel Pagan<sup>3</sup>, Karla Stucker<sup>2</sup>, Jason Kaelber<sup>2</sup>, Edward J. Dubovi<sup>4</sup>, Edward C. Holmes<sup>3</sup>, Colin Parrish<sup>2</sup>**

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Canine parvovirus (CPV) is a host range variant of feline panleukopenia virus (FPV) which emerged as a pathogen in 1978 (CPV-2) and subsequently spread worldwide, infecting >80% of the world's dog population. In 1979, a variant of CPV-2 (CPV-2a) also spread globally and by 1980 had supplanted CPV-2. Although the molecular changes between CPV-2 and CPV-2a are known, the evolutionary pathways by which they arose remain obscure.

Our knowledge on parvoviruses in wild carnivores is incomplete. Gastroenteritis in raccoons has historically been associated with FPV, and existing field and experimental data suggest raccoons are poor hosts for CPV. Since 2006, this paradigm has changed, as outbreaks of gastroenteritis associated with novel CPV variants have been diagnosed at rehabilitation centers throughout the Southeast.

Herein we genetically and functionally characterize FPV- and CPV-derived viruses from raccoons and show that raccoons served as the intermediate host in the evolution of CPV-2a from CPV-2, and possibly in the emergence of CPV-2 from FPV. All raccoon viruses derived from FPV or CPV had substitutions in the VP2 capsid protein that altered their interactions with the cellular transferrin receptors (TfR) of different host species. The mutations also altered the antigenic structure of the capsids, as determined by virus-specific monoclonal antibody binding. Cloning and expression of the raccoon TfR showed it was genetically intermediate between the feline and canine TfRs and that it was bound by both FPV and CPV-2, supporting the role of raccoons in the host adaptation of these parvoviruses in dogs and cats.

## Avian and General Track

**Non-Eagle Feather Repository**

**Terry Stevens**

Integral to Native American religious and cultural traditions is the use of feathers and other bird parts for religious offerings and to create ritual regalia and ceremonial implements. In 1999 the U.S. Fish and Wildlife Service (Service) suspended its practice of distributing feathers and other parts from migratory birds other than eagles to Native Americans for religious and cultural uses due to a lack of resources to continue its operation. Although there continues to be a religious and cultural demand for the feathers and other parts of migratory birds other than eagles,

there were no specific regulations for holding and distributing them to federally recognized tribal members. The result of this suspension left Native Americans without feathers and other parts of migratory birds other than eagles that are necessary for religious offerings and for regalia and ceremonial implements. A two year pilot program creating a legal mechanism to provide feathers and other parts of migratory birds has been instituted by the USFWS and Liberty Wildlife to rectify this situation. Since October 1, 2010 Liberty Wildlife has operated the Non-Eagle Feather Repository. Creation of a feather bank inventory, mechanisms for filling applications, and performing outreach programming has made the program very successful. Help from rehabilitators across the US is needed to make the program work at its best and put an end to illegal taking of migratory birds by Native Americans attempting to fully practice religious and cultural traditions.

#### **About the Author:**

Terry grew up in Northern Illinois, and moved with his family to Florida after high school. He earned an AS degree in aerospace technology from Manatee Community College, and attended the University of Illinois in Urbana, graduating with a BS in business administration in 1971. He worked with Eastern Airlines at Sarasota, Florida, and Atlanta, Georgia before taking a job in 1989 as a captain with America West Airlines in Phoenix. He began volunteering for Liberty Wildlife his first year in Arizona and was appointed Rescue/Transport Coordinator in 1993. Performing a growing variety of functions for the group including education, training, writing for Wingbeats, Nature News and producing This Week at Liberty, he assumed the position of Operations Director in 2008.

#### **Chimney Swift Rehabilitation; The Challenges and the Rewards Jayne Neville (formerly Amico) [jayne@mvssanctuary.org](mailto:jayne@mvssanctuary.org)**

This presentation will cover Chimney swift rehabilitation from intake to release, with attention to the challenges and problems commonly associated with them. Chimney swifts can be a challenge to rehabilitate due to their specialized method of feeding and their need to cling to vertical surfaces. Knowledge of their natural history and normal behaviors will aid the rehabilitator in meeting the basic requirements of these fascinating birds, whose numbers are in alarming decline.

