

WRNC



Sharing information and knowledge for the benefit of native wildlife.

A Quarterly Newsletter

Issue 38 December 2009

#\$%&@!!

Keeping your cool

Losing your patience with the public? Does a caller refuse to give up an animal in need of help? George Ewing and rehabber Lynn Mastin take a look at the issues.

Pages 13,16



Rabbit: Unraveling the mystery

Why does the Eastern Cottontail have such a delicate gastrointestinal tract? Randy Atkinson, Shaina Wirth and Chris Lewis explain.

Page 10



There's still time to apply

*We're offering \$300 grants to give these helpful birds a home. **Page 2***

SYMPOSIUM 2010

New location, a wide range of sessions

WRNC invites rehabilitators and associated wildlife professionals to attend its 8th symposium Jan. 30-31 in Raleigh. The symposium is being held at a new location this year, the College of Veterinary Medicine at N.C. State University. We are pleased we are able to use the facilities at the college for lectures and workshops. The college has many large rooms available for the lecture sessions, and we can use large, well-equipped labs for the workshops.

There is a wide variety of sessions being offered. Along with general sessions appropriate for all rehabilitators, there is a track of sessions for beginning rehabilitators. Another track of sessions has been approved for veterinary Continuing Education credits, and another course is being offered to vet techs. Those preparing for a federal permit can take our avian classes. The sessions are listed on Page 3 by track, but many sessions are appropriate for more than one track. *All sessions are open to everyone.*

The registration fee is \$75, if you register before Jan. 15 and \$85 afterward. The fee covers the banquet Saturday evening, lunch both days and participation in the lectures. The registration fee also includes two workshops selected when you register. An extra \$15 covers materials for the cage-building workshop. We have classified the workshops by level to help you make your selection. Seats in workshops are assigned on a first-come, first-serve basis. Register early to insure your place in workshops.

See SYMPOSIUM, PAGE 2

SYMPOSIUM

We are using the Office of Continuing Education at the college to process our registrations. When you begin registration, you will be linked to their website to enter your registration and payment information. You may pay by check or credit card. Workshop selection is part of the registration.

The Holiday Inn Brownstone is offering a discounted rate on rooms. Attendees are responsible for making their own reservations. Contact the hotel at (919) 828-0811, ext. 7624 or at www.brownstonehotel.com

Please see our symposium page on our website for more information on the sessions, workshops, speakers, events and registration: <http://www.ncwildliferehab.org/conference/conf2010/conf2010.html>.

Meet WRNC's new student liaison

WRNC would like to welcome its newest student liaison, Liz Gettinger. Liz is a first-year veterinary student at N.C. State. A native of Melbourne, Fla., Liz developed an interest in wildlife rehabilitation at an early age, growing up near the Florida Wildlife Hospital and Sanctuary (FWH). She began volunteering at the FWH while in high school and also did an internship at the hospital while obtaining her undergraduate degree at the University of Florida.



Gettinger

"My interest in wildlife rehabilitation is strong because of my previous experience and an intense desire to help wildlife," she says. "I think that it is important for all veterinarians to be informed about opportunities for wildlife rehabilitation and the care of wildlife in general."

At the same time that we are welcoming our new student liaison, we are also saying farewell to two previous liaisons, Jenessa Gjeltema and Austin Duncan. WRNC greatly appreciates the time and effort Jenessa and Austin dedicate to improving the field of wildlife rehabilitation. They have served WRNC by helping to organize the annual symposiums for the past two years, by contributing articles to the newsletter and by representing WRNC at local events. We are grateful for their service and wish them the best of luck in their future endeavors.

Toni Poston, student liaison

Esbilac Update

Allan and Shirley Casey are continuing to update their information about Esbilac® on their website www.ewildagain.org. Updates should be read in chronological order.

Gastrointestinal problems were reported in some squirrels over the summer after PetAg began using a single-step spray drying process for the powder. Some wildlife rehabilitators have reported successful results with the new product, while others have not. Suggestions and updates will be available after the first of the year.



INDEX

Rabbit Digestion: *Rehabbers know Eastern Cottontails have delicate digestive systems. But do you know why? 7*

Squirrel Feeding: *Modifying nipples to be more like mom's reduces the chance of aspiration in squirrels. 10*

Handling a Hotline: *When the hotline heats up, tempers can flare. Conflict resolution techniques can help you keep your cool. 13*

Getting Callers to Let Go: *Sometimes callers are reluctant to surrender wildlife to the care of a rehabber. A little gentle persuasion can do the trick. 16*

What's in a Name?: *Giving names to education animals builds a bond with the public and conveys information about the animal's background. 17*

Hard Landing: *Grebes often come in for a rough landing in rainy weather. 24*

Symposium 2010! *Join us in Raleigh for our 8th annual conference. Symposium related news is on Pages 1 through 5.*

Beginner Basics, 6

Book Review, 21

Board Contacts, 22

Case Studies, 12

Creature Feature, 25

Ethics Cases, 23

Pearl, 20

Spotlight, 19

SYMPOSIUM 2010

All sessions are open to everyone!

WORKSHOPS

- Mammal Physical Exam
- Sub-q Fluid Therapy
- Preparing Avian Biofacts
- Avian Techniques
- Avian Necropsy
- Avian and Reptile Hematology
- Wildlife Radiology
- Turtle Shell Repair
- Cage Building (\$15 to cover cage materials)

GENERAL SESSIONS

- Training and Operant Conditioning
- Using Non-releasable Wildlife in Education Programs
- RVS Rehab for You?
- When Rocky's Down For the Count - Squirrel Ailments
- Technology in Rehab
- Living with Chimney Swifts
- Mealworm Propagation
- Rehab Math

VETERINARY CE CREDIT

- Reptile Ophthalmology
- Salmonellosis in Wild Birds
- Avian Anatomy
- Ethical Considerations in Wild Avian Rehab
- Captive Management of Raptors
- White Nose Syndrome in Bats
- Pain Management and Anesthesia for Injured Wildlife

- Biosecurity / Zoonotic Disease Prevention in Rehab Centers
- Avian Techniques Lab
- Avian Necropsy Lab
- Wildlife Radiology Lab
- Turtle Shell Repair Lab
- Avian and Reptile Hematology Lab

VETERINARY TECHNICIAN CE**CREDIT**

All of the sessions that are approved for veterinary CE credit are approved for vet tech credit. The following sessions are also approved for vet tech CE credit:

- Rehab Math
- If You Can't See Them, Are They There?: Zoonoses, Husbandry & Sanitation
- Fluid Therapy and Emaciation Protocols
- Handling Animal Calls
- When Rocky's Down For the Count - Squirrel Ailments
- Mammal Physical Exam Workshop
- Sub-q Fluid Therapy

BEGINNER REHAB TRACK

We recommend that beginners and rehabilitators who have had little or no formal training take the following:

- Introduction to Mammal Care
- Squirrel Care
- Opossum Care
- Cottontail Care

- If You Can't See Them, Are They There?: Zoonoses, Husbandry & Sanitation
- Fluid Therapy and Emaciation Protocols
- Handling Animal Calls
- Mammal Physical Exam Workshop
- Sub-q Fluid Therapy

AVIAN CARE

The avian care class is intended for rehabilitators who are preparing to apply for their federal rehabilitation permit.

- Introduction, Goals, Permits
- Avian Anatomy & Physiology
- Identification & Natural History
- Intake & Examination
- Care & Housing of Baby Birds
- Care & Housing of Adult Birds
- Nutrition
- Groceries & Supplies
- Preparing for Release
- Telephone, Triage, & Transport
- Working with Your Veterinarian



Sensational cedar: Get your new WRNC T-shirt!

