Wildlife Rehabilitators of North Carolina

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FALL 2017

Message from the President *by Cathy Burns*

Wow, can you believe that summer is almost over and fall is just around the corner? I know some of us were hit harder by baby season than others and many faced new challenges This is when networking with others becomes very import. Having other rehabbers to turn to with your questions and concerns is a must. If you don't have a network or want to improve your network, then come join us at our symposium Jan. 19-21 at the North Carolina State University College of Veterinary Medicine in Raleigh, NC. You will meet new people, learn a lot and have some fun.

Speaking of our symposium, we are in the middle of planning. We are lining up speakers, such as Emilie Nelson - she will be doing a roundtable discussion on squirrel pox. Melissa Coe will be speaking on groundhogs and Mary Ellen will be speaking about pelicans and water birds. These are just a few of the instructors we have lined up. We still need help with some things, if you are interested please email me at patcatb@aol.com.

Sometime during the month of September the Wildlife Commission will be holding three public hearings on the proposed rehabilitation regulation changes across the state. This will be your chance to comment. If you can not make it to one of these meetings, you will be able to comment online. When you make your comments either in person or online, please be respectful. We need to get our points across in the most professional way possible. When we find out the dates, times and places we will share the information through our face book page.

If you have any questions or concerns please do not hesitate to get in touch with me. I can be reached by phone at 910-324-9967 or email at patcatb@aol.com. I am also the facebook administrator, if you prefer to message me that way.

Take care of yourself !
Cathy Burns
WRNC President

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Nomination Time !

by Cathy Burns

The Nomination Committee is looking for a few great members to run for our Board. We have some requirements.

- Be a WRNC member in good standing .
- No criminal convictions or history of wildlife violations (excluding traffic offenses).
- Must complete and submit WRNC BOD Nominee Questionnaire and Bios with picture by posted deadline date.
- You must be willing to serve a 3 year term.
- You must serve on at least 3 committees, including the symposium committee. You must attend and work at the symposium during your term.
- You must be a resident of North Carolina.

If a Board Member is absent for two consecutive regular meetings, his or her position shall be deemed vacated, unless the absence is excused by the President and a resolution setting forth the reasons is entered in the minutes.

You must be willing to help promote our objectives.

The objectives of this organization are:

1. To establish a framework for cooperation and the exchange of information among wildlife rehabilitators and others interested in the rehabilitation of native wildlife in North Carolina;

2. To support and cooperate with state and federal agencies for the benefit of wildlife and wildlife rehabilitators;

3. To support education and research intended to promote improvement of rehabilitation methods;

4. To promote the rehabilitation of native wildlife in North Carolina with the release of wildlife to its natural habitat as the ultimate goal, through education, research, financial and technical assistance.

5. To promote professionalism among wildlife rehabilitators through education and to improve the methods and standards of care used in wildlife rehabilitation in North Carolina.

For more information or to receive a WRNC BOD Nominee Questionnaire, please email Kelley at Kodell1011@gmail.com by Sept 25th.

Lou Mitchell inducted into Raleigh Hall of Fame

by Tricia Hoover

Our very own Lou Mitchell (WRNC board member) is being inducted into the Raleigh Hall of Fame this month. This is such an honor and I have waited until September 1st to share it with all of you.

Raleigh Hall of Fame http://www.raleighhalloffame.org/inductees/2017-2

Those who are lucky to see Lou in action---just stand back and observe. She speaks, thinks and takes on the same level as those she helps. There is not a shy bone in her body…she isn't embarrassed to help a drug addict, a drunk, or even an injured opossum or turtle on the road. Her motto is to help ALL….right or wrong, with or without, furred or unfurred, shelled or unshelled, clothed or naked.

Being that it may be man or beast needing help, Lou gives her all to help those who can't help themselves. She seems to cruise on auto pilot waiting to jump into action. You don't ever have to ask Lou for help…. she can see the need before you see it.

Lou, thank you for making our community a better place for all of us.

Congratulations Lou!!!!!!!!!!!!!!!!!!

