

WRNC



Sharing information and knowledge for the benefit of native wildlife.

A Quarterly Newsletter

Issue 34 December 2008

Saving an Oystercatcher

A rehabber and vets work to save an American Oystercatcher, which is a species of concern in North Carolina.
Page 19



Vaccine shortage

Pre-exposure rabies shots won't be available until next fall because of a shortage of the vaccine at the two plants that manufacture it.
Page 14



It's a wrap

Wrapping an injured wing correctly may determine if a bird recovers enough to be released. Page 8

Join us for Symposium 2009

WRNC is holding its 7th annual symposium Jan. 30 – Feb. 1 at the N.C. State University Centennial Campus Educational Center in Raleigh.

The symposium offers a wide selection of sessions for both the beginner and experienced rehabilitator.

New this year are sessions on bird identification, animal handling and restraint as well as answering calls about wildlife.

A special session for veterinarians and veterinary technicians also will be offered. The sessions include trauma management for mammals, birds and reptiles; turtle shell repair; bandaging and splinting; and rules and regulations for veterinarians.

A 6-hour session for licensed rehabilitators who want to obtain a permit to rehabilitate fawns will be held on Friday, Jan. 30. The class covers state regulations, feeding, husbandry and other topics on fawn care.

The Beginner Track covers all aspects of mammal care for the novice rehabilitator.

Additional sessions cover handling and restraint; creating a 501(c) (3) nonprofit; imprinting and early learning; avian physical exam; avian orthopaedic fractures; and digital photography.

Visit our website, <http://ncwildliferehab.org>, for descriptions of the sessions, speaker information and the session schedule.

Register online at <http://www.ncwildliferehab.org/conference/conf2009/confreg.html>

Symposium 2009

Jan. 30-Feb.1

Beginner Tract

- Introduction to Mammal Care
- Squirrels and Opossums
- Zoonoses
- Fluid Therapy
- Sub-Q workshop
- Physical Exam workshop
- Cottontail Rehab (Panel)
- Rules and Regulations

Additional Sessions

- Handling and Restraint
- 501(c)(3) nonprofits
- Imprinting and Early Learning
- Avian Physical Exam
- Avian Orthopedic Fractures
- Digital Photography
- Bird Identification
- Nestling and Fledgling ID
- Answering Wildlife Calls

Veterinary and Veterinary Tech

Continuing Education Credit

- Mammal Trauma Management
- Avian Trauma Management
- Reptile Trauma Management
- Turtle Shell Repair
- Bandaging and Splinting Lab
- Rules and Regulations for Veterinarians

The Saturday session will be held in the auditorium of the Toxicology Building. Sunday workshops will be held in Centennial Center. All sessions will carry **Continuing Education Credit**

Fawn Rehabilitation

A 6-hour session for licensed rehabilitators who wish to obtain their permit to rehabilitate fawns. The class covers state regulations, feeding, husbandry and other topics on fawn care. 10 a.m. to 5 p.m. Friday, Jan. 30. **This is the only Friday class**

Book Display and Sales

WRNC has obtained a large selection of books of interest to wildlife rehabilitators. These are on display and available for purchase. See the list of books and reserve your copy on our Web site. Visit <http://ncwildliferehab.org>, for descriptions of the sessions, speaker information and the session schedule.

Icebreaker

Meet your fellow rehabilitators at the Ice Breaker from 7 p.m. to 9 p.m. Friday. Refreshments will be provided

Supplies

WRNC offers a variety of supplies for purchase at our bulk cost. Stock up and be prepared for baby season! Rehabbers also are asked to bring their surplus supplies for a "supply swap." (See page 3).

Raffle

Drawing is held at the end of the program on Saturday.

Holiday Inn Brownstone

A discounted rate is offered for WRNC Symposium attendees at the Blackstone. Attendees are responsible for making their own reservations.

Symposium rate is: \$75 single, \$82 double and includes a full, hot, buffet breakfast.

Holiday Inn Brownstone

1707 Hillsboro Street, Raleigh, NC 27605

Toll Free: 800-331-7919

Telephone: (919) 828-0811

Fax: (919) 834-0904

Symposium 2009

Jan. 30-Feb.1

Elections will be held for WRNC board members after the banquet on Saturday evening. Board members up for re-election are:



Jean Chamberlain

Jean and her husband, Robert, have been rehabilitators for 18 years, rehabilitating raptors for more than 13 years. She is particularly interested in animal behavior and involved in all aspects of education programs and training. She helped design and teaches WRNC's Refresher and Basic Wildlife Rehabilitation Courses and organizes the symposium each year. Jean is a past president for WRNC and is the web administrator for WRNC and IWRC. She is retired from a career in Information Technology.



Linda Bergman

Upon retiring from the Marine Corps, Linda began volunteering at the Outer Banks Wildlife Shelter in Morehead City, pursuing her passion in wildlife conservation and rehabilitation, which now spans 13 years. She achieved her certification as a state wildlife rehabilitator and continues to actively volunteer at OWLS, working in the rehabilitation clinic, mentoring new volunteers and facilitating tour groups. Linda is proactively concerned with the loss of wildlife habitat due to progressive development in Onslow and its surrounding counties and regularly attends community meetings to voice those concerns through education, as well as to rally support. Linda holds a Masters of Science degree in Educational Psychology, teaches curriculum courses and loves to write, especially poetry and stories involving the wildlife rehabilitation environment. She also designs soft skill/hard skill industry training for new and existing businesses for the North Carolina Community College System. Linda is a past president of the WRNC.



Jennifer Gordon

Jennifer is a state and federally licensed wildlife rehabilitator. She is the director of Carolina Waterfowl Rescue which takes in an average of 700-900 birds a year. Her specialties are waterfowl and wading birds. She is a volunteer for several other wildlife groups including the Carolina Raptor Center. Jennifer is passionate about education and is a student of Duke University nonprofit management courses as well as a part-time student pursuing a degree in veterinary sciences. She is also certified by FEMA for disaster animal relief.

Jennifer serves as chairman of the Board for Possumwood Acres Wildlife Sanctuary. She has been serving as a board member for Wildlife Rehabilitators of the Carolinas (WRNC) since 2005. She also founded the Duck Rescue Network which seeks to network rehabilitators with other rescuers across the country. They work on education, placement of nonreleasable waterfowl, adoption assistance for domestic waterfowl, and share information about health care and husbandry. Jennifer worked with Duck Rescue Network to provide disaster relief to rehabilitators affected by hurricanes on the Gulf Coast. She also coordinates rescues and transports across the country for injured birds.



Mary Weiss

Mary has been doing rehabilitation for 11 years with small mammals, including four years with fawns. Mary participated in the reorganizational meeting of WRNC in Greensboro and has been on the Board for five years. She has taught rehab classes in western North Carolina for nine years, with two classes a year. Many of the students are still dedicated rehabbers. Mary, who has raised eight children, has worked as a licensed nurse in New York and for the Sheriffs Department in Florida. She was a Girl Scout leader for 17 years. Mary has been married to Ed Weiss for 41 years. They have 18 grandchildren and 2 great-granddaughters.

Don't need it? Swap it!

Do you have rehab or medical supplies you have no use for? Bring them to the symposium and swap them for something you need. One rehabber's trash may be another's treasure.

Not everyone rehabs the same species or uses the same size supplies. What is too small for you may be "just right" for someone else. What is too big for them may be just the item you're looking for.

Plastic lids from peanut butter jars that are usually discarded can be used as supper dishes for opossums. Empty tissue boxes can be turned into hidey-holes for baby squirrels. Used syringes that have been disinfected are perfect for feeding baby birds. Extra towels and linens also can be put to good use.

You may be surprised by the number of treasures you find in your home.



Here's your chance to help with the raffle



If you have time to send off a few e-mail messages to solicit donations from companies and businesses in your area, Raffle Committee Chairwoman Toni O'Neil wants to hear from you. O'Neil will provide form letters. If you're pressed for time, send the names and addresses of potential donors to O'Neil, and she will contact them.