The new cedar/brick T-shirt is here and will be available for purchase during the WRNC Symposium Jan. 30 - 31 in Raleigh. The new T-shirts, in sizes small to 2X, will be on sale for \$12, as in the past. The remainder of our stylin' steel-green T-shirt inventory will be available at a discounted \$10. Both T-shirts are stunning additions to any rehabbers' "wildlife" wardrobe, and purchase supports the members and good works of Wildlife Rehabilitators of North Carolina.

See you at the Symposium. I'll be easy to spot because I'll be wearing my new sensational cedar WRNC T-shirt!

Linda Bergman-Althouse
WRNC Board Member, T-Shirt Coordinator
lbergman@ec.rr.com, 910-346-8345



Apply for Chimney Swift tower

Interested in constructing and maintaining a Chimney Swift tower to benefit the birds as well as your community? WRNC can help!

We're offering a Chimney Swift Tower Grant to any individual or environmentally active group that will seek appropriate site approval, properly construct and regularly maintain a Chimney Swift tower in their area.

Find the requirements and WRNC Chimney Swift Tower Grant application online at <http://www.ncwildliferehab.org>. New applications must be submitted prior to Jan. 5.



Linda Bergman-Althouse,
WRNC Board Member, Chimney Swift Tower Grant Coordinator
lbergman@ec.rr.com, 910-346-8345

No ruling on RVS proposal

The North Carolina Wildlife Resources Commission has yet to make a decision on WRNC's proposal to establish a special permit to allow rehabbers to care for rabies-vector species animals.

The director of the commission has sent a letter to the state health director seeking input about the public health aspects of establishing the RVS program. We are planning RVS training and will offer it for the first time at our symposium, if we receive approval by then.

— Jean Chamberlain

SYMPOSIUM BRIEFS

Scholarships available

Two scholarships to cover syposium fees and *lodging are available for WRNC members with financial need. To apply, send a letter explaining how you expect to benefit from the symposium and why financial assistance is needed. Send the letter to WRNC, PO Box 2844, Durham, N.C. 27715. Applications must be postmarked no later than Jan. 2, 2010. Please include "Symposium Scholarship" on the envelop.

For additional information, contact Jean Chamberlain at jchamberlain1@windstream.net. *Lodging will be provided only if awarded to an applicant who lives more than one hour from N.C. State in Raleigh.

WRNC seeks nominees

Do you know someone you think should be on our Board of Directors? Send your nominations to Toni O'Neil, chairwoman of the Nominating Committee at Oneil9734@yahoo.com.

The Nominating Committee is looking for "fresh faces" – hardworking individuals who will take an active role on committees and help with our annual symposium.

The terms of three board members – Toni O'Neil, Carla Johnson and Janenie Ledbetter – expire in December. All three will be seeking re-election.

The election is held Jan. 31 at the symposium dinner meeting. The Nominating Committee will

contact nominees to see if they qualify and are interested in running.

Check your closets: It's time for a raffle

Please look through your closets, and donate any items you no longer use that can be part of our raffle. Ask your friends and relatives to donate items as well.

Please let me know what you will be donating, so we know what to expect. Contact Toni O'Neil at Oneil9734@yahoo.com for more information.

Exhibitors wanted!

Wildlife groups, centers, shelters and facilities from across North Carolina, as well as WRNC members, are invited to set up exhibit tables at the 2010 Symposium displaying information about their work with wildlife.

Exhibitors may also sell wildlife-related merchandise and gifts. Groups last year reported raising money for their organizations through the displays.

More than 150 members attended the 2009 symposium. Attendees are always looking for rehab items, supplies, T-shirts, books and pictures to take back home.

To participate, complete both pages of the Exhibitors Contract at www.ncwildliferehab.org. Because of the overwhelming responses, we may have to limit each group to one table. Call Toni O'Neil at 910-326-6432 or send e-mail to Oneil9734@yahoo.com to reserve a table.

Carolina Raptor Center cuts staff, still accepting birds

HUNTERSVILLE, N.C. – Financial troubles at the Carolina Raptor Center forced the center to close for two weeks in November and cut staff, according to an article in the Charlotte Observer.

The raptor center closed the first week in November to "give our birds a rest and to update our exhibits, programs and even our organization," according to the center's Web site.

"We've had some cutbacks because of the economy," media and communications coordinator Danny Bumgarner told the paper. "Donations are down, support in general is down."

The center, however, is still accepting birds into rehabilitation. "That's our primary focus," Bumgarner said. For information on donating to the Carolina Raptor Center, call (704) 875-6521.

BEGINNER BASICS

Practicing principles of the physical exam

BY JEAN CHAMBERLAIN

When you receive an injured or orphaned animal, your first task should be to check for life-threatening conditions (see 'Initial Assessment' in the September issue). Once you have determined the animal is stable, you can continue with a physical exam. Have everything ready before starting the exam, including gloves, towels and light. The exam is stressful to the animal so you don't want to take longer than necessary. Cover the animal's eyes to help reduce the stress.

Remember: Safety first. Injured animals can be dangerous. You need to know how to restrain the species you are examining (see 'Using a Little Restraint' in the March 2008 issue). Wear adequate gloves, closed-toed shoes, long sleeves and goggles for species that strike with their beaks.

You may be able to see some injuries; others are felt, some are even heard. Begin at one end (most people prefer starting at the head) and continue in order to the other end. Consistently perform the exam in the same order. Don't stop when you find one problem. There may be others.

Beginners often find it difficult to recognize if something is abnormal. It usually helps to compare both sides of the body, which is known as the symmetry principle. If something feels wrong on one side, compare it to the same location on the other. With



Photo by Jean Chamberlain

Observing the animal is an important part of the physical exam.

practice you will learn what is normal in healthy animals.

Record the animal's weight and all of your findings, including suspected abnormalities, on an exam form. Filling out the form (check-off list) as you go will keep you from overlooking things during the exam.

The next Beginner Basics article will cover things to look for during the exam.

No evidence found in N.C. of Chronic Wasting Disease

RALEIGH – North Carolina has no confirmed cases of Chronic Wasting Disease in deer, despite a newspaper report in November.

A deer was tested for epizootic hemorrhagic disease, a more common infectious disease among white-tailed deer. The results have not been confirmed yet.

For more information on hemorrhagic disease, go to http://www.ncwildlife.org/Hunting/H_Hemorrhagic_Disease.htm Sick or dead deer should be reported to wildlife personnel by calling (919) 707-0050. The Commission tested about 1,400 deer for CWD this year, and no cases were found.

Rabbit GI: Uniquely unique

BY RANDY ATKINSON, SHAINA WIRTH AND CHRIS LEWIS

We all know how delicate a rabbit's gastrointestinal tract is. But why is it so delicate? And how does it work? In this installment, we will attempt to simplify a very complex system and use the knowledge to our advantage in rehabbing these wonderful cottontails

Many of our animals have special requirement diets. Carnivores, like fox and coyote as well as domestic cats and dogs, primarily eat meat. The cell composition in this food is much like their own body's cells. Omnivores, opossums and squirrels (and squirrels are omnivores) eat both meat and plant material. As we all know, if it looks like food, an opossum will try it. Then we have rabbits. Rabbits, hares and pikas are obligate herbivores. They eat only plant material. Since the energy in plant cells is so much different from a mammal's cells, there has to be a process to extract as much nutrition from the available food as possible. Wild rabbits eat primarily grass and tender vegetation as well as bark in the winter. To digest this material and extract the nutrition from these low-quality foods, rabbits have developed a very specialized digestive system known as hind-gut fermentation. Some of the more widely known hind-gut fermenters include horses, guinea pigs, chinchillas and elephants. Hind-gut fermentation just indicates that the primary digestive function happens after the food exits the stomach. Rabbits also have an added component to their digestion system known as *coprophagy*. It is similar to fore-gut fermenters like cows "chewing their cud" in which they regurgitate their food and reingest, but rabbits use a special type of fecal pellet.