Here's Lou (in blue) helping out at the registration desk at the Icebreaker during the 2017 symposium

Photograph by John Althouse

Streptococcus didelphis Septicemia in the Virginia Opossum *by Kim Ashby, RN, BSN*

The International Journal of Systematic and Evolutionary Microbiology published an article in 2000 by Rurangirwa, Teitzel, Cui, French, McDonough and Besser titled Streptococcus didelphis sp. nov., a streptococcus with marked catalase activity isolated from opossums (Didelphis virginiana) with suppurative dermatitis and liver fibrosis. This article "describes the isolation, genetic and biochemical characterization of novel, catalase-positive streptococci from opossums displaying [septicemia] and cutaneous necrotic lesions." Essentially, a previously unknown species of Streptococcus bacteria was isolated in these opossums and subsequently named Streptococcus didelphis.

Streptococci have a variety of strains frequently found on the skin and mucous membranes of mammals. Streptococci are often parasitic; some may be virulent pathogens, while others live with the host without causing harm. Between 1994-1998, The Washington Animal Diseases Diagnostic Laboratory studied nine dead opossums (eight from a research colony and one from a wildlife rehabilitation group.) Subsequent to these necropsies, additional wild opossums were also studied. All the animals necropsied exhibited lesions on both liver and skin. Additionally, due to random bacterial invasion of other organs, other problems included pneumonia, nephritis, meningitis, spleen abscesses, necrotizing enteritis, and myocarditis. Not all animals developed all of these disease states.

Hallmark symptoms of Streptococcus didelphis Septicemia include lesions on the skin and lesions on the liver. The skin functions as the body's main source of defense against invasion by outside organisms. Any break in this barrier, no matter how small, has the potential for allowing bacteria to invade the host's body. Once it reaches the blood stream, transport to other systems is possible. The liver is a vital body organ that preforms many es-

Abdominal bruising, pale membranes

Photograph by Linda Ostrand

Swelling in extremities, skin lesions, pale membranes

Photograph by Kim Ashby

Streptococcus (continued)

sential life functions. Proteins are a main component of muscle, tendons, connective tissue, skin, blood vessels, blood, cell walls and much more. Protein metabolism occurs within the liver, which uses the amino acids metabolized to produce essential proteins the body requires such as albumin. Carbohydrate and fat metabolism also occurs within the liver, which stores the energy and then releases it as needed. Glucose, the most important source of immediate energy, is converted into Glycogen, which is then stored by the liver until needed. Without the liver's ability to metabolize and store fat, an animal will starve. Except for Vitamin C, all vitamins are either made, stored or regulated by the liver. By producing clotting factors and metabolizing Vitamin K, the liver plays a crucial role in the body's blood clotting ability. Additionally, the liver stores, uses and regulates release of minerals such as iron, copper and zinc. Through the production of bile, which aids in the breakdown of food in the small intestine, the liver participates in the digestive process. It is estimated that the liver holds fifteen percent of the body's blood volume and is able to shunt this whole blood to other parts of the body during times of blood loss. The liver plays a role in the body's immune system as well. Finally, the liver acts as a detoxification center for waste materials by breaking down and excreting many compounds from the blood stream such as urea, old hemoglobin, cholesterol, steroids, hormones, bacteria, medications, environmental chemicals, and much more. It is apparent that the Streptococcus didelphis pathogen has deadly potential once introduced into the animal's body and begins attacking the liver and skin.

Limb swelling, RLE fracture, scrotum edema, skin lesion with sloughing, abdominal bruising

Photograph by Kim Ashby

From April-August 2017, members of Wildlife Welfare, Inc received for rehabilitation as many as fifteen possums (possibly more not identified early) weighing between 30-400 grams that developed an infection with various symptoms that quickly led to the death of nine of the animals. Animals presented with a variety of symptoms including edema/swelling of the extremities, skin lesions, skin sloughing, necrotic toes, bruising, muscle wasting, pathological fractures, labored breathing, fluid filled testicles, weight loss, general malaise, loss of appetite, malnutrition, dehydration, and diarrhea. Four of the fifteen babies were submitted to NCVDLS Rollins Lab for necropsies.

