



# NEWSLETTER FOR WILDLIFE REHABILITATORS

Volume 30

December 2007

## Symposium 2008

Wildlife Rehabilitators of North Carolina is holding its annual symposium Jan. 25-27 at the N.C. State University Centennial Campus Education Center in Raleigh. The change in venue this year will give us more space and allow greater participation by students from N.C. State's School of Veterinary Medicine.

Details of the symposium are on **Pages 6-9.**

For a registration form, go to:

[http://www.ncwildliferehab.org/  
conference/conf2008/confreg.html](http://www.ncwildliferehab.org/conference/conf2008/confreg.html).

For updates, go to our website at

[www.ncwildliferehab.org/](http://www.ncwildliferehab.org/)

**Dry season:** The severe drought in North Carolina may affect wildlife, too. **Page 2**

**A sticky situation:** A snake is stuck to a glue board. Get out the muffin mix. **Page 16**

**Is that legal?:** What does your state permit cover? **Page 5**

**Stronger bones:** Improper diet can have long-lasting effects on wildlife. **Page 15**

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

# Water, water, nowhere...

By Elizabeth Hanrahan  
WREN-Wildlife Rehabilitation of Edenton, NC  
And J. Chris Turner  
Wildlife Resources Commission District 1 Wildlife Biologist



**D**rought has a wider range of effects than water-use regulations, damaged agricultural crops and brown lawns. A severe drought can transform wildlife habitats, affecting the amount and quality of plants available to wildlife. The shortage of water can bring insect infestations, plant diseases and an increased risk of wildfires, all of which can put wild animals in danger.

Long periods of extreme drought put trees under stress during growing season, jeopardizing their survival, growth and productivity. Trees already under stress from disease or injury may

not survive a drought. And that's bad news for wildlife.

Extreme drought can result in spotty mast production, early acorn drop and smaller than normal nuts, which means animals such as squirrels have to work harder to meet their food requirements on a daily basis.

Failing crops create a chain reaction for deer. Lack of food means deer may be in less- than-optimal condition going into the hard fall and winter months. Poor body condition results in lower productivity over time. Deer may also suffer from increased parasite loads and potential disease outbreaks such as epizootic hemorrhagic disease, also known as bluetongue virus, an acute, infectious, often fatal disease characterized by excessive hemorrhages. The disease, caused by an insect known as the black midge, is especially prevalent during very dry periods.

## For the birds

In general, birds are unaffected by local drought because they can move easily to find water. Widespread or long-term droughts occurring during nesting result in many nests being abandoned or at greater risk for predation. Research shows that Bobwhite reproduction is negatively affected during prolonged hot, dry periods.

Bird nests are especially at risk during droughts because of the increased risk of wildfire. This also impacts birds that nest on the ground, such as turkey and quail. Because they are sensitive to air quality, birds can succumb to smoke inhalation even miles away from a fire.

Poor nutrition may also mean poor lactation by does, leaving fawns in poorer condition and more susceptible to disease and parasites.

The impact of a drought may not be apparent immediately, but may culminate in later years as plants recovering from drought-related stress produce fewer fruits and nuts.

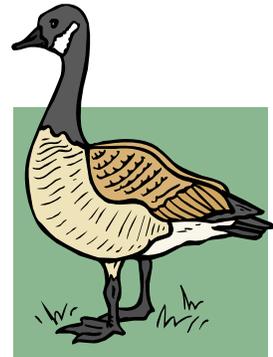
### **Nowhere to hide**

Drought also takes a toll on native grasses and weeds used as cover for small mammals and birds, making it hard for them to elude predators.

Animals such as raccoons, opossums, deer, turkeys and bear are forced to travel farther in search of water and food, putting them at greater risk of injuries or death. Bears, especially, are put on a collision course with humans when they travel in search of food.

### **Waterfowl left high and dry**

Waterfowl are at high risk during drought. Many of the places where they normally feed may be dry. Wildlife competing for a limited resource may be found at higher-than-normal densities, resulting in greater opportunities for disease, such as avian botulism and the additive effects of direct competition. It requires a lot of energy to compete constantly, energy that cannot be used for other vital functions.



### **Reptiles and amphibians**

Many native reptiles and amphibians are adapted to periodic droughts and the occasional wildfire. Some species may go into a period of dormancy during times of drought. Most are able to capitalize on small rain events that occur at the right time resulting in short, explosive breeding periods.