Photo by Ali Iyob

Hind-gut fermentation requires a high number of beneficial bacteria and enzymes to break down food into something called Volatile Fatty Acids (VFA). The components of VFA are readily absorbed into the tissue of the GI tract. Nitrogen, produced by fermenting bacteria, forms amino acids and proteins that can be

absorbed by the animal. The population of bacteria in the GI tract requires an acidic environment in which to flourish. The normal pH of a healthy rabbit's GI tract is 1-2. The bacteria is also very sensitive to excessive proteins, sugars (like Karo Syrup), carbohydrates (rice) or certain antibiotics (those that primarily affect *gram positive* bacteria). In an adult that relies on hind gut fermentation, the diet should be low protein/high fiber. Many domestic rabbits are lost because of improper diets in which pellets are fed in excess. A cottontail's diet of primarily grass is perfectly matched for hind-gut fermentation.

Let's look at how food progresses from the mouth to being excreted as waste.

The digestion process starts with those specialized teeth. A rabbit has six incisors — four on the upper arcade and two on the lower arcade. In the upper arcade, there are two "peg" teeth directly behind the primary incisors. The primary incisors have an enameled face and a softer rear. This design, in conjunction with the two peg teeth, form a chisel effect used to tear vegetation. We all have met those rabbit incisors and know how sharp they are. The food,

SEE RABBITS, PAGE 8

RABBITS

forced rearward to a curved set of premolars and molars, is not crushed as many animals do. A rabbit chews from side to side. This motion, along with the curvature of the molars, will fold the strands of grass or leaves into something that looks like an accordion. The first exposure to digestive acids are in the mouth. When the food is swallowed, it passes through the esophagus into a region just before the stomach known as the *cardia*. This area also contains a very strong muscle, the sphincter, which prevents the regurgitation of food. The food then moves to the stomach. The stomach, and the GI tract in general, has very thin walls. This makes these tissues very prone to gastric ulcers. These ulcers, which can be life-threatening, often form due to improper use of NSAIDs (anti-inflammatory drugs) or because of changing pH in the GI tract. The stomach should never be empty. There is always some amount of food, hair and mucus even after extended periods of fasting. The food is mixed with more digestive acids and moves along to the first part of the small intestine. The small intestine is where the majority of the nutritional intake occurs. The digesting food then passes into the large intestine and heads for a very specialized organ known as the *cecum*. In simple terms, the cecum is a storage area for undigested food particles, bacteria and vitamins. It is in this organ that a specialized fecal pellet we call a *cecal* is formed. In the domestic world, they are sometimes called *night poops*. The material in the cecum is formed into small mucus-covered pellets that look like a strand of grapes. They appear to be very shiny and moist. They sometimes have quite an odor. These cecals are a vital part of the rabbit's digestive system. These pellets form 3 to 8

About the authors

Randy Atkinson has worked with rabbits for nearly 30 years. In 2000, he and his wife began rescuing "special needs," domestic rabbits, and their interest quickly evolved to include wildlife populations. Atkinson, a licensed rehabber who lives in Nash County, is also a member of the newly formed rescue group Rocky Mount Wildlife Rehabbers. He also operates Sabrina's House Rabbit ResQ. In the past year, he has enlisted support in the veterinary community to help with wildlife rehab. He recruited Shaina Wirth, a rehabber and veterinary assistant, as well as Chris Lewis, a physical therapy assistant, and other rehabbers and veterinary professionals. Wirth and Lewis are also members of Rocky Mount Wildlife Rehabbers.

Atkinson, Wirth and Lewis will be presenting a session on rabbits at WRNC's 8th annual symposium in Raleigh on Jan. 30-31.

hours after food is eaten, assuming a proper transit time through the GI tract. The rabbit can stimulate its anus, and the cecals will be excreted and reingested. They are swallowed whole to protect the mucus covering. This will protect the fragile bacteria on its trip back through the stomach and into the small intestine where the nutritional content of the cecal pellet is absorbed as nutrition. This process allows all the nutrition available to be extracted from the low-quality food available. In the domestic rabbit world, the rule of thumb for a "ready gut" is to feed low proteins (limited pellets and no treats) along with high fiber (free choice hay). Ideally the protein/fiber mix should be less than 15% proteins and more than 25% fiber.

Baby rabbits are born sterile. They depend on their mother to provide the initial population of beneficial bacteria. The challenge with

rehabbing baby cottontails is to protect and to expand the population of beneficial bacteria. How can we do that? In our rescue, we focus on forming a favorable climate in the GI for the growth of a stable population of beneficial bacteria. We offer high quality formula and supplements. The pH in the baby's gut is fairly neutral — about 6-7. But remember, we established that an adult rabbit needs an acidic climate in the GI tract. In a perfect world, mom would take care of that through her milk. We have to make other arrangements. We use a probiotic — a compound that contains live cultures of bacteria. We can't provide the exact strains of bacteria in the gut, so how does this work? A probiotic alters the pH, adding acid to the gut. We start adding a probiotic to the formula immediately upon admission to rehab. We continue the use of the probiotic until release. Powdered probiotics can be sprinkled on moist greens.

SEE RABBITS, PAGE 9

RABBITS

There are many that “harvest” cecal pellets from domestic rabbits to force feed cottontails to populate the GI with bacteria. Many freeze the pellets. We do not use this method for several reasons. There is no proof the bacteria in the pellets can withstand freezing. Next, the domestic rabbit needs those cecals to maintain its own GI. Our experience has been that if you have a domestic that is producing excess cecals, it is being fed too much protein, which will alter the bacterial population in the cecum. Most domestic rabbits carry parasites such as worms or coccidia. Many rehabbers perform “fecal floats” on their domestics, but these test are notoriously inaccurate. Domestic rabbits also carry a parasite known as *encephalitozoon cuniculi* (EC) that has not yet been found in the wild population. If this parasite were to invade the cottontail population, it would be devastating. While this parasite is normally transmitted trans-placental during birth or by contact with urine from an infected rabbit, the agent can survive on surfaces in the environment for quite some time.

What are some issues that can damage the bacteria we so desperately need? Cow's milk devastates this bacteria; rabbits can't digest lactose. Cow's milk will result in “blow out” diarrhea and severe dehydration. Processed sugar also damages this bacteria. Many “old school” formulas use these sugars such as Karo syrup or cane sugar. Many use yogurt. While we do use yogurt in opossums and sometimes in squirrels, remember that the dynamics in a rabbit's GI are quite different. Many yogurts contain both processed sugar and/or lactose. We suggest avoiding them. Many broad spectrum antibiotics, especially oral (by mouth) can be devastating to the beneficial bacteria in the GI tract. Sulfanomides (SMZ, TMZ, Sulfatrim, Bactrim, etc.) can severely damage the bacteria and has been linked to a severe GI disturbance known as Tyzzer's Disease. Baytril, a commonly used but increasingly ineffective drug, can cause GI issues. Penicillins and cephalosporins are safe only as injectables and are usually fatal if administered orally. Most of the beneficial bacteria in the GI is *gram positive* (more on gram



positive/negative in future articles) and the choice of antibiotics must not only include the pathogen but consideration must be given to the effects of the drug on the bacteria in the GI tract.