Necropsy report diagnoses include:

Opossum #1: Streptococcus didelphis septicemia
Osteopenia and pathological fracture likely due to Metabolic Bone Disease (nutritional secondary hyperparathyroidism)

Opossum #2: Streptococcus didelphis septicemia
Osteopenia and pathological fracture likely due to Metabolic Bone Disease (nutritional secondary hyperparathyroidism)

Streptococcus (continued)

Opossum #3: Streptococcus didelphis septicemia

Opossum #4: Preliminary necropsy shows liver lesions/failure, skin/subcutaneous edema and lung/pleural effusion (fluid). Bacteriology report pending.

Treatment:
Initially, SMZ-TMP, Amoxicillin and Clavamox were given to four babies. Three died and the fourth is recovering after switching to Keflex. Keflex was given to eight possums suffering with similar symptoms, four died and four recovered. Convenia injection was given to one of the opossums, which is recovering. Three babies, which died, were either not given antibiotics or treatment is unknown.

Impressions:
It appears that Streptococcus didelphis is a bacterium that lives on the Virginia Opossum's skin and mucous membranes, though prevalence is not known. The bacteria appear to become virulently pathogenic when they pass through the host's natural barriers and invade internal organs, specifically the liver. All of the symptoms observed in the fifteen sick opossums were related to skin and liver failure in addition to infections arising in other body organs that were colonized (for example lungs leading to pneumonia or pleural effusion.) Poor nutrition appears to allow the animal to succumb to the infection more readily than well-nourished animals. Several of the opossums initially presented with early signs and symptoms of Dermal Sepsis Necrosis (specifically, red toes which rapidly progressed to black necrotic tissue, skin lesions, malnourishment, dehydration). Several babies appeared to have developed Nutritional Secondary Hyperparathyroidism (Metabolic Bone Disease), but it is not clear if the MBD developed first or developed in response to Streptococcus didelphis Septicemia. Most were nutritionally compromised in varying degrees.

Skin lesion with sloughing and bruising

Photograph by KT Childress

Conclusions:
Diagnosis is best assumed based on careful observation of symptoms by the rehabilitator or vet. Obtaining lab blood work by a vet is not helpful in seeking treatment for Streptococcus didelphis Septicemia. Blood cultures need several blood samples drawn, and cultures can potentially take several days to grow specific bacteria. Once symptoms of Streptococcus didelphis Septicemia begin, death can occur in a little as a few hours to several days. Treatment needs to be initiated as soon as potential symptoms are observed by the rehabilitator. Additionally, symptoms of Dermal Sepsis Necrosis (Crispy Ear) should be consider a result of possible Streptococcus didelphis Septicemia and treated accordingly.
In addition to careful, frequent assessments by the rehabilitator, supportive measurements that may help the animal recover include diet and supplements. All opossum

Streptococcus (continued)

rehabbers should be well-versed in an appropriate and varied omnivore diet that has an acceptable Calcium:Phosphorus ratio including a variety of proteins with the natural associated calcium (no "pure" proteins.) Optimal protein sources include whole ground chicken or duck, whole mice, smelt, eggs with shells. The whole ground animal appears to supply vitamins, minerals, proteins, carbohydrates and fats in correct proportions that appear to be missing when protein/calcium (example chicken wing with bone) are offered alone. Additionally, a variety of vegetables must be offered daily. Daily fruit should be given in small amounts as a "treat". Supplements to consider include Rescue Remedy, which may help to decrease stress levels, Echinacea, which supports the immune system and Nutritional Yeast (Brewer's Yeast NOT baking yeast), which will offer a boost of plant-based proteins to support the liver in healing.

All opossums that present with any break in the skin barrier must be treated immediately with an appropriate antibiotic. Assess all animals for signs and symptoms of Dermal Sepsis Necrosis or any physical symptoms that could be related to liver lesions and treat aggressively with either Keflex or Convenia. It appears that Dermal Sepsis Necrosis is probably caused by the Streptococcus didelphis bacteria and the rehabber should consider treating aggressively for this bacteria.