Members who contacted businesses last year for donations are being asked to contact the same businesses this year.

And don't be so quick to throw away those unwanted household items or gifts you've found no use for. It could be a potential raffle prize.

O'Neil also is looking for suggestions on what to solicit for the raffle. Send your ideas to: oneil9734@yahoo.com



Toni O'Neil built a 50-foot combination cage at Possumwood Acres Wildlife Sanctuary with a cage grant from WRNC.

Need help building a cage? Apply here

WRNC awarded cage grants this year to Toni O'Neil of Possumwood Acres Wildlife Sanctuary and to Beth Knapp-Tyner. Possumwood Acres has built a combination cage 10 feet wide, 12 feet high, and 50 feet long to serve as the mews for non-releasable raptors and as a large raptor pre-release flight cage.

The mews has three sections: two 20-foot cages and one 10-foot cage that will house education birds. The cage dimensions satisfy both the Minimum Standards Guide for Raptor Rehabilitation and the



A grant paid for improvements to an enclosure at Wild at Heart Rehabilitation Center.

dimensions listed in the University of Minnesota Raptor Center's Care and Management of Captive Raptors.

The wall dividers between sections are built so they swing up and can be removed to create one 50-foot cage to serve as a pre-release flight cage. The cage was constructed with pressure-treated lumber, vinyl-coated wire, tin roofing, privacy screening, and underground wire for predator-proofing.

Possumwood Acres regularly rehabilitates raptors, and the large pre-release cage will allow them to remain on the premises for the final stage of their care. The cage also will be made available to other rehabilitators in the area.

Beth Knapp-Tyner of Wild at Heart Wildlife Rehabilitation, used the grant to put a wire top on an existing pen used in the rehabilitation of otters. The pen is 6-feet high and includes a land portion and a water pen. So far, four otters have been raised in it. The pen is versatile enough to be used for other species if needed.

WRNC offers two grants of \$300 each every year to help rehabilitators build cages.



Beth Knapp-Tyner received a grant to put a wire top on an existing pen used to raise otters.

The paperwork requirements are minimal, and the application and requirements can be found on our web site at <http://www.ncwildliferehab.org/admin/documents/Cage%20Building%20Grant%20Information%202009.pdf>

Recipients are selected on the basis of need, location, and how many other members will be able to utilize the cage.

Applications are accepted beginning in January. The deadline for applications is May 1.

The grants are paid for by the raffle at the annual symposium.

Town may allow police to shoot squirrels

The board of aldermen in Gibsonville, N.C., is considering whether to allow police officers to kill squirrels with air rifles after complaints from residents that squirrels are destroying nut crops.

The police chief in March asked for a ban on shooting squirrels because it violated state wildlife laws as well as a town ordinance prohibiting the discharge of weapons within the town.

Police Chief Mike Woznick said he requested the ban as a matter of safety.

A resident complained at a town meeting in October that squirrels had damaged \$600 worth of pecans, according to an article in the News & Record of Greensboro.

WRNC adds 3rd student liaison



WRNC recently elected its third veterinary student liaison, Toni Poston. Toni grew up in Mooresville, N.C., but has lived in the Triangle since moving to Chapel Hill in 1999. Toni graduated from UNC-Chapel Hill in 2003 with a Bachelor of Arts in Psychology. She then decided to pursue a career in veterinary medicine. While completing prerequisite coursework for veterinary school, Toni also completed internships at The Piedmont Wildlife Center (PWC) in Durham and the Marine Mammal Care Center in San Pedro, Calif. In August 2007 she became a staff member at PWC, where she served as the nursery supervisor.

Toni is a first-year veterinary student at North Carolina State University's College of Veterinary Medicine. She lives in Durham with her husband, two cats, two ferrets and bird.

Toni will be serving with our other liaisons, Jenessa Gjeltema and Austin Duncan, to continue generating collaboration between WRNC and the College of Veterinary Medicine. Initially, only one student liaison was elected every two years; however, to ensure the liaison program continues to operate smoothly, WRNC will be electing a new student from the incoming class each year. This system will ensure there is always an experienced liaison to provide training.



Board members

Bergman, Linda lbergman@ec.rr.com
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 Knapp-Tyner, Beth (vice president) WildatHeartRehab@aol.com
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About Us

This is a quarterly newsletter produced by Wildlife Rehabilitators of North Carolina (WRNC). WRNC was organized in 1999 with a mission to share information and knowledge about wildlife rehabilitation.

The opinions, techniques and recommendations expressed in the articles of this newsletter are those of the authors and do not imply endorsement by WRNC.

All material in the newsletter is copyrighted and should not be used or reproduced without the permission of the author.

This newsletter is your tool for reaching everyone in WRNC. Submit comments, corrections and announcements to editor Brenda Hiles at bhiles919@earthlink.net, or by phone at 336-420-5581. The next editorial deadline is Feb. 21.

Test your diagnostic skills

Cottontails in, mentor out!

A new wildlife rehabilitator who just received her license, took in two 50-gram cottontails. She had heard stories about how difficult bunnies are, so she called her mentor, an experienced small mammal rehabilitator. Her mentor was out of town for the week.

She referred to her notes and saw she was to feed the bunnies 5% of their weight or 2.5 cc's of formula 4 times per day. She had distilled water to mix the formula, but she had no formula. She checked the Internet and saw she could feed them goat's milk mixed half-and-half with water.

The rehabilitator ran to the store, bought the goat's milk, mixed it with distilled water, and began giving quality care, according to her notes. She would check with her mentor when she returned.

Questions to consider:

1. What caused the bunnies to develop diarrhea?
2. What two things should the rehabilitator have done?
3. Should something else have been added to the formula?
4. What lessons can be learned from this case?

Answer on Page 25



Ask WRNC

Q. "I was wondering about the use of honey and sugar to treat soft-tissue wounds. How does it work, and is it effective?"

A. Yes, honey and sugar can be used as a topical antibacterial for infected wounds. Honey is preferable to sugar. It reduces bacterial growth in more than one way. For an in-depth explanation and reports on studies, please see "Honey as a topical antibacterial agent for treatment of infected wounds" at <http://www.worldwidewounds.com/2001/november/Molan/honey-as-topical-agent.html>

Q. What do I tell people who call about "nuisance" beavers? Should they try trapping them and moving them?

A. Trapping and relocating beavers in North Carolina is illegal. For beaver "problems" such as flooding and tree destruction, I recommend referring people to Beavers, Wetlands & Wildlife at www.beaversww.org. They have a lot of information on how to live peacefully around beavers, as well as solutions to the typical "problems," including pond leveling devices and ways to protect particular trees.

Have a question? Send it to Beth Knapp-Tyner at WildatHeartRehab@aol.com

Fixing a fracture

By Elizabeth Hanrahan

Reviewed by Dr. Lauren Powers DVM

Fracture is defined as a complete or incomplete break in the continuity of bone. Bone fracture can be accompanied by varying degrees of soft tissue injury or disruption of the blood supply, and can result in a compromise of the locomotor system functioning; the bird may be unable to fly, stand, or walk.

Rapid and proper immobilization of a wing or leg fracture is essential in dealing with wildlife. Often, the initial care affects the prognosis for release and survivability. Wildlife rehabilitators are not permitted to “set a fracture.” That would be considered practicing veterinary medicine without a license and is addressed in item 5 (as well as 1, 7, 8, and 11) in the Wildlife Rehabilitator’s Code of Ethics. However, consult with your veterinarian to receive in-service care or to determine the level of care you both feel comfortable providing.

Bandaging is used to stabilize a fracture until surgical or other repair can be performed. Proper stabilizing requires immobilizing the joint above and below the fracture site. The type of songbird, other injuries, and the severity of the fracture will need to be considered when choosing the proper immobilization technique.