#### **USFWS Permits and Proposed Changes to Education/Eagle Exhibition Regulations Carmen Simonton and Resee Collins**

This talk will be an overview on what permits are required for different activities including rehabilitation, education and oil spills; outreach resources/programs the Division of Migratory Birds has available; the pilot non-eagle feather repositories; non-releasable eagle placement and make the request for any information the Service is interested in (eagle mortality, lead, about windfarm injuries/mortalities, etc.) Since the U.S. Fish and Wildlife Service has also proposed to revise current permit regulations that authorize the possession and use of migratory birds in educational programs and exhibits, and to revise existing regulations authorizing public exhibition of eagles, this session will review the status of the proposed regulations and the remaining steps in the regulatory process before the final rule is published. This will be an informative and interactive session about current and new federal regulations and will feature a question/answer session. Questions may also be submitted before this session to the FWS/ IWRC/NWRA liaison at [Resee\\_Collins@fws.gov](mailto:Resee_Collins@fws.gov).

## **Criminalization of Kindness: Virginia State Hunting Laws and their Interpretation** **Shelley Aley aleysb@jmu.edu**

In Virginia it is illegal to “possess” wildlife. While many citizens of the commonwealth would agree that wildlife should remain wild, Virginia law criminalizes well-meaning citizens showing kindness to injured animals. The Virginia Department of Game and Inland Fisheries oversees violations of law relating to hunting and uses the law of “possession” to prosecute citizens who they find to be in possession of wildlife, even if the citizen is trying to help and not harm the animal. Citizens are encouraged by the Department’s web site to “report pet or tame deer” to the department. These animals are euthanized for stated reasons relating to public safety and health. What the Department does not explain is that reporting well-meaning neighbors or friends who are in possession of a deer will mean that this person will be charged with a misdemeanor and brought into court. The fines and court costs can be hefty, and a person could even spend time in jail. After witnessing one citizen’s five-month ordeal after being turned in for caring for an injured deer by an unnamed tipster, I present an alternative to criminalizing well-meaning citizens, one that can lead to a better-educated public that will be more responsive to the law and to wildlife welfare.

### **About the Author:**

Dr. Shelley Aley is an associate professor in the School of Writing, Rhetoric and Technical Communication at James Madison University who focuses her work on writing in the public sphere, conservation rhetoric, and technical communication. She has published articles and book chapters on environmental rhetoric, Rachel Carson, and Aldo Leopold. Currently, she is addressing issues relating to hunting regulations and law enforcement in Virginia.

## **South Florida Wildlife Center Papers**

### **Criminal Abuse and Neglect of Wildlife—What Wildlife Rehabilitators Should Know and Do**

**Sherry L. Schlueter**

An introduction to wildlife rehabilitators and veterinary professionals of the concepts of abuse and neglect of wildlife from a criminal investigation perspective, offering insight about how to recognize and report such matters (whether protective laws do or do not exist); how to handle and preserve findings of evidentiary value; and ways wild animals become subjected to many of the same intentional acts of cruelty and deprivation as do companion animal species. The overview will include evidence of the correlation between animal cruelty and human interpersonal violence, how wildlife is impacted, and why violent offenders target and exploit animal species to achieve their goals.

### **About the Author:**

Sherry Schlueter, the original “animal cop”, was a law-enforcement professional for nearly 37 years before retiring from the Broward Sheriff’s Office to take a position with The Humane Society of the United States (HSUS) in mid-2009. She entered law enforcement to protect animals from intentional human harm, and created the first animal-cruelty-specific detective unit within a law enforcement agency anywhere. She initiated and helped author the original

Florida felony animal cruelty bill that became state law in 1989. She later created the Special Victims and Family Crimes Section, which included specialized units investigating crimes of abuse, neglect, and exploitation of vulnerable humans and all animals, as well as sex crimes, missing persons, and domestic violence. Lt. Schlueter continues to provide training nationally and internationally to professional law enforcement and civilian investigators, prosecutors, judges, and legislators regarding such crimes, and on the disturbing and illuminating correlation between animal cruelty and human interpersonal violence. She has appeared before members of the US Congress and the British Parliament on the societal impact of these matters, and has authored chapters for published textbooks as a subject-matter expert. Presently, she serves as executive director of the South Florida Wildlife Center of The HSUS, based in Fort Lauderdale, FL, USA.

### **Validation of a triage scoring system for orphan wildlife to predict morbidity, mortality and release rate”**

**Stefan Harsch, DVM Director of Clinical Services, South Florida Wildlife Center  
3200 SW 4th Ave, Fort Lauderdale FL 33315**

Many rescue organizations and private rehabilitators raise orphaned wildlife species. Criteria vary widely on the decision of when to treat/raise or euthanize these animals, and are solely based on anecdotal evidence or individual preference. Objective scoring systems used to assess admission health status are well-established practices in human medicine. There is currently, however, no scoring system validated to predict whether or not orphaned wildlife have a chance of in-hospital survival or release into their natural habitat.