#### Backyard Wildlife

Water is vital for all life, including backyard wildlife. Water is needed for ponds and birdbaths, but also for the plants the animals use in the garden. Landscapes designed with wildlife in mind and supplemental feeders become increasingly important as food for birds, butterflies and other animals that depend on them. Nectar, seed, and fruit production all require water. Over all, native plant species are better adapted to drought conditions and require less water than cultivated ornamentals. These native plants are also important food and shelter sources throughout the year.

## Fish and shellfish

Drought reduces oxygen in ponds, lakes and rivers. Nutrients and pollutants become concentrated, causing fish kills or disease.

Water quality is always an issue during a drought. In eastern North Carolina, lack of river-flow, such as in the Chowan River, means saltwater from the sound can further intrude into freshwater regions. Without freshwater from upstream to flush out the salt, we can wind up with major impacts to the freshwater riparian habitats that cannot handle high salinity levels.

### The Data

Much has been hypothesized about the relation of drought to wildlife encounters.

Wildlife population and conflict records are inconsistent. Reliable data on game animals, endangered species and animals that have entered urban areas has been available for at least the past ten years. Reviews of hunting permit data, hunters' records, and wildlife managers, rely on climate information to determine game animal abundance, distribution and potential hunter success.

Records kept on declining endangered populations or increasing urban encounters with wildlife help researchers evaluate the link between drought and severity of wildlife behavior. Wildlife agency records, animal control officers and secondary sources provide data on wildlife encounters with people in urban areas.

The National Drought Mitigation Center,

through the Climate Assessment for the Southwest, has conducted research on animal habitat use, survivorship, and incidences of human/wildlife conflicts during droughts to determine the impacts of drought on wildlife. These include:

- Increased desertification
- Reduction and duration of fish and wildlife habitat
- Lack of feed and drinking water
- Disease
- Increased predation
- Disruption of reproduction cycles, delayed breeding or unfilled pregnancies
- Loss of wildlife in some areas and too many in others
- Increased stress to endangered species
- Damage to plant species
- Increased number and severity of fires
- Wind and water erosion of soils



## KNOW THE LAW

In North Carolina, rehabilitators are not permitted to rehab rabies-vector species, which include bats, foxes, skunks, raccoons and coyotes. Nor can they rehab wild turkeys, bear and adult deer.

Fawns and threatened or endangered animals require an additional permit to rehab. Permits for threatened or endangered animals and species of special concern are typically given on an as-needed basis.

The list of endangered and threatened species and species of special concern can be found on the North Carolina Wildlife Resources Commission's website at <http://www.ncwildlife.org/> under the topic Wildlife Species and Conservation.

Authorization from the WRC is required to rehabilitate these species. Authorization and permits are given on a per-need basis. This means the state will issue a temporary permit for an endangered species under the care of a rehabber, but will not issue a permanent permit that covers listed species.



	<h3>Change in bird permits</h3> <p>The U.S. Fish &amp; Wildlife Service no longer requires a permit to humanely remove a bird from inside a building.</p> <p>The change doesn't apply to eagles or any federally listed threatened or endangered species.</p> <p>The changes to Sec. 21.12 can be viewed at: <a href="http://www.epa.gov/fedrgstr/EPA-SPECIES/2007/October/Day-05/e19712.htm">http://www.epa.gov/fedrgstr/EPA-SPECIES/2007/October/Day-05/e19712.htm</a></p>
---	--

### From the editor's desk

This newsletter is your tool for reaching everyone else in WRNC. Please feel free to submit comments, corrections, announcements and submissions to Brenda Hiles at [bhiles919@earthlink.net](mailto:bhiles919@earthlink.net) or by phone at (919) 462-3249.

**The next editorial deadline is Monday, Feb. 25.**



# WRNC Symposium 2008

Jan. 25 - 27



WRNC invites rehabilitators and associated wildlife professionals to attend its 6th symposium Jan.25-27 at the NCSU Centennial Campus Educational Center in Raleigh. WRNC has planned a great selection of sessions for this symposium. Many are being offered for the first time. Have you always wanted to take more professional-looking photographs of animals for your website, newsletter, PowerPoint presentations or promotional materials? There is a session covering the challenges in animal photography and workshops for practicing what you've learned. We also have planned a session on the endangered and threatened wildlife of North Carolina.

Learn how to set up a 501c(3), how to identify the feeding categories of birds and safe techniques for handling wildlife. Attend a session on ways to expand the educational opportunities you offer. If you are interested in rehabilitating fawns, don't miss the fawn rehab session.