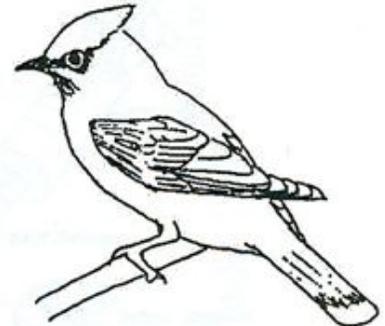
Before bandaging a wing or a leg, a complete physical exam must be

See FRACTURES, page 9

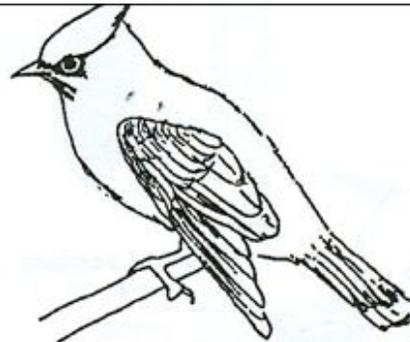
Recognizing Fractures of the Wing



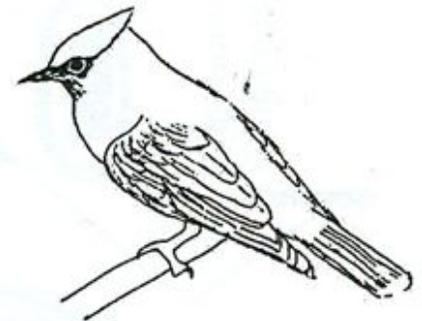
Humeral fracture or injury to elbow joint



Coracoid fracture or injury to shoulder joint



Carpal or metacarpal fracture or injury to wrist joint



Radial or ulnar fractures

Drawings courtesy of Leah Schimmel

STABILIZATION TECHNIQUES:

1. Limit stress to the animal: be gentle and have supplies ready.
2. Be prepared for any emergency.
3. Consult with and be in-serviced by your veterinarian
4. Practice the techniques during “off season” on dead songbirds to improve your skill.

Fractures

performed. Do not limit the initial examination to the initial fracture. Perform a complete initial assessment to determine and deal with any life-threatening conditions. List the patient's general health, injuries or problems on the admission form. Determine if other fractures or dislocations are present. Examine to see if tissues or organs next to the fracture have been damaged. Clinical signs of bone fracture include: pain or tenderness; deformity or change in angulation; abnormal mobility; local swelling and bruising; exposed bone (open fracture); loss of function; or crepitus (a crackling or grating feeling under the skin). Perform necessary wound management and determine the type of fracture involved. Stabilize the patient.



Following this exam, get the equipment and supplies ready before bandaging or stabilizing the injury. This will increase your efficiency and reduce stress for you and the bird.

Body Wrap — (1) Can be used alone for temporary immobilization and stabilization. It can also be used in conjunction with the figure-8 wing bandage to minimize shoulder movement. When applying the body wrap, the wings should be in a neutral or normal resting position. A small piece of padding may be placed between the injured wing and the bird's body for additional stabilization. Wrap over the affected wing to maintain the neutral position, across the back, high underneath the unaffected wing across the keel and attached to the injured wing. Ensure the wrap is on the keel caudal to the clavicles and cranial to the knees.

Do not incorporate the unaffected wing or legs. Make sure the bird can stand normally. The body wrap should not restrict normal respiration. If the wrap restricts normal leg movement, make two small slits above the knees or refit the wrap higher on the bird.

Figure 8 Bandage — (see next page) Is useful for all fractures of the wing bones. Fractures of the humerus must include a body wrap to minimize shoulder movement. It can also be used to minimize movement to allow soft tissue injuries to heal. Prolonged use of a figure-8 bandage can result in irreversible wing joint stiffness. Consult your veterinarian regarding physical therapy during fracture healing. Check and adjust the body wrap at least every other day in very young birds.

Leg Fractures — (2) Femoral fractures are difficult to splint because the hip joint must be immobilized for stabilization. It may be possible to bandage the leg in flexion to the body for temporary immobilization before receiving veterinary care. Be sure the bandage does not slip and cover the vent. Because bandages tend to be uncomfortable and force the bird to place all its weight on the other leg, monitor the feet on

WHEN TO USE A FIGURE 8

Use a figure-8 and body wrap on:

- Clavicle
- Coracoid
- Scapular
- Humeral fractures

Use a figure-8 only on:

- Radial
- Ulnar
- Metacarpal
- Digit fractures

See FRACTURES, page 11

Wrapping a figure-8 bandage



Step 1

1. Position bird and group feathers for application of bandage. Wrap bandage around the back of the humerus.



Step 2

2. Extend bandage over carpus.



Step 3

3. Continue wrapping in a figure-8 configuration.



Step 4

4. Completed



Step 5

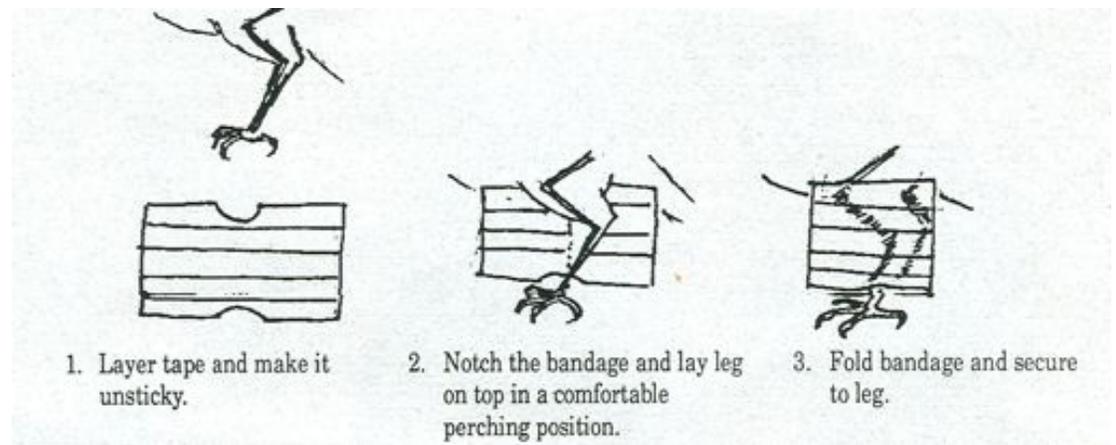
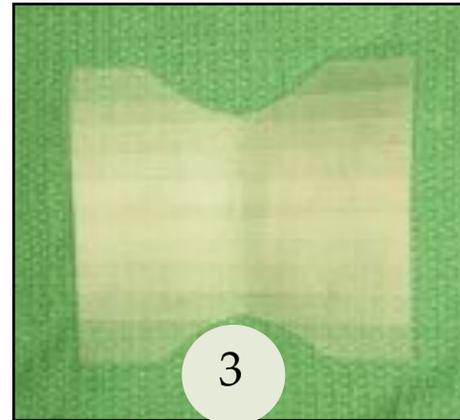
5. A figure 8 wing wrap (beige) with belly band (blue) to provide additional stabilization if needed.

Fractures

larger songbirds for signs of bumblefoot. A Robert-Jones bandage, which uses an external splint, is inappropriate for songbirds.

Altman Tape Splint — (3) This is used for tibiotarsal and tarsometatarsal fractures in small birds. Use pieces of masking tape, Microspore™, Transpore™, or lightweight tape. Layer the tape, piece by piece, on a smooth surface. Each piece should lay approximately three-fourths of the way to the top of the previous piece. When you have enough tape to make the bandage, lift the tape off the table and turn it over sticky side up. Cut a curved section in the top middle of the bandage so it will fit snugly near the body cavity. Cut the bandage to a size that can be folded over the leg. If the affected portion of the leg is feathered, consider gently plucking the location to be splinted. Apply the tape to the leg, incorporating the joint above and below the fracture (this may be very difficult to do for the knee joint). Lay the injured leg in a comfortable perching position on half of the tape bandage. Fold the bandage so it covers the leg completely. Push the tape together snugly against the leg. Carefully trim the excess tape. Rounding the edges and corners prevents skin abrasions. It is recommended you practice this procedure on a dead bird to prevent cutting off the leg or toes when trimming the bandage. Check the toes often for swelling, coldness, and darkening or other discoloration which can indicate loss of circulation. Be extremely careful when removing the bandage; carefully separate the edges of the tape to remove. Small amounts of rubbing alcohol on the edges may help.