Fifteen babies is a small percentage of the number of opossums taken in this year by Wildlife Welfare rehabilitators. However, this is a much larger number of opossums presenting with symptoms or diagnoses of Streptococcus didelphis Septicemia than has been seen in previous years. It is unclear as to why the Streptococcus didelphis bacteria appeared to cause an increase in infection and mortality this year. Were there environmental changes that factored into the increased incidence? Could there be natural factors affecting the increase in number or virulence of the Streptococcus didelphis bacteria? Is this simply nature's way of culling an over population of opossums in a particular region? More questions have been raised than have been answered; however, I hope that this essay will increase awareness of Streptococcus didelphis Septicemia in the hope that other opossum rehabilitators will be able to observe and treat possible infections and increase the number of opossums that survive.

Resources of Interest:
Streptococcus didelphis sp. nov Report: http://ijs.microbiologyresearch.org/content/journal/ijsem/10.1099/00207713-50-2-759
Hare Today Gone Tomorrow https://hare-today.com/product/raw_pet_food/ground_chickenbonesorgans_1_lb_fine_ground

Kim Ashby, RN earned her BS degree in Nursing. She has held a NC Small Mammal Wildlife License since 2007. She is a former Assistant Director of Wildlife Welfare, Inc and continues to work with WWI training and mentoring new members. She also enjoys teaching various workshops on wildlife rehabilitation. She frequently presents at the annual WRNC symposium.

If you have similar cases or questions for Kim, feel free to contact her at kimwashby@gmail.com or 919-656-3878

Why are you not talking?

by Mathias Engelmann

You're a wildlife rehabilitator with two or more years of experience. You are probably a volunteer, trying to work as many shifts as you can between home life and your "real" (paying) job or jobs. Or maybe you are really lucky and you get paid to work with wildlife.

You really like the work, otherwise why would you still be doing it? You love the animals and you tolerate the people. You are learning something new every day, with every patient. Hopefully you have been to the WRNC symposium because it is a great way to gather information and meet fellow rehabilitators. So why are you not presenting at the symposium? I bet you have seen some interesting cases, or maybe you've come up with a different and successful treatment technique. Maybe you have a couple of cases that have baffled you and everyone you have asked so far. You could share those stories and ask for advice.

Maybe you have a legitimate excuse - you're terrified of speaking in front of crowds. Join the club! I know I get really nervous every time I have to stand in front of people and speak somewhat intelligently.

Michelle Gregory at WRNC symposium

Photograph by John Althouse

The key to pulling it off is preparation. You need to know your material well enough so you don't have to constantly look at your notes. Practice short speeches, maybe in front of small groups of people, like the folks that just dropped off an injured animal at your facility. You're probably already talking to them about "their" animal, its natural history, what kind of treatments it will be receiving, and what they can do at home to help wildlife. You have your standard answer ready to go and you don't need to refer to a "cheat sheet." Basically you're already giving this kind of a talk.

How about a tag team approach? Do you have a co-worker or another volunteer that could assist? It's a lot less intimidating, you only have to practice half the cases and you can take turns presenting information.

Hopefully you are keeping good records and don't forget about good photographs. All of this will come in very handy right about now. Whatever you talk about, you have to be able to back it up with facts, not something you got off the internet! !

So gather the notes if they are your cases or collaborate with someone else if you're working under their permits.

Rehabilitators need to be willing to share what they learn, otherwise we are all constantly reinventing the wheel – what a waste! Guess who suffers (besides you) when you try to do everything yourself - your patients and those patients getting care by other rehabilitators. I encourage you to share successes and failures so we can all continue to learn. It's about the wildlife, not our egos.

As a rehabilitator, sooner or later you will probably be giving talks to the public. It is a necessary and incredibly important part of wildlife rehabilitation. Through environmental education you can a have a huge impact on the species you're rehabilitating. In addition, public presentation can help raise funds and recruit volunteers, as well as inspire the next generation to pursue their dreams.

So don't be shy, start planning and start talking! We want to hear from you.