We are offering our full range of workshops again this year. Did you miss the necropsy workshop last year? Sign up for it when you register. Other workshops include physical exams, bandaging and sub-q fluids.

WRNC is offering a full track of sessions for the beginning rehabilitator. The material in our beginning rehabilitation class will be covered. These sessions begin on Friday afternoon and continue throughout the symposium.

## Banquet

Enjoy great food and fellowship at dinner Saturday evening. Our annual general meeting follows the banquet.

## Sessions

Endangered Wildlife; Enrichment; Ethics Case Studies; Seabirds; Study Skin Demo; Becoming a 501c(3); Handling and Restraint; Expand Ed Programs; Feeding Categories of Songbirds; Wildlife Medications and more

## Workshops

Avian Necropsy; Mammal Necropsy; Physical Exam; Sub-q Fluids; Photo Practice Photo Editing; Bandaging

## Supplies

WRNC is offering a variety of supplies for purchase at our bulk cost. Stock up and be prepared for baby season.

## Ice Breaker

Meet your fellow rehabilitators at the IceBreaker from 7 to 9 pm. Friday. Refreshments provided.

## Raffle

Raffle prizes are on display. The drawing is held at the end of Saturday's program.

## Beginner Track

WRNC is offering many sessions for beginning rehabilitators.

## Book Display

WRNC has obtained a large selection of books of interest to rehabilitators. These are on display and available for purchase. See a list of the books and reserve your books on our website.

# WRNC Symposium 2008

NCSU Centennial Center, Raleigh, N.C.

Jan. 25-27, 2008

## Banquet

Enjoy food and fellowship Saturday evening, followed by our annual general meeting.

### Menu

Chilled Crispy Romaine Lettuce served Caesar Style  
Italian Pasta Salad  
Chicken Parmesan  
Penne Pasta with Tomato Basil Sauce  
Baby Green Beans tossed with Wild Mushrooms  
Orzo Pasta with Roasted Garlic and Basil  
Warm Rolls and Butter or Breadsticks  
Tiramisu  
Chocolate Dipped Cannolis

Freshly Brewed Coffee, Decaf Coffee, Iced Tea and an assortment of Hot Teas

### Holiday Inn Brownstone

A discounted rate is offered for attendees at the Brownstone. Attendees are responsible for making their own reservations.  
1707 Hillsboro St., Raleigh, NC 27605  
Toll Free 800-331-7919  
Tel: (919)828-0811  
Fax (919)834-0904

Symposium Rate: \$69 per night (for 2 guests). Specify that you are attending the WRNC Symposium.

### Beginner Track

There is a full set of sessions for the beginning rehabilitator covering the material in our Basic Beginner rehabilitation course. The sessions are comprehensive, covering all aspects of mammal care. The sessions begin on Friday afternoon from 2-6 and are held throughout the symposium.

### Fawn Rehabilitation

There is a 4-hour session for rehabilitators who wish to obtain their permit to rehabilitate fawns. The session covers the state regulations for the fawn permit, as well as feeding, husbandry and other topics on fawn care.

### Join WRNC

If you can't attend the symposium, but wish to join WRNC, complete the membership portion of the form and send it with your check for \$15 to the address found near the top of the form.

Directions will be posted online at: <http://www.ncwildliferehab.org/conference/conf2008/directions.html>.

Registration forms are available at: <http://www.ncwildliferehab.org/conference/conf2008/confreg.html>. Sessions are subject to change.

# And the winner is....

Wanda Burton submitted the winning design for a WRNC T-shirt to be sold at Symposium 2008.

During the WRNC quarterly meeting Sept. 16, the seven submissions for our WRNC 2008 Symposium T-Shirt logo contest were discussed, and Wanda's design earned her the distinction of "2008 WRNC Symposium T-Shirt Logo Design Champ" and a \$100 cash award. The competition was keen, but Wanda's illustrative skill and shared vision won

the hearts of the majority of the voting board members, and we look forward to seeing many wildlife rehabilitators and friends wearing the attractive symposium T-shirt with the logo she designed.

Thanks to all the talented artists -- Margaret Baxter, Kim Sabbagh, Karen Carter and John Althouse -- for entering the WRNC T-Shirt contest.

On behalf of all WRNC board members, I encourage you to continue sharing your special abilities by entering future graphic design contests. You are all certainly gifted creatively.