What happens when the beneficial bacteria is damaged? As mentioned, the most likely presentation is “blow out diarrhea.” Many times the pain will result in agonal presentations in which the rabbit may start to sway back and forth and eventually fall

on its side gasping for air. This is a result of enterotoxins in the body. Several events are occurring in the body when this happens. First, the beneficial bacteria dies off and begins to decay. This injects toxins in the body. Not only does the beneficial bacteria manage digestion, but good bacteria manages bad bacteria. The die-off of the beneficial bacteria allows opportunistic bacteria to take over. This condition is known by many names: Tyzzer's Disease, mucoid enteritis, bacterial enteritis, antibiotic enteritis, cecal dysbiosis and many others. The most common bacteria isolated in these events is *Clostridium Piliforme*. *E. Coli* is also sometimes found. *Clostridium* is a particularly nasty anaerobic bacteria. Our traditional response to this condition is an immediate reduction in the amount of formula (if they are still on hand feeding), hydration preferably by sub-q and using an antibiotic known as Metronidazole (Flagyl). Not only is Metronidazole effective against *Clostridium*, it also acts as an anti-inflammatory inside the GI tract. Another drug, Questran, has been used to bind the toxins. This drug is difficult to find and difficult to administer. We have recently begun using a horse product known as “BioSponge” that has proven invaluable in both rabbits and squirrels.

We also intend to use it with opossums. This product has been clinically proven to absorb nearly all the enterotoxins produced by *Clostridium*. It is available both in a powder or a paste. We mix the powder directly into the formula and sprinkle the powder on solid food once they are eating on their own. We have been tremendously impressed by this product.

Once you understand how a rabbit's gut works, it all falls into place.

Modifying a feeding nipple

Reducing the risk of aspiration in young squirrels

BY ALLAN AND SHIRLEY CASEY

WildAgain Wildlife Rehabilitation

Aspiration of formula by very small and young squirrels in rehabilitation seems to be a common problem. It is often a result of the rescuer or rehabilitator not carefully controlling the amount of fluid into the squirrel's mouth during feeding.

Generally, the risk of aspiration can be significantly reduced through the use of a 1cc syringe to feed squirrels weighing less than 100 grams and pushing the plunger very, very slowly. However, the size of the syringe tip opening may still allow too much fluid for them to swallow safely with each small push of the plunger.

Some rehabilitators also express concern that the hard syringe tip is not at all like the mother squirrel's nipple and seems to be painful on tender mouths, causing the squirrel to initially resist this method of feeding. Placing a plastic nipple on the end of the syringe can help control the flow of formula and effectively soften the feeding instrument that is placed into the young squirrel's mouth.



Currently, the choice of nipples used by rehabilitators varies widely.

Nipple Selection

The selection decision of the size and shape of the nipple to place on a syringe should be based on natural history of the species, safety and effectiveness. A lactating squirrel's nipple is about one-fourth to one-third inches long (see photo). After a young squirrel places its mouth around the mother's nipple, it pushes



Most synthetic nipples are much longer than the mother squirrel's nipple and can cause improper swallowing.

Photos by Allan Casey

or pumps on the mother's chest with its front paws, assuming a comfortable and safe position. Once in position, the infant only sucks and swallows a small amount of fluid at a time.

Currently, the choice of nipples used by rehabilitators varies widely. These include some with very small openings that are made of hard plastic, such as the Interlink™ cannula (Baxter™) or teat infusion cannula. Others with small openings are softer, such as the white nipple from the Mothering Silicone Nipples (Classic™ products), Elongated nipple (Zoologic®), Catac™ nipple, or the soft I.V. catheter. While being softer, experience shows that some of these nipples collapse or stick to themselves after only a few uses, are difficult to pull formula up into the syringe and are difficult to clean.

Most of the nipples mentioned above are much longer than the mother squirrel's nipple (some up to 4 - 5 times longer) and can cause improper swallowing if the young squirrels suck them too far into their mouths, risking aspiration. Some rehabilitators trim the

SEE FEEDING, PAGE 11

FEEDING

nipples to make them shorter and decrease these risks to the squirrel.

Another Approach

In 2001, Colorado rehabilitator Venice Kelly attempted to address these concerns by modifying the nipples. She liked white silicone nipples from Classic products for its suppleness, durability and easy cleaning, but thought it was too long. She cut it in half and put it on the syringe, easily drawing formula into the 1cc syringe without having to remove the nipple from it. The risk of aspiration seemed to be reduced because it was now easy to only have the tip of the nipple in the infant squirrel's mouth. However, the infant squirrels could not hold the syringe with their paws and seemed to be in a very uncomfortable position during feeding, pumping their front paws into the air.

She found that the Elongated nipple (Zoologic®) had a wider base onto which the squirrels could place their paws. But the nipple was long and, in her opinion, was more difficult to clean.

To gain the benefits of both of these nipples, Venice cut the Elongated nipple in half (about ½ inch) and placed the tip section of the silicone nipple on the 1cc syringe. She pushed that nipple tip through the opening in the base of the Elongated nipple (see photos).

Positive Results

The infant squirrels seemed to adjust quickly to this modified



To gain the benefits of both of these nipples, Venice cut the Elongated nipple in half (about ½ inch) and placed the tip section of the silicone nipple on the 1cc syringe.

nipple. It fit snugly over the 1cc O-ring (slip tip) or Monoject™ (luer lock) syringe and the amount of formula given could be controlled very easily and effectively.

Additionally, this modified nipple was soft and approximately the same length as a mother squirrel's nipple. When an infant squirrel took the nipple tip into its mouth, the base of the Elongated nipple stopped them from sucking the nipple in too far. The base was wider to hold or pump. Plus, it was easy to draw formula through the nipple into the syringe as well as to clean after feedings.

Rehabilitators using the modified nipple have consistently reported that the infant squirrels have adjusted to the nipple very quickly and seem less stressed. The pinkies also seemed to make fewer "fish-breathing motions" when eating. She found that using the modified nipple on a 1cc syringe for squirrels weighing less than 100 grams markedly reduced aspiration incidences.

After squirrels' front teeth are fully erupted, they are able to nurse from a 3cc syringe without a nipple. In fact, the use of a nipple on a syringe after their eyes are open and chewing solids is not recommended since they can bite off the nipple tip and choke or swallow it. Since the plunger diameter of the 3cc syringe is smaller than the diameter of larger syringes, the rehabilitator can better control the flow of formula and reduce aspiration risk.

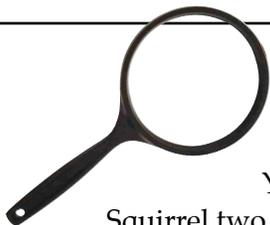
The white silicone nipple by Classic, Elongated nipples (Zoologic®) and O-ring syringes are available from Squirrels and More.com and Squirrelstore.com. The Monoject™ syringes are available from various veterinary suppliers. Note: Rehabilitators placing the shortened silicone nipple on larger syringes for feeding rabbits also have reported excellent results.

Many thanks to Venice Kelly for this design and sharing it with fellow rehabilitators!