Important dates if you're a WRNC member

Deadline to submit a $500 Chimney Swift Tower Grant Application: January 5th, 2018

Deadline to submit a $500 Cage Grant Application: January 5th, 2018

Next WRNC Symposium: Saturday & Sunday, Jan 20th & 21st, 2018 with an Icebreaker on Friday, Jan 19th

WRNC Newsletter Schedule

Do you have a wildlife-related idea you'd like to share with the WRNC membership? You should think about submitting it to the editors for consideration. How about a relevant article you found somewhere? Send us a link so we can ask for permission to reprint it.

Email articles, ideas, comments and questions to: Mengelmann@carolinaraptorcenter.org

The WRNC newsletter is published four times a year. The deadlines for submissions are:

March 1st June 1st September 1st December 1st.

How Long Do Birds Live?

by Mathias Engelmann

Have you ever asked yourself that question? Here's one way to get an answer—check the Bird Banding Laboratory's website at https://www.pwrc.usgs.gov/BBL/longevity/Longevity_main.cfm

You'll find a list of almost all bird species native to the US and then some. In case you are curious, the oldest band return currently listed on this site is a Laysan Albatross, banded in 1956 as an adult and recovered in 2017. That makes this bird over 60 years old!

Banding birds is one way we can study aspects of bird life such as survival, longevity and dispersal. In the US, under the auspices of the Bird Banding Laboratory (BBL) in Maryland, scientists have been banding wild birds for many years. Every once in a while a bird bander will get a notice about a band recovery or band return. Typically (but not always) the only way to get a follow-up report about a particular bird is if it has been found injured or dead. So we tend to joke that "No news is good news".

Photograph by Mathias Engelmann

Rehabilitators can learn more about their patients in the same way, by having their birds banded before release. The Bird Banding Lab currently does not issue banding permits to independent avian rehabilitators. For most rehabbers that means finding a licensed bander who is willing to work with them.

Those few "Bad News" band returns can provide valuable information about a particular bird and whether we as rehabilitators did a good job preparing this patient for life in the wild.

Wildlife Commission Debunks Hellbender Bounty Rumor

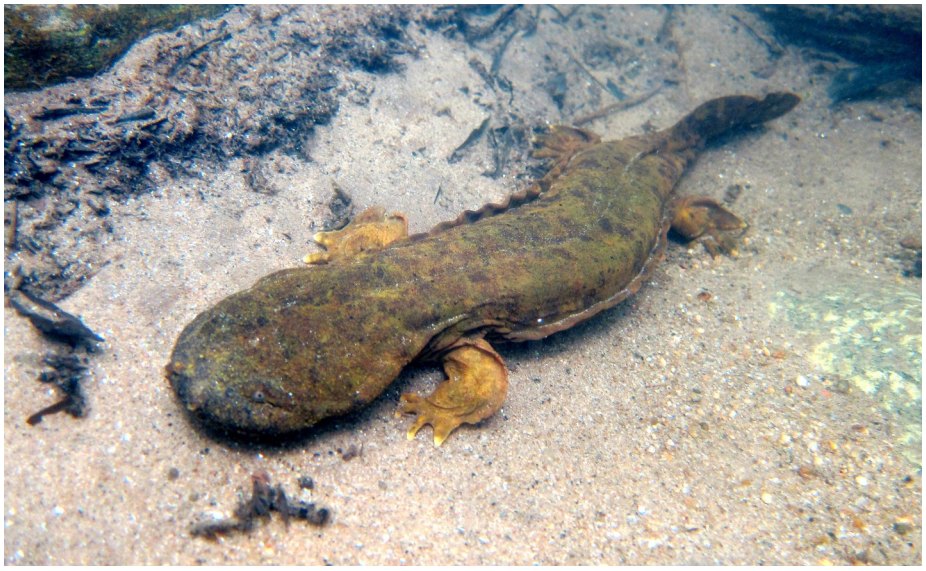
reprinted with permission from NC Wildlife Resources Commission blog

A $200 bounty on hellbenders? Say it's not so.