Soda Straw Splint — (4) used for temporary bandaging of tibiotarsal and tarsometatarsal fractures in small birds. It is easy to adjust the splint above and below the joint. The “bend” in the straw easily conforms to the areas of the femur and



A POOR PROGNOSIS

Certain fractures and conditions have a poor prognosis for return of function:

- Open fractures
- Fractures close to the joints (especially in the wing)
- Distal fractures of the wing
- Distal to the carpus with little soft tissue support
- Very displaced fractures with severe soft tissue trauma
- Fractures with significant muscle contracture
- Fractures that are more than 48 hours old
- Dislocation of any joint

See FRACTURES, page 12

Fractures



the tibiotarsus or the tarsometatarsus. The straw should be wrapped in at least one layer of cloth tape and have the corners rounded. Avian skin, which is very thin, tears easily and does not

respond well to sharp edges. Cut the straw to the length needed, and then slit the straw. Apply the straw to the injured portion of the leg. Secure with VetWrap™.

Fractures of the digits — (5) in small birds are easily handled by taping the injured toe to the uninjured toe next to it. This provides a “splint.” Use only one layer of bandage, either Vet Wrap® or Co-Flex®. Bring the bandaging material over the injured toe and the uninjured toe. Close on the top of the toes. Do not wrap the bandage too tightly. Monitor the foot for swelling of the toes due to excessive tightness and for abrasions to other toes due to excessive tightness or bulk between the toes. It is important to place only one layer or no more than two layers of bandage material around the toes.



LEG FRACTURES

Tibiotarsal or tarsometatarsal fractures

- Use an “Altman Tape Splint” or soda straw splint.

Fractures of the digits

- Tape one digit to another or “shoe” only with adequate ankle support.

Fracture Types



Transverse



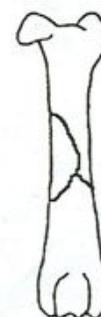
Oblique



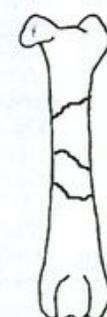
Spiral



Greenstick



Comminuted



Multiple

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1. Miller, E.A. editor. 2006. Quick Reference, 3rd edition. National Wildlife Rehabilitators Association: St. Cloud, MN
2. Proctor, N.S. & Lynch, P.J. 1993. Manual of Ornithology-Avian Structure & Function. Yale University Press: New Haven and London
3. Rupley, A.E. 1997. Manual of Avian Practice, W.B Saunders Company: Philadelphia, PA.

Beginner Basics

Preparing squirrels for life after rehab

By Jean Chamberlain

It is vital to know the natural history of the species you rehabilitate. Today we consider how the knowledge of natural history is used to provide good care for the gray squirrel.

Gray squirrels are rodents found throughout North Carolina. They have powerful jaws with large incisors for gnawing. In the wild, squirrels eat the buds, berries and bark of fruit trees. Provide pine twigs and cones; fruits, such as dogwood berries; deer antlers or cuttle bones for gnawing and to provide calcium.

The squirrel's nest is made with twigs and leaves and is lined with moss, fur and feathers. Tree cavities are sometimes used in winter months. Provide a nest box and a supply of leaves and other natural items they can use to line it. Cages need to be tall (at least 8") to allow climbing. Move the nest higher as the inhabitants get older. Add fresh branches for climbing and gnawing. Not all limbs should be secure; squirrels need to practice on limbs that will give when they land on them.

When released, squirrels need time to establish a nest. This is why a soft release is important. A soft release gives them an opportunity to locate an abandoned nest or build a new one and to locate the local food supply during the day with the safety and comfort of their own nest box to stay in at night. In addition, they can explore and practice climbing and jumping on high branches, getting needed exercise. *(Two methods of soft release are described in the September 2005 issue of this newsletter.)*

Squirrels cache their winter food supply in the fall. If they can't be released early enough to establish a nest and cache their food, they should be wintered over. If you winter over squirrels, be sure to provide leaves and sticks in their cage. Gather and save a supply of leaves in the fall to replenish the leaves in mid-winter. Release the squirrels in spring when their natural diet is available. A rule of thumb is to release when the dogwoods bloom.

Use knowledge of the squirrel's habits in the wild to help create an environment that will prepare them to thrive after release.

Enrichment 101

Squirrels like to explore their environment. To make their time in rehab more interesting and enriching, try these ideas:

- Put branches and limbs for climbing in their enclosure. Make sure the branches are not secured on both ends so they'll get used to the swaying motion of trees in nature.
- Collect garbage bags of dried leaves to replenish in winter.
- Fill a tub with leaves, sticks and rocks so they can explore and cache their food.
- Provide antlers, bones and cuttle bones for them to chew on.
- Give them pine cones to play with.
- Feed them buds and bark from nut and fruit trees as well as dogwood berries.
- Hang larger food items around the enclosure
- Provide live crickets and mealworms
- Spread peanut butter on pine cones
- Find a log with holes and place their food inside. Food can also be put inside a "Boomer ball," a virtually indestructible ball used in animal enrichment programs.



Rabies vaccine still scarce

Species Composition of rabid animals in N.C. 2007

By Carol Kaczmarek

An international shortage of the rabies vaccine is making it all but impossible for wildlife rehabilitators to receive pre-exposure shots.

The shortage is due to renovations at a pharmaceutical company in France, and because it and another company underestimated demand for the vaccinations. The vaccine for pre-exposure shots is not expected to be available until next fall.

About two years ago, Sanofi-Pasteur began renovating its production facility in France to meet FDA requirements and French manufacturing regulations. They had stockpiled what they thought was a sufficient amount of the vaccine, but as demand increased, Sanofi-Pasteur and Novartis found supplies dwindling. They decided to keep the vaccine for those exposed to the disease.

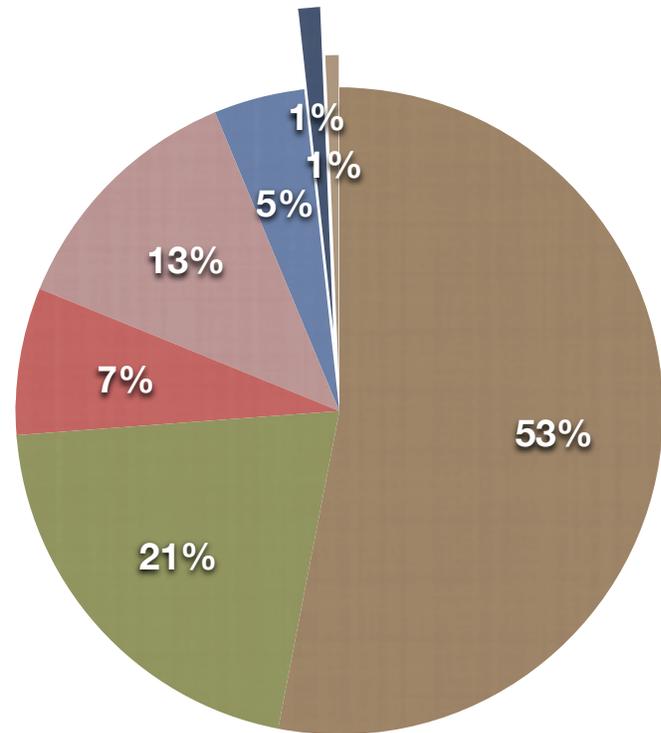
Work is continuing on the plant in France. Novartis also is building a facility in Germany.

Until the pre-exposure shots are available, the companies recommend those who work with wild animals be very cautious, wear gloves, and report any bites immediately. While most cases of infection come through bites, it is possible for it to be spread by saliva getting into an open wound, though this is rare.