Best to you always and looking forward to seeing you and collectively sharing our "know-how" at the 2008 Wildlife Rehabilitators of North Carolina Symposium in Raleigh!

*Linda Bergman  
WRNC Board Member  
2008 T-Shirt Design Contest Coordinator*



**Shirts will be sold for \$12 at the symposium.**

## Cage grant awarded

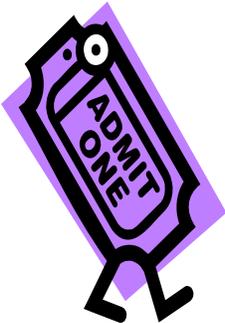
A \$300 cage grant has been awarded to Jayne Ross of Shelby for a 9-foot by 16-foot building to house a variety of cages.

“With this building I am able to move all my cages off of my screened-in porch, which is the primary entrance to our house,” Ross said. “This building also provides me the space needed for opossums that come into care as adults to be able to have much needed space to roam.”

Ross plans to add large moveable cages to the building to house various species, including opossums and squirrels.

Applications for the 2008 Cage Grant will be available online at <http://www.ncwildliferehab.org/> WRNC is awarding two grants of \$300 each. For more information, contact Linda Bergman at [lbergman@ec.rr.com](mailto:lbergman@ec.rr.com), or Toni O’Neil at [oneil9734@yahoo.com](mailto:oneil9734@yahoo.com)

## Feeling lucky? We need your help!



Successful raffles don’t happen by chance. WRNC needs the help of its members to solicit donations for prizes.

Items should be brought to the symposium.

Help also is needed to sell tickets at the symposium on Saturday.

Last year, the raffle raised more than \$1,000 for WRNC.

To help, send an e-mail to Toni O’Neil at

[oneil9734@yahoo.com](mailto:oneil9734@yahoo.com)

Thank you, and good luck!

## Pearls of Wisdom

Carrie Kiger of Second Chance Wildlife Rescue in Fayetteville saves expired bags of Lactated Ringers Solution and other fluids. By heating them in the microwave, she uses them as “hot water bottles” for baby animals during transport. Heated for three minutes, the 1,000 ml bags stay warm for about three hours. The 500 ml bags can be zapped for two minutes for two hours of warmth. And Carrie doesn’t have to worry about getting her hot water bottles back.



*Do you have any tips that make your job easier? Send your favorites to Toni O’Neil at [oneil9734@yahoo.com](mailto:oneil9734@yahoo.com)*

# Beware of dogs

By Toni O'Neil

In September, a pack of dogs attacked the ducks and geese in the waterfowl pen at Possumwood Acres Wildlife Sanctuary. The ducks and geese all had prior injuries that left them either limping, walking slowly, or unable to fly. Many were domestic breeds waiting to be adopted. Six ducks were severely wounded and three geese were killed outright. One duck and five geese had to be euthanized because of their injuries. It was a devastating loss.

The local Animal Control unit responded immediately, but by the time they arrived, all three dogs had escaped through a hole chewed through the metal fence. They were able to capture one dog; another escaped. The most aggressive dog, the leader of the pack, was shot and killed later that day by a neighbor.

This incident should not have happened. Onslow County has a leash law, but Animal Control lacks the manpower to enforce it.

Neighbors don't own the dogs. They provide no medical care or vaccinations. They simply allow them to run free. Because of this lack of ownership, we had no legal recourse to press charges.

A fence surrounds the waterfowl area, but the dogs were able to jump it. Because these dogs were part Labrador, they swam after the ducks and geese that had escaped into the small pond, where they were able to attack them in the water, and drag them out to kill them.

We were loaned a large dog trap from Animal Control for a week to try to catch the remaining dog or any others that wander at night onto the sanctuary grounds. Our dog-trapping efforts were unsuccessful, though we caught and released five raccoons and one opossum.



## WHAT YOU CAN DO

Report stray dogs to Animal Control.

They will round up unlicensed strays. You are only authorized to use force against a dog if it is attacking you or your animals.

Try trapping stray dogs in a humane trap to turn them over to the shelter.

Make sure the fence around your enclosure is high enough. A 4-foot-wire fence will keep out most dogs.

Add floating platforms for waterfowl so they can put distance between themselves and predators.

Enlist the help of neighbors to watch for strays and predators in your neighborhood.

We were told that legally we would be able to shoot and kill any dogs that attack the waterfowl. However, this isn't a feasible solution for someone who isn't a hunter.