"That is a rumor and absolutely untrue," said Lori Williams, a Wildlife Diversity biologist with the N.C. Wildlife Resources Commission. "Furthermore, the Eastern hellbender is listed as a species of special concern in North Carolina. Harming, harassing, collecting or killing one is a Class 1 misdemeanor, which can result in a fine and up to 120 days in jail."

Hellbenders are one of the largest salamanders found in North Carolina, averaging 16-17 inches long but can grow up to 24 inches long.

Also called the "water dog," "snot otter," "Alleghany alligator," among other names, the hellbender is a harmless, giant aquatic salamander found in fast-moving, clean mountain streams in western North Carolina. It was once common but has disappeared throughout a lot of its habitat, due mainly to declining water quality, habitat degradation, and persecution — hence, the reason it's protected as a species of special concern in the state.



Photograph by Lori A. Williams

Essentially, hellbenders breathe through their skin, which is why they are sensitive to poor water quality. They are considered a "bio-indicator," or a species that can tell us about degrading environmental conditions when conditions first start changing. They are active during the daytime, particularly in the spring, and can be found under large, flat rocks. If no rocks are around, they will seek refuge in submerged trees or holes in the streambank.

In addition to busting the hellbender bounty myth, Williams dispelled other common myths about hellbenders.

Myth No. 1: Hellbenders are poisonous, venomous, toxic or harmful.

Wrong on all levels. Although hellbenders are large, slimy and can be scary looking, particularly if you've never seen one before, they are nothing to fear, Williams said. They are harmless and not poisonous, venomous or toxic. And while they may try to bite if picked up, they will leave you alone, if you leave them alone.

Myth No. 2: Hellbenders negatively impact trout populations.

Not true. Hellbenders eat mainly crayfish, although they may occasionally go after a trout on a line or stringer, looking for an easy meal. They may also scarf unsuspecting minnows and scavenge for dead fish, discarded bait or other dead animals. However, fish can be bigger predators of young or larval hellbenders than hellbenders are on fish.

Myth No. 3: Catching a hellbender will bring you bad luck.

On the contrary, these harmless, giant salamanders are very good luck because their presence in a body of water indicates good water quality for people, fish and wildlife alike.

Hellbenders *(continued)*

"It is very important that citizens speak up and help dispel the negative myths, misconceptions, rumors, and outright untruths that abound with this species," Williams said. "People speaking out to correct misinformation about hellbenders can help us conserve this unique species, which is an iconic part of our Appalachian heritage and natural history. Negative myths about hellbenders serve no good purpose, particularly when the species already is in significant decline, or already gone completely, from a large part of its range."

Want to help the hellbender? Here's how.

Williams, along with other Commission biologists and agency partners, began a long-term inventory and monitoring project for hellbenders in 2007. They want to know where hellbenders are located and how populations are doing. If you find a hellbender, email Williams (lori.williams@ncwildlife.org) with the location (physical location or GPS coordinates), and picture, if you have one. Or you can call the Wildlife Commission's new Wildlife Helpline at (919) 707-4011 or toll free (866) 318-2401 and provide details of the observation.

People enjoying streams and rivers can also help hellbenders by not moving or disturbing river rocks, especially the large ones that hellbenders use as shelters and nesting habitat. When people move rocks to build dams, chutes for tubing, or even to stack rocks as "rock art," these actions can cause harm directly to large or small hellbenders that can get crushed underneath or by impacting the local population's ability to nest successfully.

Finally, if you see someone trying to harm, kill, harass or collect a hellbender, report that person immediately by calling the Wildlife Commission at 1-800-662-7137.

Read the Eastern Hellbender in North Carolina fact sheet to learn more about these fascinating amphibians!

It is available at http://www.ncwildlife.org/Portals/0/Conserving/documents/FactSheets/Eastern_Hellbender_fact_sheet_lores.pdf

WRNC Symposium Scholarships available

The WRNC board will award up to three scholarships to deserving members in good standing to allow them to attend the annual symposium in January. Each scholarship covers the registration fee and hotel registration if the recipient lives further than 1 hour's drive away.