Rabies is a deadly disease caused by a virus. Most pets are required by law to be vaccinated against rabies. While most cases of the disease occur in wild animals, it can be spread to humans by bites.

An extremely effective rabies regimen was developed for humans about 20 years ago that can be administered before exposure. Two brands of vaccine manufactured by Novartis and Sanofi-Pasteur are made from inactive or killed viruses.

Many people at high risk for contracting the disease — veterinarians, animal control officers and wildlife rehabilitators — opt for the pre-exposure shots. People



● raccoon ● skunk ● bat ● fox
● cat ● bovine ● coyote

can also receive shots after they've been exposed to the virus, though the regimen is different. Post-exposure shots often cost several thousand dollars compared to several hundred dollars for pre-exposure shots.

There is no treatment once rabies symptoms appear. The disease is usually fatal.

Pre-exposure shots require three doses given over a period of about one month. If the rehabber is later bitten, two more doses are required. The side effects, which include itching, swelling at site, headache, and muscle aches, are usually mild.

Those who have had pre-exposure vaccinations need periodic titers to evaluate the amount of vaccine in their system. If there is not enough to afford protection, a booster is needed.

Rabies is found in wild animal populations throughout North Carolina. The species most likely to have rabies are bats, skunks, foxes, raccoons, and coyotes, all of which the N.C. Wildlife Resources Commission classifies as rabies-vector species, barring rehabbers from working with them.

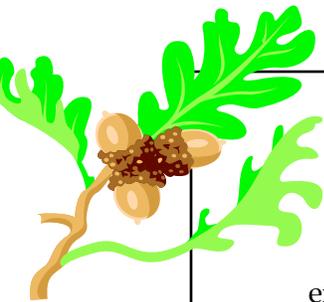
Rabies can cross over to other species, so wildlife should be handled with caution. Groundhogs have occasionally been found to be rabid. Bats are a particular problem because their bites are so small and light they may go unnoticed. Outdoor cats, because of their lifestyle, are the most common domestic animal to get infected. In one case, a cat caught a mouse and dropped it. The mouse was tested and found to be rabid.

During 2006, 49 states and Puerto Rico reported a total of 6,940 confirmed rabies cases in animals. About 92% of the cases were wildlife; 8% occurred in domestic animals.

In 2007, North Carolina submitted 4,120 animals for testing. Of those submitted 474, or 11%, were positive.

Human rabies cases are rare in the United States. Since 1990 there have been 39 confirmed cases, three of those in 2006. There has been one case each in 2007 and 2008. However, there are many more cases of possible human exposure each year requiring the post-exposure vaccine. If a human has been bitten by an animal and the animal is not available for testing, the vaccine is usually given as a precaution. Many more cases of rabies in humans occur in other countries.

In the United States, rabies has decreased in pets and livestock because of vaccination programs. Some states are deploying the vaccine in the form of nasal sprays and fish-based food packets. Rabies remains a problem in many parts of the world. International travelers are advised not to handle unknown animals while abroad. If their stay involves working with animals, they are encouraged to get pre-exposure rabies vaccinations if available.



Going green

As wildlife rehabilitators, we are very concerned about the environment. Here are some ideas wildlife rehabilitators and others can use to help preserve our world.

- Do your laundry in cold or warm water instead of hot if you use a bleach cycle after the wash cycle (1 part bleach to 10 parts water). This will sanitize your laundry. Always do full loads.
- Shop locally whenever possible. Farmer's markets are particularly good places to shop as you know that the items have not been shipped long distances.
- Pick up acorns, nuts, dogwood berries, and other natural foods in the fall. This is a good job for kids if you have some around. We have a neighborhood party each fall and give out prizes. Discard nuts that are cracked or otherwise damaged. Bag and then freeze.
- Plant a small garden. This is a good time to start planning. Include several types of greens, carrots, tomatoes, squash etc.
- Buy paper towels and other paper goods made from recycled paper.
- Replace regular light bulbs with LED light bulbs. This will reduce energy consumption by 80-90%. Also put lights on a timer, and adjust timing for the seasons.

— Carol Kaczmarek



IN BRIEF

Animal control laws available online

"North Carolina Guide to Animal Control Law" book is available in a view-only PDF file at: <http://www.sog.unc.edu/programs/ncphl/AnimalControl/pubs.htm>

The booklet also includes a section about nuisance animals attacking animals on a wildlife sanctuary.

N.C. makes change in education permits

Rehabilitators who keep animals to be used in education programs will have to apply for a captivity permit in the next permit cycle. In the past, education animals were covered under a nonreleasable education permit.

The change is primarily administrative, said Daron Barnes of the North Carolina Wildlife Resources Commission. Education animals used to be covered under the captivity permit but that changed several years ago, he said.

"At some point, the two were split off," he said.

The captivity permit, which covers all education animals in a rehabilitator's care, costs \$5.

Beach protest raises security concerns

A committee negotiating beach driving rules will hold its meetings at the Wright Brothers National Memorial after a protest raised security concerns, according to a story by the Associated Press.

During a meeting in September, beach-driving advocates confronted

committee members, holding signs that read: "SAVE THE HUMANS" and "SAVE A BIRD, KILL AN ISLAND."

The committee of 30 members is working to draft rules governing beach access to protect endangered species that nest along the shore.

Meetings had been alternating between the southern and northern end of the Outer Banks to make it convenient for residents to attend.

Mike Murray, superintendent of the Cape Hatteras National Seashore, cancelled the October meeting after the protests.

A spokeswoman for the National Park Service said the Wright Brothers location is more secure.

Environmental groups have sued the Park Service, saying restrictions on beach driving failed to protect turtles and birds.

USFWS updates stewardship policy

The U.S. Fish and Wildlife Service has updated its Wilderness Stewardship Policy for lands designated as wilderness under the Wilderness Act of 1964. The policy is the Service's first revision since the original Wilderness Stewardship Policy was issued in 1986.

The new policy clarifies that refuge visitors may use only non-motorized and non-mechanized equipment in designated wilderness areas while hunting, fishing or during other recreational pursuits. Among its many other provisions, the Wilderness Stewardship Policy also provides guidance on development of wilderness stewardship plans and clarifies

when prohibited uses may be necessary for wilderness preservation.

Some provisions of the policy:

- Affirms the Refuge System generally will not modify ecosystems, such as creating new impoundments, species population levels or natural processes in refuge wilderness unless doing so maintains or restores biological integrity, diversity or environmental health.

- Guides the determination of whether a proposal such as protecting habitat for a threatened or endangered species, constitutes the minimum requirement for managing a refuge as wilderness.

- Describes the process the Refuge System follows in conducting wilderness reviews in accordance with the refuge planning process as outlined in the planning policy.

To view the policy, visit <http://www.fws.gov/refuges/whm/wilderness.html>

Don't want Chimney Swifts? Try this

Shirley Needham, a wildlife rehabber in Indiana, suggests using a "Chimney Balloon" designed for stopping drafts for callers trying to keep swifts out of their chimney or to muffle the sounds they make. The balloon is designed for easy installation, and if someone forgets and builds a fire, the balloon ignites and disappears. For more information, write to:

www.info@batticdoor.com
or call 508-320-9082.

Power lines versus raptors

By Elaine Corvidae

Electrocution through power lines can be a problem for many large avian species, particularly raptors.

Raptors frequently hunt from perches, and in areas such as the desert southwest where there are few trees, they will often exploit power lines both as hunting perches and nest sites. In these areas, electrocutions may represent up to 80% of all raptor mortalities. In the Carolina Piedmont, with its abundant trees and natural perches, only about 1.5% of raptor injuries are the result of electrocutions.

To understand why electrocution occurs, it's helpful to know how power lines are constructed. There are several different types in common use in the U.S., some of which are safer than others. Poles carrying multiple lines beside one another, rather than arranged vertically, are the most dangerous.

Birds or other animals are electrocuted when they either touch more than one live wire at a time or touch one live wire and a grounding wire. Touching a single wire at a time is not harmful.