Taller fencing materials have been purchased, and our volunteers have agreed to come out on a weekend to help build a new fence for the waterfowl area. We also plan to reinforce the fenced area for the goats in case the dogs return.

We are thankful nobody was hurt. If the attack had occurred a day later, teen volunteers would have been working in the waterfowl area.

## TRAINING



### ***Close to home***

Training classes are held throughout the state.

For details and updates, go to: <http://www.ncwildliferehab.org/wrnctrain.html>

### ***Farther afield***

#### **IWRC**

IWRC offers a variety of courses online and in the classroom. For a course schedule, visit:

<http://www.iwrc-online.org/training/catalog.html>

## NEWS IN BRIEF

### **Hemorrhagic disease reported in N.C.**

Hemorrhagic disease has been found in deer herds in several areas of North Carolina. This virus is one of the most significant infectious diseases of white-tailed deer, and outbreaks are seen almost every year in the southeastern United States, according to the Wildlife Resources Commission.

Evin Stanford, deer biologist with the Commission, said the disease has been observed in at least 11 counties in the western piedmont, foothills and mountain regions of the state. The disease poses no threat to humans, Stanford said.

The disease, carried by midges that hatch on mudflats, can kill an animal in five to 10 days.

### **No landing field list yet**

The Navy has not set a date to release a list of potential sites for a practice landing field in Virginia or North Carolina.

The Navy had been considering sites in Beaufort and Washington counties, but backed off because of opposition from farmers, environmental groups and wildlife rehabilitators.

The sites were near a wildlife preserve.

# Ask WRNC

**Q:** Is there a recommended teaching/training method to use with education animals?

**A:** Yes, the recommended method is called operant conditioning. A great book for the trainer to learn about this method is "Don't Shoot The Dog" by Karen Pryor.



*Have a question? Send it to Beth Knapp-Tyner at [WildatHeartRehab@aol.com](mailto:WildatHeartRehab@aol.com)*



## Board member contact list (email)

Bergman, Linda [lbergman@ec.rr.com](mailto:lbergman@ec.rr.com)

Cawlfied, Alicia [aliciadc05@yahoo.com](mailto:aliciadc05@yahoo.com)

Chamberlain, Jean (treasurer) [jchamberlain1@alltel.net](mailto:jchamberlain1@alltel.net)

Engelmann, Mathias [mathiasengelmann@carolinaraptorcenter.org](mailto:mathiasengelmann@carolinaraptorcenter.org)

Gordon, Jennifer [waterfowlrescue@aol.com](mailto:waterfowlrescue@aol.com)

Hanrahan, Elizabeth (president) [eh11@earthlink.net](mailto:eh11@earthlink.net)

Johnson, Carla (membership) [Wildlifeed2@aol.com](mailto:Wildlifeed2@aol.com)

Knapp-Tyner, Beth (vice president) [WildatHeartRehab@aol.com](mailto:WildatHeartRehab@aol.com)

Ledbetter, Janenie [Ledbetter767@aol.com](mailto:Ledbetter767@aol.com)

O'Neil, Toni (secretary) [oneil9734@yahoo.com](mailto:oneil9734@yahoo.com)

Weiss, Mary [weiss275@cs.com](mailto:weiss275@cs.com)

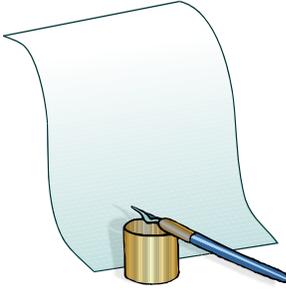
All material in the newsletter is copyrighted and should not be used or reproduced without the permission of the author.

## 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](mailto:WRNC-subscribe@yahoogroups.com).



## BOARD MINUTES



WRNC Board Meeting Minutes for Sept. 16, 2007 (10 a.m. – 11 a.m.)

**Present:** Elizabeth Hanrahan, Jean Chamberlain, Linda Bergman, Alicia Cawlfeld, Jennifer Gordon, Mathias Engelmann, Beth Knapp-Tyner, Carla Johnson, and Toni O’Neil

Absent (excused): Janenie Ledbetter and Mary Weiss

**Brochures:** New WRNC brochures have been printed and sent to several board members, Mathias Englemann reported. Brochures will be sent to the Wildlife Resources Commission in Raleigh to be included with new permits.