Shirley Casey, co-founder of WildAgain Wildlife Rehabilitation in Colorado, has rehabilitated squirrels since 1986. She has presented and published on a wide range of rehabilitation topics and is co-author of [The Squirrel Rehabilitation Handbook](#). www.ewildagain.org

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Test your diagnostic skills



You receive a juvenile Flying Squirrel two days after a thunderstorm. Mom was not able to be located. The physical exam is unremarkable; though the mouth is somewhat “tacky,” and there are some folds in the skin that stand up. “Just the extra skin of a Flying Squirrel,” you say to yourself.

You mix up the appropriate milk replacer and feed the “cute little thing” the required amount at the appropriate intervals.

It does not seem to improve the following day; it is lethargic, the urine is dark brown, and it has begun to develop diarrhea.



Photo by Wanda Angel

Questions for the Case:

1. What was missed during the initial exam?
2. What needs to be done?
3. What is the probable outcome if the routine is changed?

Answer on Page 24

TRAINING

National Wildlife Rehabilitator’s Association Symposium, March 9-13 in Seattle, Wash. For more information, go to: <http://www.nwrawildlife.org/page.asp?ID=264>

Wildlife Rehab Inc. of Winston-Salem offers an 11-week wildlife rehabilitation class starting in February at Forsyth Technical College. The cost of the class is \$50. For more information, go to: <http://www.wildliferehabinc.org/classes.html>

Carolina Raptor Center, Husbandry and Training Workshops, 8:30 a.m. – 4:30 p.m., Saturday, Dec. 5. The workshop is targeted toward beginner and intermediate-level educators, trainers and caregivers. A workshop for intermediate and advanced professionals is 8:30 a.m. – 4:30 p.m. Sunday, Dec. 6. For more information, go to: http://www.carolinaraptorcenter.org/pdf/2009_All-Seminar.pdf

Basics of Wildlife Rehabilitation and Advanced Wildlife Rehabilitation, 6-9 p.m. Mondays and Wednesdays Jan. 11- June 9 at Coastal Carolina Community College in Jacksonville, N.C. Basic and advanced classes will be offered in the same six-month course. Prepare for entry level and intern positions in nature centers, wildlife centers and animal sanctuaries, and meet the requirement for specific training needed to apply for the North Carolina wildlife rehabilitation permit. 910-938-6294 or www.coastal.cc.nc.us



HANDLING A HOTLINE, *and keeping your cool*

BY GEORGE EWING

Your initial contacts for a wildlife rehabilitation case referral will most likely come from a formal phone chain of rehabilitators and veterinarians in your area, someone in your own neighborhood, from the friend of a friend who knows you are “into” wildlife rehab or from some other well-intentioned Good Samaritan who stumbles across an injured animal and your phone number. Suffice to say, you will be working with the public throughout your career as a “rehabber.” The initial contact with a rehabilitator is quite frequently an emotionally charged one for the public, due to their excitement, panic, concern for and lack of experience dealing with wild and/or injured animals. When emotions are running high and nervousness and fear pervade, there is always an opportunity for miscommunication, or even worse, bad communication. Even if you are an experienced “rehabber,” this emotion can spill over into your interaction with the referring party and can be the root of a misunderstanding and a potentially serious conflict.

Many times, the person referring the case to you has attempted to rehabilitate the animal in their own

way and have “cared” for the animal for several days or weeks before you are contacted. Most likely, this “care” has been given with great love and attention, but has been potentially detrimental to the injured

animal and may not have been the best care plan for long-term rehabilitation success. The referring caretaker may have made some major mistakes in handling, feeding or housing the animal, which may have been damaging to the overall health of the sick or injured wildlife, or even worse, the overall outcome of the case. In addition, the member of the public releasing the animal into your custody may share with you specific

directions, plans and demands for what you as the “rehabber” should do next. No one likes to be told how to do their job, especially when it is blatantly the wrong advice. This can increase the tensions and emotions of the interaction, leading to further opportunities for conflict.

If this scenario hasn’t already happened to you as a rehabilitator, it will. What would you do if faced with a similar situation? How would you resolve the

**How can
you deal with
emotionally charged
situations?**



SEE CONFLICT, PAGE 14

CONFLICT

conflict? How would you best show respect for the concerns, feelings and opinions of the public, but make certain that going forward you are contacted in a more timely manner for your expertise and assistance and before more damage is done? Most importantly, how do you ensure your interactions with the public are positive ones that lead to education about what the interim caregiver did for the animal (both right and wrong) and lead to future referrals from them and people they know?

Remember, this is your best opportunity to share with your community about wildlife rehabilitation, and how wildlife rehabilitation care intervention and referral is supposed to work in your area.

Here is a brief model from the book *People Skills* to show you how to deal with emotionally charged situations that can be laden with miscommunication and can lead to conflict:

1. Deal with the Emotions First

“When feelings run high, rational problem solving needs to be preceded by a structural exchange of the emotional aspects of the controversy” (Bolton, 1986). Stop, take time to breathe and focus on the immediate need, which is the person releasing the wildlife into your care. You cannot do anything until you take possession of the animal and complete an assessment. Help make the animal comfortable and be patient with the member of the public. This might be a traumatic experience for them, so take your time.

2. Treat the Other Person with Respect



The member of the public referring the case to you will most likely start to debrief you about the entire case from the discovery of the animal to the present time. The referring party may share with you that they did everything wrong that they possibly could do with the injured or sick animal. Although this may upset you or stir emotions within you, BE

RESPECTFUL. Don't shake your head in a disapproving manner, make statements under your breath, or negate the "help" this person tried to give. You have time for education later. Showing any disrespect now will destroy your opportunity for future referrals from this individual and will ruin this person's perception of wildlife rehabilitation in their community.

3. Listen Until you "Experience the Other Side"

Let the members of the public excitedly or haphazardly explain EVERYTHING they have done, including the story of how they found the injured animal, what they did for the animal, what they have noticed. Do not interrupt. You will gain a lot of information that you can put to use in your rehabilitation care plan later and this unfettered chance to communicate will allow the individual to settle down. Reflectively listen to what they have had to say and "then reflect those thoughts and feelings back to them in a succinct statement" (Bolton, 1986). Then be silent and let the other person think about what

SEE CONFLICT, PAGE 15

CONFLICT

you have just said, give them the chance to indicate that what you said was right, and allow them the opportunity to correct any inaccuracies there may have been in your listening or their speaking.

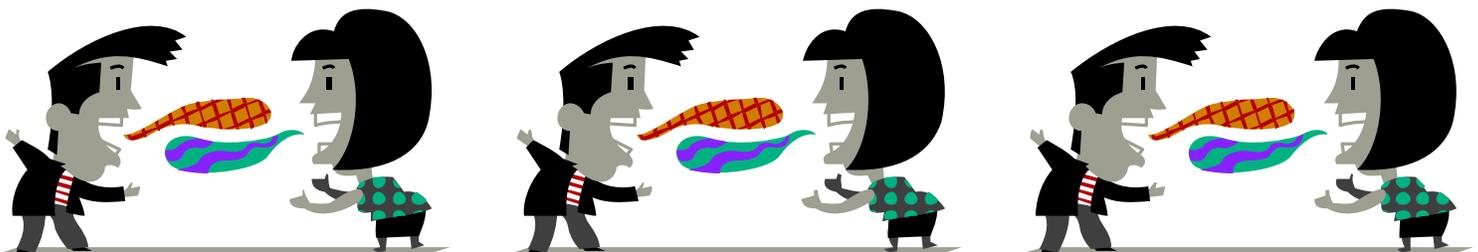
4. State your Views, Needs and Feelings

After you have made certain to treat the person with respect, have listened to what they have had to say and conveyed that you understand their point of view, it is your turn to communicate. State your point briefly, avoid loaded words, say what you mean and mean what you say, disclose your feelings, and share your views and present needs. Here is where you have the opportunity to make the most difference. Acknowledge everything they did right, mention what they did wrong, give them examples of what they could do different in the future, and take time to educate them on what you will do next. Let them know what you need from them now and in the future, offer to provide additional advice and education opportunities about wildlife rehabilitation and rescue after you have tended to this case (either through your affiliated organizations or personally), and then move onto getting the animal to a safe and appropriate facility for assessment and care.