Unless someone witnesses a raptor electrocution or finds the bird dead directly under a power pole, electrocution may not initially present with symptoms allowing for a clear diagnosis. The most obvious cases are those with melted talons or feathers; although it looks ugly, generally these cases represent only superficial damage, as the current has traveled over the exterior of the bird rather than through it. If the current travels through the bird's body, there may be an exit wound (there may or may not be an obvious entry wound as well). Frequently, the bird presents with large areas of swollen tissue. Over the next few days, the tissue will begin to die off, often taking on a wet appearance as it does so.

Recommended treatment consists mainly of supportive care, along with any wound debridement and cleaning needed. Because it may take several days for all the damaged cells to die, the severity and extent of the injury may not be clear on intake, so it is important to check wounds daily for signs of continuing necrosis.

Birds with extensive damage to the feathers may need to be kept in captivity through their molting season, particularly if the body feathers are too damaged to allow for normal thermoregulation (or waterproofing, in the case of Ospreys).

If electrocution is known or strongly suspected, encourage the finder to report the case to the local utility and the USFWS office. In North Carolina, call Sandra Allred at the USFWS office at 919-856-4786, but note that they must be able to clearly identify the *exact* location of the pole in question. Rehabbers should also list all instances of electrocution in their yearly report to the USFWS under section C, "Criminal Activities."



Photo by David Hurt

A Red-Shouldered Hawk surveys the Arboretum in Greensboro in October. The abundance of trees in the Carolina Piedmont reduces the number of electrocution-related raptor injuries.

In the spotlight

Name: Marie Strouse

Organization: Squirrel Central Inc.

How did you get started in rehabbing?

I kept finding injured and abandoned wildlife when I lived in the Washington, D.C., area. Over and over again I would take them to rehabbers in the area. One newly weened squirrel I rescued found his way into my basement apartment in Washington D.C. He chewed through the screen in my front window and hung out on top of my boom box until I noticed him. I felt that was a definite sign I was supposed to get involved in rehabbing.

How long have you been rehabbing?

Since 2002

Who was your mentor or who is someone you admire?

Barbara Prescott in Northern Virginia. She has been rehabbing for over 20 years, has collected many awards, and is a wealth of information

What animals do you work with?

I work with flying squirrels, gray squirrels, and so far, one fox squirrel. I hope to work with more. Fox squirrels are truly magical.

What type of set-up do you have?

I rehab out of my home in Southern Pines. I have two outdoor release cages measuring approximately 10x10x10 and I put an addition on my home for the sole purpose of accommodating all my furry babies. I guess you could say I've gone a little over board. And people wonder why I've never been married.

Any pets?

I live with a 19-year-old Madagascar boa, Mortisha, an 8-year-old yellow anaconda, Pugsley; and two conures, Fred and Ginger

Any non-animal family members? No



What are your hobbies?

I'm a gym rat who enjoys riding my motorcycle, especially when I can keep it upright.

Tell us about an accomplishment of which you're proud.

Moving to North Carolina from Washington, D.C., in order to release in my own back yard. I wouldn't dare release any animal in my neighborhood in Washington. When my babies were at the proper age, I'd pass them on to various rehabbers in Northern Virginia. I wanted to experience the entire rehabilitation process.

If you could have dinner with one person alive or no longer living, who would it be?

I want to say Sid [punk rocker Sid Vicious and his girlfriend] Nancy just for shock value. But really it would be a talented, artistic, and eccentric friend from my early twenties

What do you like about being a part of WRNC?

I like making a positive difference.

The Oystercatcher that wouldn't fly

By Elizabeth Hanrahan

The American Oystercatcher, part of a highly managed colony that hatched in mid June, arrived at Roanoke Island Animal Clinic from Cape Hatteras on July 17. Its only sibling had been injured several days before and would die on July 20.

Radiographs by Dr. Mary Burkhart revealed fractures of metacarpals 1 and 2, close to the joint. She recommended euthanasia as the metacarpals — bones of the primary feathers — are used to “take off” for flight. Because the American Oystercatcher is a species of special concern in North Carolina, the National Park Service did not want the bird euthanized. Therefore, the Oystercatcher was transferred to WREN Wildlife Rehabilitation in Edenton, stabilized, and transferred later that week to Piedmont Wildlife Center in Durham. Dr. Cheryl Hoggard performed surgery to “pin” the fractures. The bird was given a 50/50 chance of full recovery and functioning of the wing. After the pins were removed, the bird was sent back to WREN Wildlife.

Measurements of the wing were taken to provide a baseline for recovery of full wing extensions and range of motion. Based on manual extensions and range-of-motion exercises, massage of the callus — the site of healing of a bone fracture that appears as a lump — was given twice daily. The bird regained full extension of the wing, as indicated by a goniometer, an instrument that measures angles. The bird would demonstrate full extension with manual manipulation as well as active, voluntary stretching. But it made no effort to fly.

In September, the bird was taken to the local veterinarian, Dr. Ford, for radiographs of the wing. The pictures showed incomplete healing and no reduction of the callus. Follow-up radiographs were taken again on Sept. 30. The results were the same, making the bird non-releasable.

Several agencies were contacted for help in placing the bird. They included: U.S. Geological Survey shorebird monitors, National Park Service, N.C. Wildlife Resources Commission Colonial Nesting Waterbird Biologists, U.S. Fish & Wildlife Service, the American Zoological Association, the N.C. Zoo, the Brooklyn Zoo in New York and the zoo in Milwaukee, Wis.

It was decided a transfer the American Oystercatcher to the Milwaukee Zoo because it has a female oystercatcher on exhibit as well as an extensive shorebird collection.

The bird was flown to Milwaukee in mid-November and was expected to go on exhibit this month.



Because the American Oystercatcher is a species of special concern in North Carolina, the National Park Service didn't want the bird euthanized.

*Photos by
Elizabeth Hanrahan*

Cold snap takes toll on turtles

More than two dozen sea turtles, caught in cold seas, washed up along the shores of North Carolina during one week last month.

The turtles, stunned by cold temperatures, were found at Lookout Bight, the Harkers Island area and Chadwick Bay.

They are being found in places where they feed, said Jean Beasley, executive director of the Karen Beasley Sea Turtle Rescue and Rehabilitation Center.

The story was reported by the Associated Press on Nov. 25.

A volunteer at the center cautions against putting them in warm water.

"We're warming them up slowly, giving a course of antibiotics and trying to get them to eat," volunteer Karen Sota told the Associated Press. "Hopefully we can get them well enough and can get a very large boat to get them to warmer waters."



TRAINING

NWRA Symposium 2009: March 10-14, Bloomingdale, Illinois. For more information, go to: <http://www.nwrawildlife.org/page.asp?ID=248>

Wildlife Rehabilitation Class: An 11-week course begins in February at Forsyth Tech. The classes meet from 6 to 9 p.m. on Tuesdays. The cost is \$50. For more information, contact Wildlife Rehab Inc. wildlifed2@aol.com.

Pearls of Wisdom

To take non-releasable education opossums on programs and presentations, put them in the small-sized dog harness that straps around their front legs, stomach, and back, and walk them on a leash. The animal is allowed to wander but not escape. This is a great way to exercise female opossums that tend to become overweight through inactivity.

Do you have a tip that makes your job easier? Send your favorites to Toni O'Neil at oneil9734@yahoo.com



Join us online!

WRNC has set up a listgroup on Yahoo! for members to share information, ask questions, network and get to know each other. To join, go to:

<http://groups.yahoo.com/group/WRNC/> or send an email to: WRNC-subscribe@yahoogroups.com.

Environmental education

The Environmental Education Certification program aims to promote stewardship of North Carolina's natural resources. For more information, go to: <http://www.eenorthcarolina.org/certification.html>

Book Corner

The call of the wild, in suburbia

Coyote**By Catherine Reid****Houghton Mifflin Company****179 pages****By Brenda Hiles**

In her century-old farm house in Massachusetts, Catherine Reid is haunted by coyotes.