**Rabies-Vector Species:** A proposal to allow wildlife rehabilitators to care for rabies-vector species animals has been sent to Daron Barnes at the Wildlife Resources Commission for review, board member Jean Chamberlain reported. Jean also is working on an outline for training should WRC approves the proposal.

**T-shirt Contest:** A winning graphic has been chosen for the Symposium T-shirt contest, Linda Bergman announced. The design needs to be slightly rearranged and resized for printing purposes. All the applicants and the winning artist were notified by letter of the board’s selection. The image will be printed straight across the front of the T-shirt, rather than on a pocket, which would be too small. Linda will work with the artist about resizing the design for printing purposes, and look into the colors and printing costs.

**Federal Bird Permit Class:** Dates for the Federal Bird Permit courses in Asheville and Raleigh have been selected. Beth Knapp-Tyner received a thank-you for helping with arrangements in Asheville. Press releases were sent to the local media in October. Fliers will be sent to all WRNC members. A problem has arisen over the location for the Basic Mammal Rehab class in the Wilmington area, and the class may have to be postponed..

**Newsletter Index:** A list indicating what articles are in each issue of the newsletter and where to find them will be posted on the website and will be available to the public in hopes of attracting interest and new members, Jean Chamberlain reported. Current newsletters are available online to the public, and then archived. The archived newsletters are available to members only.

**Chimney Swift Towers:** An application form for the proposed Chimney Swift Towers Grant has been finalized, according to Linda Bergman. Her proposal is broken down into sections, each of which was discussed and voted on by the board.

a) The Chimney Swift Towers Grant will be in the amount of \$300, and up to three per year may be awarded. The grant will cover the majority of building expenses, but applicants must raise the remainder of the money themselves.

## BOARD MINUTES

- b) The board will decide the eligibility of the applicants and monitor the locations to ensure the towers are built in different geographical areas.
- c) The current authority regarding chimney swift towers is found in a book written by Paul and Georgean Kyles. These books will be available for sale at the symposium in January. A copy of the book will be donated to the selected applicant.
- d) Once the tower is built, it must have a permanent marker or plaque placed on it that includes the name of the organization that erected it and that it was sponsored by WRNC. The specific wording will be decided later. The grant information, proposal, and application form will be available on the WRNC website. We also request the information to be put on the Wildlife Resource Commission's website.

**Symposium:** Information will be sent to the entire board and will be placed on the website. The 2008 Symposium will be held in the WRC's Education Building in Raleigh.

**Records:** Official WRNC records will be scanned and appear in a separate section of the website open to board members only. Currently, they are kept in a notebook that is passed each year to the new secretary. The electronic filing will help ensure safekeeping of important and official information.

**Meetings:** No more teleconference board meetings are scheduled this year because the minimum required number of meetings has been met. All other business will be handled through e-mail.

**Cage Grant:** WRNC member Jayne Ross of Shelby will receive the second Cage Building Grant of \$300. Members are encouraged to take advantage of this benefit and apply for financial assistance in 2008.

*Submitted by Toni O'Neil, Secretary*

*Oct. 8, 2007*



### About Us

This is a quarterly newsletter produced by Wildlife Rehabilitators of North Carolina (WRNC). WRNC's mission is to share information and knowledge about wildlife rehabilitation for the benefit of native wildlife. For comments or questions, write to: WRNC, 2542 Weymoth Road, Winston-Salem, NC 27103.



## BEGINNER BASICS

# Building better bones

By Jean Chamberlain

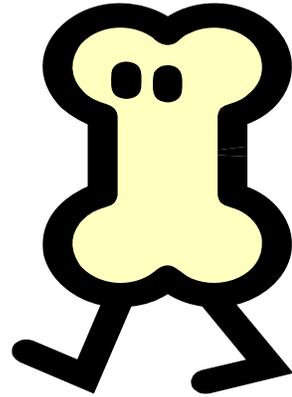
Often one of the first diseases a rehabilitator encounters is metabolic bone disease. Even those rehabilitators who only care for young animals may encounter this condition. Metabolic bone disease is a term used to cover a number of nutritional disorders. Some are caused by a deficiency of calcium, phosphorus, or vitamin D. Others result from an improper balance of calcium to phosphorus in the diet (adequate calcium but too much phosphorus). Phosphorus affects the metabolism of calcium.

Calcium is necessary for the growth of bones in young animals. Without adequate calcium, growth is retarded. The bones may become deformed and are soft and weak. You may notice lameness, reluctance to move, bowing of the limbs, walking on hocks and loss of appetite when a young animal has metabolic bone disease. The teeth and eyes can also be affected.