Individuals who have received the award in the past may apply again, but if there are more than three applicants, preference will be given to individuals who have not previously been awarded the scholarship.

Details on how to apply will be available on the WRNC website starting in October. The deadline for submitting the application will be December 15.

"Blockheads; Loggerhead Shrikes!"

by Linda Bergman-Althouse as written for "Carolina Salt Magazine"

The Good Samaritan had no idea what type of bird it was, but knew it was a baby, on its own and on the ground with cats in the area that would soon be checking it out or worse. With no parents or nest in sight, it was time to scoop up the little one and get it to safety. After leaving a few messages at wildlife centers with no return calls (it's baby season, so everyone is very, very busy!), the rescuer decided to jump in her car and drive over two hours from her home in Dunn, NC to the Outer Banks Wildlife Shelter in Newport. During the infant bird's admission, discussion threw out possible identities such as an odd Blue Jay or Northern Mockingbird because the colors were similar, but after research, his true identity was revealed; Loggerhead Shrike and the first of its kind to be admitted at our shelter. Loggerhead Shrikes (LHS) are native to North America and have been introduced to some island groups such as the Bahamas or Caicos. Initially we placed the LHS youngster with four young Mockingbirds since they were all the same size, however we learned that a Loggerhead Shrike is indeed a songbird, but with raptor habits. So, we knew that the togetherness they now shared could not last forever. After a few weeks of growing, he was moved to his own playpen for the Mockingbirds' safety.

Photograph by John Althouse

A Shrike eats many insects to include grasshoppers and beetles which is similar to the Mockingbird's diet, but they also eat lizards, snakes, frogs, turtles, mice, shrews, small mammals, roadkill, carrion and other birds. They will also not shy away from poisonous food items such as monarch butterflies or narrow-mouthed toads, but will wait about three days before eating them to allow for the poisons to break down. Shrikes prefer to hunt on cold mornings when insect prey are immobilized by the chilly temperatures. Therefore, working smarter not harder! A Loggerhead Shrike is smaller and more slender than an adult Robin, but larger and longer-tailed than a Western Bluebird. The head of a LHS is unusually large in relation to its body which is where the name Loggerhead, a synonym for "blockhead," came from. They have gray feathers on the upperpart of their bodies and paler gray underneath. They wear a black feathered mask and their throat is white. Their 11 – 12" wingspan, flying low and swift, exposes black feathers with white patches. Sometimes, while hunting on the ground, they will flash those white patches to startle prey out of hiding. The tail is long and black with a white edge. To look at a Loggerhead Shrike, you would not think they are the heavy hunters they are, but it's their bill that is very 'raptoresque!' It's thick, strong, hooked like a hawk's and features two pointy tomial teeth. Shrikes use their hooked bills to break the necks of vertebrate prey and can carry an animal as large as itself with its feet or beak. This masked predator hunts from utility poles, fence posts and other perches in much the same way raptors do. They do lack talons that hawks use for holding a meal in place while they eat, therefore Shrikes utilize a very unusual method for presenting their

"Blockheads; Loggerhead Shrikes!" *(continued)*

kill for eating. Shrikes will skewer their prey on thorns or barbed wire or wedge them into tree limbs for safe keeping, easy eating or caching for later consumption. So, if you see a large insect or a mouse impaled on barbed wire or possibly a thorn, that was no accident. You have a Loggerhead Shrike, sometimes referred to as a "Butcherbird," in the area! They enjoy open country, including grasslands and shrub-steppe areas, where there are scattered trees, tall shrubs, fence posts, utility wires or other lookout posts. They tend to nest in northeast or southeast facing ravines in open country such as agricultural fields, pastures, prairies, golf course and cemeteries. Both sexes help find a nest site, inspect many locations before choosing and together they gather nesting materials such as twigs, bark strips, grasses, feathers, moss, fur, lichen and even flowers. The nest is about six inches round and the depression is approximately three inches deep.