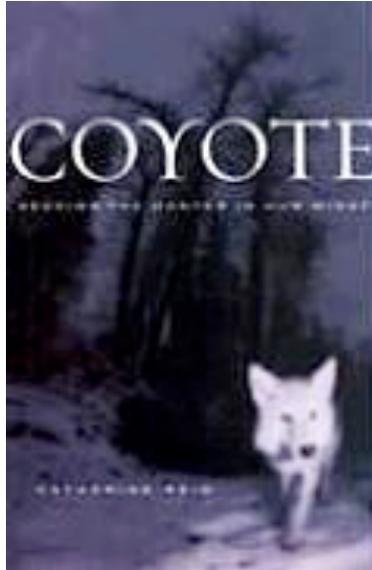
She hears them at night, a wailing chorus in the dark. She finds their scat among the blackberry bushes behind the barn where they eat the mice she collects from traps in the basement. They hover nearby, just out of sight, taunting her.

Reid is a naturalist, teacher and poet who returns to her native Massachusetts with her partner, Holly Iglesias after 25 years away. "Coyote" is as much a meditation on life and its choices as it is about the arrival of a nonnative animal on the eastern shore. Reid sees something of herself in the animal she describes admiringly as a survivor.

"They store information, they pass it on, and they just keep traveling, despite the tough odds," she writes, of the journey that resonates with her.

Rumors of coyotes in western Massachusetts surfaced more than 40 years ago when the animals slipped across the border from New Hampshire, quiet as ghosts. They had moved from the western Plains to the Atlantic Coast in less than 100 years. Some may have been the result of pet coyotes that gained their freedom. But for the most part, Reid writes, they traveled eastward, state by state, mating with gray wolves near the Canadian border to create a new hybrid.

DNA tests and observations support the theory that the eastern coyote is a hybrid. It is almost two times bigger than its western cousin, weighing between 40 to 45 pounds, and because it hasn't experienced hostility shown coyotes in the West, it tends to be more playful.



In New England and elsewhere along the East Coast, coyotes found an environment in which they could thrive. They do well where the landscape is fragmented, where wooded areas abut suburban landscapes. In residential areas, they find a ready supply of food from trash cans, gardens and pet food left on back steps.

One of the most fascinating aspects of coyote behavior deals with communication between the animals. In a simple test, one researcher discovered a group of coyotes that had been fed tainted sheep meat later managed to warn another group not

to eat the meat that had sickened them. How that information was conveyed remains a mystery.

Massachusetts isn't the only state experiencing a coyote boom. In March 2006, a coyote led rescuers on a chase through Central Park before it was shot with a tranquilizer dart and removed.

They've been found in all 100 counties of North Carolina, including urban areas

In December 2006, a coyote was trapped in a neighborhood in Greensboro, near a busy highway but not far from the arboretum where a clear stream provides water and a diversity of native plants attract mice and rabbits. A dog owner who lives nearby complained to animal control after hearing the coyotes distinctive wail and finding scat in her back yard. The scat contained fur, she indignantly told a reporter, convinced the area was no longer safe for her small dog. Because coyotes are not considered native to the area, the animal was destroyed.

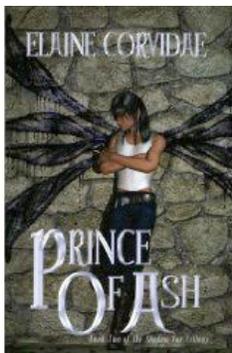
The story is being repeated in suburbs throughout the East as run-ins increase between coyotes and humans and their pets. (For coyotes, cats are akin to candy.)

It appears every effort to rid an area of coyotes has the opposite effect: their numbers increase.

See COYOTE

ON THE SHELF

Elaine Corvidae, WRNC board member, is the author of 14 novels and numerous short stories. She is the winner of both the Eppie and Dream Realm awards for Best Fantasy Novel. All of her works have a strong theme of social and environmental justice. You can find out more about her books on her website, www.onecrow.net, where you can also download her **free** science fiction novel, *Exile's Burn*.



Corvidae is the rehabilitation coordinator at Carolina Raptor Center.

Coyote

The coyotes response to pressure is to have larger litters.

"It's fruitless to kill a coyote in a specific area simply to get rid of the coyote," said researcher Jon Wray, who has studied the animals in Cape Cod. Another coyote will quickly fill its space.

Two years after the coyote was trapped and killed in Greensboro, another has likely taken its place. When I drive past the arboretum at night, I imagine this interloper lurking in the shadows of the magnolia trees, watching warily, as it must if it hopes to survive.

What do rehabbers want?

* Thayer Birding Software Birds of North America v3.9 features all 925 birds seen in the U.S. or Canada (excluding Hawaii). The program, available for Windows and Macs, includes 2,788 color photos and songs for 708 species; 90 video clips are also included. This CD can help you identify unfamiliar birds. Simply select the color, size, habitat, location or sound of your bird and the program will show you everything that matches your description.

<http://www.onlinenaturemall.com/birdsoftware>

* The Squirrel Rehabilitation Handbook from WildAgain Wildlife Rehabilitation <http://www.ewildagain.org/pubs/squirrel%20rehabilitation%20handbook.htm> The book is available for \$45. The price includes shipping costs. A copy of your rehab permit is required for purchase.



* Minimum Standards for Wildlife Rehabilitation: 3rd Edition. NWRA/IWRC cooperative project, 2000 77pp This book reviews such topics as basic housing requirements for mammals and avians, euthanasia standards, and disease transmission. \$6.50. <http://www.nrawildlife.org/pubs.asp>

* A Rehabber's Gift Basket: include syringes, cotton balls, Q-Tips, latex gloves, welding gloves for handling raptors, and Esbilac and Fox Valley infant mammal formulas.

* A new net to be used in rescues

* An afternoon at a spa before the beginning of baby season

* A membership in WRNC. The gift that keeps giving all year. Memberships are available for \$15.



Case Studies*Deciding right from wrong***Case 7**

The wildlife rehabilitator has lived in the rural community all her life. She is active in church and many community organizations. She is well respected, well liked and “knows everyone.”

Within the past month she has received three hawks, an owl, a black vulture, and several songbirds with verified gun shot wounds.

She has a feeling that local kids who received guns for Christmas shot the songbirds. She decides not to report any of the cases to the appropriate law enforcement or wildlife conservation officials because she does not want to antagonize her hunting friends and neighbors.

- ❖ How does this relate to the Wildlife Rehabilitator’s Code of Ethics?
- ❖ Which code(s) might apply?

Case 8

The state-licensed wildlife rehabilitator, known as the “Bird Lady,” has been accepting animals into rehabilitation at her home in a suburb of the city for more than 15 years. She accepts small mammals, songbirds and fawns. On admission she gets only the name, phone number and address of the presenter. There are no additional records.

She has never filed any reports because “it is too much trouble.” She has never been to a wildlife rehabilitation class, is not a member of a wildlife rehabilitation organization or group, and does not subscribe to any related publications.

She says, “I have been doing my own thing for 15 years, and it works. I don’t mess with protocols; I know what I am doing!”

- ❖ How does this relate to the Wildlife Rehabilitator’s Code of Ethics?
- ❖ Which code(s) might apply?
- ❖ Other questions / issues?

*Answers to previous ethics cases***Case 5**

A wildlife rehabilitator writes a letter to the editor supporting a political candidate and expressing a political position on a “hot” state issue. In the letter, the rehabilitator identifies herself as a wildlife rehabilitator and as a board member of a local wildlife rehabilitation group.

Code(s) that apply: (11) An individual’s conduct reflects on the entire field. In addition, there may be an article in the wildlife group’s by-laws that prohibit identifying the group with political activity.

Case 6

A wildlife rehabilitator has lived in and practiced wildlife rehabilitation in the community for almost 20 years. When an animal is admitted he always provides the presenter with information about the natural history of the animal, probable prognosis for release and additional helpful, information. He has never offered to present a program to a school or community group.