In adults, the bones become less dense. Sometimes they enlarge. Fractures are common.

Muscle meat and many vegetables contain low quantities of calcium. Do not feed meat eaters like opossums chunks of meat. Include the bones. Feeding whole mice is one way to provide calcium. Many other good foods (egg yokes, mealworms, seeds, grains, nuts and many fruits) are high in phosphorus. This is one reason we are cautioned not to feed squirrels a diet with large amounts of nuts and fruits: the phosphorus can prevent the absorption of calcium. Research has been done to develop balanced diets for various species. These diets are formulated to contain the proper balance of calcium and phosphorus.

Some rehabilitators believe an animal will balance its own diet if offered a variety of foods. *This is not true.* Animals can become habituated to their favorite foods or eat mostly treats. It is particularly important to start young animals on a nutritious diet. It is also a mistake to overfeed animals in the hope they will get all the nutrients they need. Be sure to learn the proper foods for each species and age of the animals you rehabilitate. Avoid metabolic bone disease by providing a balanced diet with sufficient calcium. A complete explanation of calcium requirements, calcium food sources and supplements can be found in Chapter 15 of the IWRC Basic Wildlife Rehabilitation manual.



# Stuck on a snake

By Elizabeth Hanrahan

“Someone brought in a baby snake for identification. It’s caught in a glue trap, and it is alive! Can you help it?” the County Extension agent asked.

“Sure,” I answered unenthusiastically.

I know about getting birds out of glue traps, but a snake, no.

With a bird or small mammal caught in a glue trap, one uses corn meal to gently remove the animal. Then the bird is allowed to rest for 24 hours. It is then swathed in canola oil and washed to remove the glue. Would it work for a snake?

I didn’t have any cornmeal. But I did have Jiffy Corn Muffin mix, canola oil and Dawn Dish soap. While waiting for the snake to arrive, I gathered supplies and set up an aquarium habitat.

An acquaintance brought the snake, stuck to the glue trap, to the wildlife rehab clinic. After an initial physical exam, we began removing the snake from the glue trap. I dusted the glue board and snake with muffin mix. As I worked to gently free the snake, the woman who brought him in continued to sprinkle the muffin mix on both trap and snake. Half an hour later, a completely muffin mix covered snake was free of the trap. I tentatively identified the snake as an adult, male garter snake.

The snake was stressed and exhibiting shallow, open-mouthed breathing. And, so was I.

When I put the snake into its habitat for rest it stuck to everything! What to do?

In desperation I slathered the snake in canola oil and spread the oil on the substrate of the cage. It worked! The snake could slither around, find a private spot and chill out.

Later, I sent an e-mail message to a birding friend, Jeff, who happens to be the curator of herpetology at the N.C. Museum of Natural Sciences. I sent a picture of the snake for a positive identification and asked if the snake could be washed using the protocol for birds.

Jeff immediately wrote back. “Yes,” it was a male garter snake, and” No,” he didn’t know if it could be washed but “try it anyway.” Oh, and if the snake died, “could it be saved for the Museum?” It was only the second documented case of a garter snake in Chowan County. And, finally, could I “save road killed snakes [and] take photos of live snakes seen?” It seems there is



Dawn Dish Soap was used to gently remove the glue and canola oil from a garter snake.

no inventory of the snakes in the county.

The following afternoon, when the snake and I were more relaxed, I prepared to wash him, first making a mental check list.

7.2 ounces of Dawn dishwashing detergent. *Check.*

Thermometer. *Check.*

Washing area, kitchen sink. *Check.*

Rinsing area, other kitchen sink. *Check.*

104-degree water. *Check.*

Gloves. No. They stuck to the snake.

I examined the snake and could find no apparent abrasions. He looked “good to go” for a bath and rinse. I filled the sink with 3 gallons of 104-degree (F) water, added 2%, or 7.2 oz , of Dawn dishwashing detergent and a thermometer to monitor the water temperature.

Then, in went the snake. It could sure move around in the water! Despite his protestations, I gently peeled off the glue covering him. It took two consecutive washings and rinsings but he ended up squeaky clean. Again, both of us were stressed, with the telltale open mouth and shallow breathing.

He was placed into a clean aquarium habitat and allowed to rest for the next 24 hours.

He looked great the following day and was eating and behaving like a normal garter snake. He was weighed and measured and then released next to a pond at the back of our property.