Positive and productive interaction with the public is necessary for any wildlife rehabilitation specialist. Each referral can be either an arduous task, fraught with conflict, misunderstanding and confusion or an amazing chance to educate the public, to share your passion for wildlife rescue and rehabilitation and do what you do best...heal and care for wildlife. The choice is yours. How you choose to deal with the public will determine your success with every new case. Any time an animal is sick or hurt, emotions run high. You are the expert and have the ability to diffuse most situations simply by being a respectful and patient listener and by sharing your expertise. The public can be your greatest advocate if you utilize a plan of contact that includes dealing with emotions, being respectful, listening reflectively, and sharing your needs, views and feelings in every interaction.

George Ewing is a PhD. candidate in Conflict Analysis in Resolution at Nova Southeastern University in Fort Lauderdale, Fla. He is the president of Win-Win Resolutions, Inc., the premier conflict resolution nonprofit organization in the Southeast and conducts conflict resolution and organizational development workshops throughout North Carolina.

Reference: Bolton, R. (1986). *People Skills: How to Assert Yourself, Listen to Others, and Resolve Conflicts*. Simon & Shuster: New York.



When a caller won't let go

BY LYNN MASTIN

Wildlife Rehab Inc., Winston-Salem

Have you ever run into a caller who insists they can raise that cute little baby themselves? It's happened to all of us. Here are few things that may help you get that animal the care it needs.

Experience

Let the caller know that special training is required to know how to properly care for wildlife. Each animal will require different care, and without it, they will most likely die. Encourage them to sign up for training about how to become a wildlife rehabilitator.

Nutrition

Help them understand that each animal has a specific diet, depending on its stage of development, and that each stage requires different care. If any key nutrient is missing, the animal may not develop properly.

Disease

Rehabbers know about zoonoses, but the public has no idea what dangers wildlife pose to humans. No one wants to believe that cute little baby could have a disease that could make them sick or even kill them. Educate them about the diseases and parasites and the risk to children and pets.

Injury to wildlife

They are not trained on what to look for to discover if the animal is injured. Just because it's not bleeding does not mean there is no injury.

An injury to wildlife needs to be addressed by an experienced rehabber or vet as soon as possible to determine what course of action to take. Waiting can mean certain death for an animal when early intervention could have saved it. The stress from being handled alone is enough to kill some animals.

Injury to Humans

No matter how cute, cuddly or "tame" they may seem, they are still wild animals. They have natural instincts and when those kick in, look out! Without the proper handling and equipment they can seriously hurt or even kill a human (depending on the animal of course).

Habitat

Each animal has specific needs for housing during each developmental stage of its life. You must know what is necessary and what could pose a danger to the animal. You can stress the animal to the point of death, if it is not properly housed.

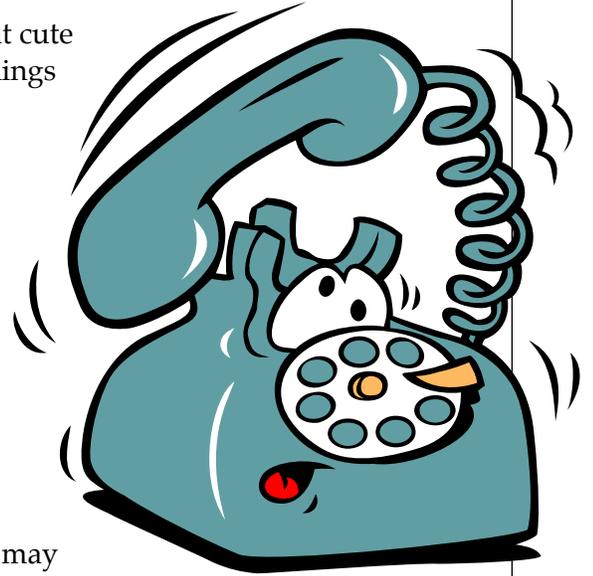




Photo by Jean Chamberlain

Athena, a Great Horned Owl used in education programs by Wildlife Rehab Inc., in Winston-Salem, was formerly known as Hannah.

What's in a name?

BY CAROL KACZMAREK

To name or not to name, that's the question.

When I became a volunteer at the N.C. Zoo 20 years ago, the naming of zoo animals was controversial. Critics feared naming wild animals was anthromorphic, endowing them with human characteristics. A zoo that named its animals ran the risk they would be perceived as pets. But in private, zookeepers often used names to help train the animals.

Today a growing number of zoos and wildlife centers name their education animals to forge a connection between visitors and wildlife. Names are chosen in a number of ways, ranging from asking volunteers to submit ideas to holding public naming contests to raise money.

The Greater Los Angeles Zoo offers individuals and groups the opportunity to name an animal for prices ranging from \$1,000 to \$50,000. Many zoos sponsor contests, which also aids public relations. At the San Diego Zoo, a contest was held to name the latest baby panda. (The winner? Yun Zi, which means "Son of Cloud.")

At the Valerie H. Schindler Wildlife Rehabilitation Center at the N.C. Zoo, it seemed easier to name nonreleasable education animals rather than referring to them by species, number or initial. Today we try to use names that incorporate the animal's background. Our Flying Squirrel is named Dewa, which means Flying Squirrel in a Native American language.

Some of our education animals have been given names that refer to the reason they are unreleasable. A Blue Jay with one eye is named Jack, as in one-eyed Jack. Squint, a Flying Squirrel, was born with only one normal eye.

SEE NAMES, PAGE 18

NAMES

Misty, our first nonreleasable education opossum, had sinus issues and often sprayed a fine mist from her nose. A yellow rat snake is called Butterscotch because of his beautiful, rich color.

Some names are more fanciful. A large Red-tailed Hawk was named Zena, after the warrior queen in the cartoons, a reference to her hunting ability. In a nod to J.K. Rowling's "Harry Potter," an imprinted Screech Owl is named Pigwidgeon. The center's Great Horned Owls — Merlin and Morgana — take their names from the Camelot myths.

"I think that it is a good idea to name birds in some way, but to stay away from human names or cutesy pet names," says Carol Orr, raptor coordinator of Wildlife Rehab Inc. in Winston Salem. The group initially had no naming criteria for its education raptors and so ended up with Goober the Turkey Vulture and Ralph the Barred Owl. When Orr became coordinator she established a naming criteria. The Great Horned Owl, formerly known as Hannah, has been rechristened Athena, after the Greek goddess who had an affinity with owls. The name commands more respect for the owl than the more passive-sounding Hannah, Orr says.

"I like to choose a name that relates back to the animal species, habitat, markings, coloring etc.," says Orr. "In other words, something that can lead to a lesson or learning opportunity for the public."

A gray-phase Eastern Screech Owl that recently joined the education program is named Otus, a reference to its species name Otus Asio, which means long ears or horned.

The Carolina Raptor Center in Charlotte also names its birds.