He has never been featured in a local newspaper story.

He says, “I am too busy for that kind of thing. I just want to work with the animals.”

Code(s) that apply: (9) This could apply: “encourage community support through public education. However, in this case the wildlife rehabilitator is providing education to each member of the public that brings in an animal (s). (10) By including information on the natural history of each animal, he is practicing he is demonstrating a conservation ethic and attitude of stewardship.

Code of Ethics

- 1. A wildlife rehabilitator should strive to achieve high standards of animal care through knowledge and an understanding of the field. Continuing efforts must be made to keep informed of current rehabilitation information, methods, and regulations.*
- 2. A rehabilitator's attitude should be responsible, conscientious, and dedicated: continuously working toward improving the quality of care given to wild animals undergoing rehabilitation.*
- 3. A rehabilitator must abide by local, state, and federal laws concerning wildlife and wildlife rehabilitation.*
- 4. A rehabilitator should establish good and safe work habits and conditions, abiding by current health and safety practices at all times.*
- 5. Rehabilitators should acknowledge their limitations and enlist the assistance of a veterinarian when appropriate.*
- 6. As a means of preventing further wildlife loss and abuse, a rehabilitator should encourage community support and involvement through volunteer training and public education.*
- 7. Rehabilitators should respect other rehabilitators, sharing skills and knowledge with each other, and working toward a common goal: a responsible concern for living beings and the welfare of the environment.*
- 8. A rehabilitator should work on the basis of sound ecological principles, incorporating appropriate conservation ethics and an attitude of stewardship.*
- 9. A rehabilitator should acknowledge that a non-releasable animal, inappropriate for education, foster-parenting or captive breeding, has a right to euthanasia.*
- 10. A rehabilitator should strive to maintain all animals in a wild condition and release them as soon as appropriate.*
- 11. A wildlife rehabilitator should conduct all business and activities in a professional manner, with honesty, integrity, compassion, and commitment, realizing that an individual's conduct reflects on the entire field of wildlife rehabilitation.*

Diagnostic skills: Were you right?

Answers

1. The bunnies probably developed diarrhea because of the change of diet. Lactating mothers make changes gradually over the course of lactation. When the diet of a juvenile is changed significantly in a short time, stool problems often result. Goat's milk is not appropriate for cottontails. There are several good, scientifically developed commercial formulas on the market that are appropriate for bunnies.

Diarrhea can cause dehydration. Continuing to feed a dehydrated animal can lead to more dehydration, and death can result. Additional stressors may have also contributed to their deaths.

2. The rehabilitator should have called other rehabilitators in the area and borrowed some proper formula until she could get it on her own. She also should have introduced the formula gradually or rehydrated the animal first and then introduced the formula at 50% strength.
3. A probiotic such as Probios oral gel or Bene-bac for mammals or lactobacillus acidophilus should be added to formula daily. These help maintain the intestinal flora for a delicate system.
4. Always be willing to ask for help. Don't always rely on information you find on the Internet. Be prepared in advance of baby season.

Owls fly the coop

The barn owlets featured in the September edition of the newsletter successfully fledged Sept. 16.

But the following morning I received a frantic phone call from the farmer who owned the property. He had just bought a new, red combine and parked it in the shed that held the original nest. The adult barn owls had put the smallest owlet into the engine of the new combine!

I drove to the farm, climbed on to the motor and removed the baby. It was relocated to the artificial nest cavity it had grown up in.

That night, the youngest owlet fledged. The farmer was able to harvest his crops. Two days later, I took down the artificial nest box.

The farmer plans to put up an artificial nest box for the owls next year. He was amazed by how beneficial the owls were when he saw they had eaten many of the critters that feast on his crops!



— Elizabeth Hanrahan

Backyard Fatality

*As much as I love nature and nature loves me,
I can't seem to escape the occasional backyard fatality.
Their hunt is aggressive but manners demure, it wasn't a
cat, that's for sure.
Feline free roamers with pure criminal intent are not nature
to me.
Wildlife has little defense against efficient sport killers as
these.
With cats, death is usually quick and quietly carried away.
They leave no trace, there is nothing to know, no guilt to
pay.
No . . . this was a hawk, Sharp-shinned or Cooper's variety,
Who must also eat, so I reluctantly accept occasional loss
and know it must be.
Nature circles where I live; my grounds, my mind, soul,
and in my heart.
Disjoined bed of feathers, tragic scenes such as these give
way to guilt's start.
Which to save . . . not for me nor others to say, it's always
nature's way.*



*I try to keep them all safe with cover and food; the doves,
cardinals, flickers, squirrels,
Wrens, bluejays, titmouse, robin, thrasher, chickadee,
opossum and sparrows.
But there'll come a day when one is not alert or fast enough
to out sway,
And I shall gather up all that is left of one I encouraged to
stay.
I'll always love nature and nature will love me,
Just wish I could escape the tormenting backyard fatality.*

—Linda Bergman

An unusual case

I received a juvenile plumage Herring Gull in August that was literally fished out of the sea off Topsail Island by a shrimp boat. This was shortly after hurricanes Ike and Kyle swept along the coast, and the shrimpers reported the seas were extremely rough with zero visibility in the water. Many sharks were seen in the area, and they rescued the gull from one, but not before it was bitten on the head and neck.

Unfortunately, the bird had to be euthanized when it arrived at our facility. The right eye was completely punctured, and both eyelids were almost torn off. There were multiple wounds to the head, neck, and throat. This was a new one for me!

— Toni O'Neil

Do you have a story to share? If so, send it to Brenda Hiles at bhiles919@earthlink.net. Put "unusual case" in the subject line.

CREATURE FEATURE**Killdeer – *Charadrius vociferus*****Adults**

Description: Killdeer are large (10.5 “), plovers common throughout the southern United States, west to Oregon and Washington. Adults have distinctive double-breast bands with a bright, reddish-orange rump visible in flight. The species is monomorphic — both sexes look the same.

Weight range: 83 to 121 grams

Range: Common throughout the southern United States

Natural history: Killdeer are found in grassy fields, meadows, pastures, or freshwater margins. They nest on open ground, often on gravel, which provides an extended view. The adults will perform conspicuous “broken wing,” distraction displays when approached by a predator. Killdeer ground glean, spending most of their time on the ground. They do not perch in trees.

Adult Diet: Killdeer are insectivores. Three-fourths of their diet comes from insects, including mealworms, wax worms, beetles, caterpillars, grasshoppers, crickets, ants and true bugs. Their diet also includes some invertebrates and about 2% weed seed.

Nestlings: They are classified as precocial 2, and are downy with one breast band. They are mobile and follow their parents to find their own food. The nestlings can easily be returned to their parents following an absence of up to four days, if the exact location is known. Parents incubate the young to protect them from heat.

Fledglings: They may be reunited with parents if not fully flighted.

Juveniles: Because they are precocial, juvenile killdeer are often assumed to be orphaned. The parents are



usually in the area. They are self-feeding but are unable to thermoregulate until they are in juvenile plumage.

Rehabilitation notes: Activity Aviary requirement: 4' x 8' x 8.' Rehabilitators should provide insects on the ground to encourage foraging.

Common problems: The leading cause of death of juvenile killdeer in rehabilitation is cool

temperature. Provide a warm climate with an inside cage temperature of 104 degrees. Always provide a small jar top filled with fresh water. Enrich the environment with a mirror for single chicks. Provide adequate calcium to all plover types. Rehabbers should monitor killdeer for “folding fractures” and signs of metabolic bone disease.

Provide baby crickets and mealworms, high in calcium and gut-loaded, which can be achieved by feeding the insects well 24 hours before feeding them to the bird. Buy a supply of small mealworms — one-eighth to one-half inch long — suitable for very young birds. As the chick grows, so will the remaining insects. When chicks have juvenile plumage and flight feathers, they may be put in an outside cage once evening temperatures reach 75 to 80 degrees to condition for release. Release killdeers in open fields.