We both celebrated!

## **TEST YOUR DIAGNOSTIC SKILLS**



You live on the coast. In December you receive a pelican that is unable to walk. Its feet have red and black spots and what looks to be small bites out of the skin. There are inflamed spots in the pouch.

### **Questions for Case:**

1. What do you think happened to this bird?
2. How will you treat it?
3. Which avian species are the most susceptible to this?
4. Have you seen this condition in mammals?

**Answer: Page 19**

## CREATURE FEATURE

### Common Grackle- *Quiscalus quiscula*

**Adults:** Grackles are large: 12.5-inch black birds with yellow eyes, long, keel-shaped tail and a long heavy bill. In good light, males reflect glossy, purplish, greenish head, neck, and breast. Females are smaller and duller. Juveniles are sooty brown with brown eyes. They are monogamous, Polyandrous. Males may form harems.

**Weight Range:** 135 to 197 grams

**Range:** Common throughout the southern U.S.

**Natural History:** Breeding begins in late March in their southern range. They are found in open woods, fields, pastures, cultivated fields, and coastal marshes, parks and suburban areas. They often roam in mixed flocks with other blackbirds. They frequently wade in shallow water and fish like a heron. Grackles will steal food from other birds. They build their nests in colonies. Females breed as yearlings; males breed in their second year.

**Adult Diet:** They are omnivores, eating a variety of insects, fruits, plants, and small vertebrates. A grackle can eat about 3,000 ants per day, more than any other bird in North America. It also eats seeds, acorns and nuts. They glean bark and the ground for insects. Grackles may be fed beetles, crickets, grubs, earthworms, mealworms, small frogs, snakes, eggs, minnows, corn, cherries, grapes, native fruits seed, chopped fruits and vegetables while in wildlife rehabilitation. Provide grit and ground oyster shell, and the occasional mouse.

**Nestlings:** Altricial with pale, brown, down.



Photo by Jim Stasz

The eyes are brown; the skin is dark pink. The inside of the mouth is red; gape flanges are white and crooked. They fledged at 10-17 days. The young are fed by both parents and possible members of the extended family.

**Fledglings:** Grackle fledglings stay near the nest for several days after they fledge. They may become aggressive toward siblings or other small birds. They will make loud, harsh squawking sounds. The area around the eyes is the last area to fully feather. Do not house with other species.

**Juveniles:** Juvenile Grackles admitted to rehabilitation can present behavior problems. They may refuse to eat, spit out food, or hold food in the mouth and refuse to swallow. Stroke the neck lightly to encourage swallowing. If Grackles refuse to gape, stroke a hand slowly above the head towards the tail to mimic the shadow of the parent. Introduce natural foods as soon as possible to speed independence. Do

house with other species. Juveniles make loud, harsh, squawking sounds. They may habituate to caregivers.

**Rehabilitation Notes:** Activity aviary requirement:  
8' x 16' x 8'

**Common Problems:** Grackles often nest up to 50 feet in trees. If a baby falls from the nest, the extended family will try to protect the nestling and often dive-bomb predators. It is frequently impossible to return the nestling to the nest. They may present with injuries consistent with trauma. Rescue is often the best answer.



Grackles prey on smaller birds and are naturally aggressive. Do not house them with other birds.

Some Grackles are susceptible to liver problems. Consult your veterinarian if the juvenile begins to spit food, lose weight, or refuses to eat for no apparent reason.

If not provided with enough calcium and adequate sunlight, Grackles can be prone to metabolic bone disease.

**Similar Species:** Boat-tailed Grackle, Great-tailed Grackle



---

## Case Study: Were you right?

**Answer:** Frostbite

**Treatment:** Treatment depends on the severity of the frostbite. Light cases may be treated the same as burns. Serious cases can result in loss of the pouch, secondary infections, and other complications.

**Discussion points:**

Migrating birds may show unusual symptoms. Banding information revealed this bird came to North Carolina from the Eastern Shore of Maryland. The previous week there had been an unexpected, hard freeze in northern Virginia.

Non-native species from warmer climates are not adapted to colder weather.

## Calling all bird watchers!

Project FeederWatch, run by the Cornell Lab of Ornithology, is seeking data about the birds visiting your feeder. The program runs from November through March and costs \$15.

For more information, go to:

[www.birds.cornell.edu/](http://www.birds.cornell.edu/)

[pfwfeederwatch@cornell](mailto:pfwfeederwatch@cornell).