"We have over 100 permanent residents, so naming them makes it easier for us to talk about them and differentiate between the different individuals," says Nicki Dardinger, director of husbandry and training at the center. "But also, we believe that it helps us spread our message if we can help people to feel a connection between them and the animals."

The names often help visitors understand the birds' stories, whether they were hit by a car or shot or caught on a barbed wire fence.

"When we talk about the birds during the programs, we always talk about their stories and introduce them last because it's generally not the most important thing that we say," Dardinger says.

Toni O'Neil at Possumwood Acres held a contest at a county fair this fall, charging \$1 for people to vote on a name for the center's new nonreleasable opossum. Sadie was the name they settled on. O'Neil liked its informal, country sound, keeping in mind the abundance of opossums in rural areas. "She's a sweet little thing, so she fits being a Sadie," O'Neil says.

THE NAME GAME

Education animals at N.C. Zoo's Valerie Schindler Wildlife Rehabilitation Center



Ouch: a Gray Squirrel who's named served as a warning to caregivers. Though imprinted on a human, Ouch would often nip at anyone who came near her food.



Murphy: The center's first groundhog was named by the Zoo Society to make Groundhog Day a public relations event. Every Feb. 2, Murphy, named for the town in southwestern North Carolina, traveled to Manteo at the far northeastern end of the state.

Sunshine and Stormy: Our two new groundhogs were given names appropriate to their ability to predict the weather.

Kernel: A corn snake

If you have names for education animals you'd like to share, send e-mail to: Carol Kaczmarek at carolkaczmarek@yahoo.com

In the spotlight

Name: Carolyn Powell

Organization: Animal Rehabilitators of the Carolinas (ARC)

How did you get started in

rehabbing? Even as a child my father brought home turtles, lost baby ducklings, baby birds, several little rabbits, and together we “saved their lives” and put them back into the wild. I know this love of rehab was founded by the age of 8, even though my dad and I did not call it that. It was after raising a baby squirrel named Scooter in the late 1970s that I heard about ARC. I had found a baby bird and took the little fledgling to Ms. Lessie Davis, who lived quite a distance from me. That is when I became aware of ARC and that you could take classes to become a rehabilitator.

How long have you been rehabbing? I began rehabbing full time eight years ago, after retiring from my job as a registered nurse.

What animals do you work with? I rehab squirrels, rabbits, opossums and mice. You would be surprised at the number of people who find mice in their garage or attics at Christmas when getting out the decorations. I get them all year because mice are born all year. I feed them on the same little syringe setup we use for flying squirrels.

What type of setup do you have? I have a room off my kitchen set up for wildlife, including a large animal intensive care unit my children gave me for Christmas several years ago. I am so lucky to have this because I frequently have critically ill neonates to care for.



Carolyn Powell and Pogo, an education opossum.

Family: I have two children and three grandchildren. My daughter and her family live in Connecticut. My son lives in Charlotte.

Any pets? I have a yellow-nape parrot and a bearded collie now 11 years old, plus three domestic rats I raised from the day they were born. Their mother died after having 14 wee ones. They were divided between the vet techs and myself after the owner brought all of them to the vet. They are very smart and very sweet and make wonderful pets for children. They do not bite, are clean and love to be handled.

If you're employed, what type of "day job" do you have? I'm retired from a career as a registered nurse, which included service in the Air Force.

Tell us about an accomplishment of which you're proud: I am very proud to be associated with ARC, WRNC, and IWRC as well, and have been to several workshops. I have completed three courses online through IWRC and have been so impressed at how

SEE SPOTLIGHT, PAGE 20

SPOTLIGHT

great they were. It was just like being in the classroom. The material and the presentation was absolutely outstanding.

If you could have dinner with one person alive or no longer living, who would it be? My mom and dad. My dad died in 1960 when I was stationed in Germany as an Air Force nurse; my mom died six years ago. I wish my dad could see just how far I have advanced with rehabilitation. He would be so proud. My mom so enjoyed watching me feed these little critters, and she would go with me at any hour during the night when often I would need to take one to the emergency vet. We are so fortunate in Charlotte to have several emergency vets open all night.

What do you like about being a part of WRNC? I am so pleased to be a member of WRNC. I do appreciate all the work the group does in providing these great workshops every year. It is a real learning experience to meet so many people there with the same interest as myself. Then there is the added bonus of the very informative quarterly newsletter.

Pearls of Wisdom

Have an escape artist such as a flying squirrel or a chipping sparrow? This container designed by Dr. Kirby Harriss-Rigsby lets you handle the animal while preventing escapes.

1. Take a cat litter bucket with a tight-fitting lid.
2. Cut a square hole in the lid and the side of the container. On the side of the container, near the square hole, cut a round opening.
3. Drill small holes around the open areas to attach cable ties.
4. Using cable ties, fasten a grate or coated wire over the square openings.
5. "Sew" a sock to the hole on the side using cable ties.
6. Looking into the bucket from the top, you are able to see the animal while putting your hand in the sock and reaching through the hole to secure the animal. Once you have a secure grip, you can open the top and remove the animal.

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



Book Corner

An obsession takes wing

The Big Year: A Tale of Man, Nature, and Fowl Obsession

By Mark Obmascik

Free Press

248 pages

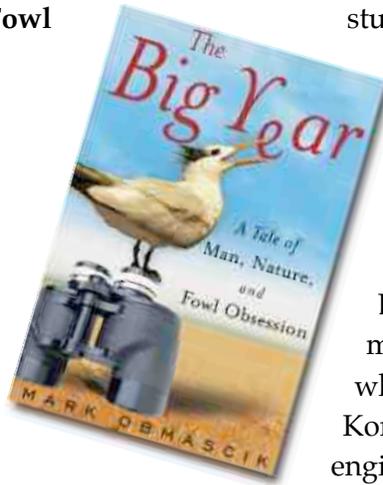
BY BRENDA HILES

The clock starts ticking at 12 a.m. on Jan. 1, and by dawn, when New Year's Eve revelers are just beginning to stumble to bed, the first birds of the year have already been spotted. But competitive birders don't stop there. For the next 365 days, a few birders with the money and motivation will crisscross North America in an attempt to wrack up the most birds in what is known as a Big Year.

Mark Obmascik follows three birders on a Big Year in 1998, capturing all the obsession and mania that drives a competition few outside the birding world can understand.

At the heart of Obmascik's book are Al Levantin, a workaholic who retired from a chemical company after 40 years; Sandy Komito, a contractor and salesman; and Greg Miller, a software writer who in 1998 is trying to eradicate the Y2K bug before the year 2000. On the surface, Obmascik couldn't have found a more disparate trio. Al Levantin is a charmer, who made a successful business career out of collaborating with others. Sandy Komito possesses a brash, in-your-face attitude. Greg Miller, the only one of the three holding down a full-time job during his Big Year, comes across as a bit hapless, recklessly running up credit card bills in pursuit of a dream. What they all have in common is an obsession.

A Big Year is a numbers game: the number of birds seen, the number of miles traveled, the number of dollars spent. It is about making every minute count, deciding whether to chase the exotic bird or spend money traveling to see a sure thing. It is about



studying flight schedules, running through airports, and jealously guarding news of a rare bird blown off course to make an unscheduled appearance in North America.

The mild-mannered sport of bird watching is not without danger. Al Levantin comes face to face with a mountain lion in Big Bend National Park while searching for a Colima Warbler. Sandy Komito becomes stranded on a boat with engine trouble as darkness closes in. In Florida, Greg Miller finds himself stuck in a canoe in alligator infested waters as he tries to find a Flamingo.