Using a validated admission scoring system that takes into account objective admission medical findings, will predict morbidity/mortality and the likelihood of successful release into the wild. A validated scoring system will also establish a common basis for comparing data amongst rehab centers, and may lead to a more standardized decision-making process for determining the need for humane euthanasia.

This presentation will introduce the admission scoring system currently in use at the SFWC. The scoring system takes into account objective medical findings to determine whether an animal should be admitted and raised for eventual release or whether the animal should be humanely euthanized upon arrival.

Our preliminary experience has shown that a score below 6 is a significant predictor of early or in-hospital death. A score of 8 or higher has been associated with an increased likelihood of successful treatment and release, so these animals will continue to be treated and raised, with the anticipation of eventual release. There is no consensus, however, on animals receiving an admission score of 6-7, as some are eventually released, some survive but cannot be released, and some do not survive past their initial hospital admission.

#### **About the Author:**

Stefan Harsch is a veterinary medicine graduate from the Free University in Berlin. He continued his postgraduate work at the University of Minnesota, St. Paul. After passing the US licensing program for foreign trained veterinarians, he joined the Wildlife Care Center in 2005 as a Staff Veterinarian. From May 2007 he has served as the Director of Veterinary Services at the South Florida Wildlife Center.

### **Capture Myopathy in Long-legged Herons and Marsh Birds - Physiology, Diagnosis, Treatment, and Selected Cases from the South Florida Wildlife Center**

## **Antonia Gardner, DVM, South Florida Wildlife Center**

Capture myopathy (AKA exertional rhabdomyolysis) is a syndrome that is often encountered associated with entanglement, injury, or capture of a wide variety of species. For wildlife veterinarians and rehabilitators, this illness is a serious and often deadly complication of what is often a very minor initial injury. A wide array of symptoms and affected systems are possible depending upon the stage and severity of the disease at presentation.

In South Florida, we are presented with a large number of herons, egrets, and marsh birds with capture myopathy. These birds are prone to this syndrome and this tendency adds a unique complication to the rehabilitation of these species. The patho-physiology, presentation, and diagnosis of this disease in these birds will be discussed, as will treatment of this syndrome and selected cases from the South Florida Wildlife Center.

### **About the Author:**

Originally from the Florida Panhandle, Antonia Gardner graduated with her veterinary degree from the University of Florida in 2004, after which she completed a small animal/ exotic internship at Florida Veterinary Specialists and North Bay Animal Hospital. From there she moved to southeast Florida and was introduced to the South Florida Wildlife Center as a part-time employee. Three years ago she became a full-time staff veterinarian at the South Florida Wildlife Center, a high-volume wildlife rescue and rehabilitation facility which also cares for and places a large number of abandoned and surrendered domestic and exotic animals. She has presented at the annual AAZV conference twice and been published in JZWM ("Radiographic Evaluation of Cardiac Size in Flying Fox Species"). She would like to become more involved in research and hopes to see more relationships forged between wildlife centers and the academic veterinary research community. Besides being a wildlife veterinarian, Antonia also loves to see native wildlife in its natural environment and is extremely proud to be a Florida native!

## **A retrospective look at success' and failures of orthopedic surgeries of wildlife at the South Florida Wildlife Center.**

**Renata Schneider, DVM Staff Veterinarian, HSUS, South Florida Wildlife Center**

A large percentage of cases seen in Wildlife Rehabilitation include fractures of limbs, the thoracic girdle and the pelvic girdle. Due to the size and special characteristics of certain species, including birds, standard orthopaedic techniques are not always an option for repair.

In this presentation we will examine a series of cases with an emphasis on care and surgical techniques that attributed to success' and failures of various techniques.

### **About the Author:**

I was born and raised in Montreal, Canada. I moved to the South Florida area in 2002 and have been active on the local avian, exotic and wildlife animal scene ever since. I completed an internship with Dr. Susan Kelleher at Broward Avian and Exotic Animal Hospital. I then managed the medical department of the South Florida Wildlife Center for 3 years. I have continued my work with the South Florida Wildlife Center as a part-time staff veterinarian, but also entered the private sector. Currently I am the director and sole practitioner of Exotic Pet Veterinary Services; offering a house call service for avian, exotic and certain farm animals. I participate actively in the education of the community regarding co-existing with wildlife and caring for unique pets. Finally, since February 1st of 2010, I am also the proud mother of my son, Sebastian.