The most telling anecdote in "The Big Year" involves a Ruby-Throated Hummingbird's migration across the Gulf of Mexico. Her journey begins in the Yucatan jungle. In the weeks leading up to migration, the bird had doubled her weight. By time she began her 500-mile trip across water, she weighed as much as two pennies.

Five hours into her flight, she was travelling at 30 mph. By morning she had covered 300 miles. Her heart beat a thousand times a minute. She had lost 25% of her weight.

Then a gale-force storm hit. She was within 20 miles of land. The wind blew her backward and drove her down toward the waves. If she hit water, she would die.

Finally, she comes to rest on a twig of a shrub in High Island, Texas, where birders are waiting to see what the storm has blown in. Sandy Komito spots her. Ruby-Throated Hummingbirds are common along the East Coast in summer. She wasn't one of the rare birds Komito needed for his list. He walked over to the shrub, looked at her and made his assessment: No big deal.

Ultimately, a Big Year is more about the birder than it is the birds.

Board members

Bergman, Linda, lbergman@ec.rr.com
 Chamberlain, Jean, (vice president)
jchamberlain1@windstream.net
 Degernes, Laurel, laurel_degernes@ncsu.edu
 Gordon, Jennifer waterfowlrescue@aol.com
 Hanrahan, Elizabeth eh11@earthlink.net
 Hiles, Brenda (secretary) bhiles919@earthlink.net
 Johnson, Carla (treasurer) Wildlifefeed2@aol.com
 Knapp-Tyner, Beth (president)
WildatHeartRehab@aol.com
 Ledbetter, Janenie Ledbetter767@aol.com
 O'Neil, Toni oneil9734@yahoo.com
 Powers, Lauren,
miloplume@gmail.com
 Rogers, Ann,
mom2wildlife@gmail.com
 Weiss, Mary, eweiss8625@charter.net
Student liaisons:
 Poston, Toni, toni.poston@yahoo.com
 Gettinger, Liz, ejgettinger@hotmail.com



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.

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ABOUT YOUR NEWSLETTER

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. 15.

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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.

Case Studies

Deciding right from wrong

Case 12

A wildlife rehabilitator is giving an "Introduction to Wildlife Rehab" program for a local civic group. During the presentation she openly criticizes another wildlife rehabilitator who uses "outdated methods." In the same presentation she states that she rarely uses any of the local veterinarians because "they don't know squat about wildlife or wildlife rehabilitation."

The Wildlife Rehabilitators Code of Ethics is available in the IWRC's Minimum Standards, which can be found at: <http://www.iwrc-online.org/documents/MSWR.pdf> on Page 7.

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

Answers to previous ethics cases

Case 11

The wildlife rehabilitator needs another, larger cage. Over the years she has given presentations to civic groups and worked with several Scouts on merit badges. She knows of a Scout who is looking for an activity for his Eagle Scout project. She meets with the boy and his Scout Master and enlists him and other Scouts to build a large cage.

The Scout develops a great set of plans. The wildlife rehabilitator works to get all the building materials donated. It should take about a month, on weekends, to build the cage.

On a bright, fall Saturday, the Scouts and Scout Master arrive at the center to start building. The wildlife rehabilitator shows them where the cage is to be built and leaves them alone.

Boys will be boys. They play their radio and "horse around" making a lot of noise. They come in and out of the center asking questions, eating and trying to pet the animals.

"Only 3 more weekends to go!" says the rehabilitator that evening.

Which code(s) might apply?

Code 9: A wildlife rehabilitator should encourage community support and involvement through volunteer training and public education. The common goal should be to promote a responsible concern for living beings and the welfare of the environment.

The gift of WRNC

Membership in WRNC makes a thoughtful gift for the rehabber in your life.

Members have a link to wildlife rehabilitators across the state. They can access past newsletters as well as up-to-date news on our web site.

The annual membership fee is \$15.

For an application, go to:
<http://ncwildliferehab.org/>

A ROUGH LANDING



Photo by Jennifer Gordon

This grebe was found after it crash-landed in the rain near Charlotte. Grebes and Loons, which migrate through North Carolina in the fall, often see wet roadways or mirages after rain, and believing it's a body of water, they try to land. Because their legs come straight out the back of the body, they don't walk on land. They need to run on water to take flight, so a Grebe on land is literally beached. This Grebe was uninjured, and was set free at a pond.

Diagnostic skills: Were you right?

1. The Squirrel was dehydrated as indicated by the tacky mouth and the folds of the skin.
2. Neonates and juveniles should all be warmed and rehydrated immediately. Rehydration of a dehydrated juvenile is critical to its survival.
3. Use skin turgor, mouth color and condition of the saliva to determine the degree of dehydration. You must be able to accurately determine the degree of dehydration and to calculate how much fluid replacement is needed. The rehabber must be able to determine the degree of dehydration, amount of fluids needed, and the route of administration. Too little does little good, too much can be deadly.
4. If the Squirrel is warmed and appropriately rehydrated before being offered any formula, the outcome is usually good.



Photo by Wanda Angel

Creature Feature

Yellow-bellied Sapsucker, *Sphyrapicus varius*

Adult

Description: Yellow-bellied sapsuckers are mid-sized (8.5 inches), black and white woodpeckers common in mixed deciduous/conifer forests, often near water. They winter in most parts of North Carolina and the Southeast states west to Texas. They are identified by a red fore crown on black-and-white head. The chin and throat are red in males, white in females. Their back is blackish with a white rump and large white wing patches. Their under parts are yellowish. The woodpecker's feet and tail work together to propel it up tree trunks with a jerky gait. They are monogamous and tend to form long-term pair bonds. The

Yellow-bellied Sapsucker is highly migratory and often interbreeds with two other species of sapsucker.

Weight Range: 40 to 62 grams

Range: Common throughout North Carolina in winter. Winters from Virginia along the east coast, west to Texas. It does not breed in North Carolina.

Natural History: Found in mixed deciduous/coniferous forests, often near water.

Adult Diet: *Exudativore*. It feeds on sap taken from 246 species of native trees. It also eats cambium, fruit, berries and insects. In wildlife rehabilitation, it may be fed mealworms, waxworms, spiders, caterpillars and



Photo by USF&WS

suet cakes. Rehabbers also should provide wood and sap from tree logs including maple, hickory, cedar, holly, magnolia, pine and oak. Provide native wild berries of the season.

Nestlings: They are born altricial and naked. The male incubates and broods at night. The young feed by regurgitation by both parents as well as sap, fruit, and insects. They do not breed in the southern United States.

Fledglings: The young are not likely to be seen in the Southeast.

Juveniles: Juveniles and adults begin to arrive in North Carolina from mid-September through October. May often be identified by the irregular

cadence of drumming. Their call is nasal *neeah* or emphatic *QUEEah*. Wandering, first-year birds are most often seen in wildlife rehabilitation.

Rehabilitation Notes: Activity Aviary requirement: 4' x 8' x 8'. Provide upright logs for perching. Furnish the aviary with freshly cut logs for enrichment and to exude sap for foraging.

Common Problems: Glean decayed trees that can fall during winter storms. Frequently admitted as a result of window or auto strikes or during unusually cold winters in the area resulting in a lack of forage.

Online

For more information about birds, go to the Cornell University Lab of Ornithology: <http://www.birds.cornell.edu/>

A wide variety of information about wildlife and exotic animals is available online. Share your favorite websites with us.