Photograph by John Althouse

Loggerhead Shrikes often build their nests in thorny vegetation, which may help keep predators away. In the absence of trees or shrubs, they sometimes nest in brush piles or tumbleweeds. The average height of nests above the ground ranges from 2.5 to 4 feet. A clutch of five to six grayish buff eggs with yellowish brown markings are laid and incubated for 15 – 17 days. After hatching, the young will be fed by both parents for nearly three weeks before leaving the nest. Once fledged, the parents will continue to tend to their young Shrikes for three to four weeks by feeding them and teaching them adult hunting behaviors. The youngsters will practice hunting by picking up various objects and repeatedly press them against branches as if they are trying to make them stick.

The Loggerhead Shrike is recognized as a "common species in decline" due to habitat loss, harsh winters, collisions and human disturbance. It needs a large range for hunting and to accommodate their social grouping. A flock of Loggerhead Shrikes is known as an "abattoir" or a "watch" of Shrikes. There are groups across the U.S. who have implemented LHS breeding and release programs to increase their population. The longest living Loggerhead Shrike on record was a male from California who enjoyed 11 years and 9 months on the planet. Our little "Wild One" at the shelter is doing very well on his own in the nursery, demands his daily flight time and consumes his share of hearty food while awaiting his release day!!

UPDATE: Since the writing of this article for "Carolina Salt Magazine," our Loggerhead Shrike has been released close to the shelter (Outer Banks Wildlife Shelter in Newport, NC). We see him quite often and hear him even more often because he manages to squeeze into one of the Owl enclosures where he sits and chats up a storm with the pre-release Owls. We're sure he's asking politely for their leftovers!!!

Letter to WRNC from St Louis

Hopefully this reply will get to your group-I loved the newsletter-first one I have received. I hope it is ok that I shared it with my vet. We are a smaller facility than your article contributors and have a vet office that we take our guys to for x-rays, casting etc. While we do not do birds, I am thinking there is a way to adapt the Velcro™ wing wrap for our mammals that would be easier on them & us! And of course, I loved the opossum article-very informative and spot on! I love the term "Yard Angels"! The St. Louis crew is looking forward again to this year's symposium!

Beth Winkler

I have been volunteering with the Wildlife Rehabilitation Center in High Ridge, MO for 6 years and have held a MO Wildlife Rehabilitator Permit for 3 years. Our Center is a small facility so we are staffed by one part time paid position and the rest are volunteers. We run strictly on donations from the community as we receive no state or federal funding. My specialty is the Virginia Opossum however our center rehabilitates most native mammals. My "possum training" came from Connie Light (known as Possum Ma) who also introduced me to the WRNC symposium.

While my passion is rehabbing and animals, my job that "pays the bills" is as a teacher. I am fortunate that I can carry my passion and experiences with animal rescue groups & wildlife to my classroom where I teach classes on Pet Care & Civic Responsibility which includes, why wildlife doesn't make good pets, as well as classes on wolves, sharks, birds and conservation of beaches and the rain forest.

Beth Winkler

WRNC Grants available

WRNC members can apply for a $500 **cage grant** to help with new cage construction or the renovation of an existing cage. Up to three grants are awarded every year and more than 20 grants have been awarded since inception. You will need references from three other rehabilitators and/or veterinarians who are familiar with your work. Visit the WRNC website for details and an application form.

The $500 **Chimney Swift Tower grant** is available to any individuals and communities that would like to help these aerial acrobats. You do not have to be a member to apply. Chimney swifts are losing valuable nesting sites when old buildings are torn down or chimneys are capped. Requirements and the application form can be found on WRNC's website.

ZAHP Update: Hurricane Season, Carfentanil, Zoo Ready, and National Preparedness Month *by Ashley Zielinski, reprinted with permission*

Created to bridge the gap in communication between the managed wildlife community and the emergency management sector, the Zoo and Aquarium All Hazards Preparedness, Response and Recovery (ZAHP) Fusion Center is a USDA-funded initiative that works to disseminate critical information on prevention, protection, mitigation, response, and recovery to the managed wildlife community while developing new partnerships with federal agencies, local and state emergency responders, and private sector groups concerned with animal welfare and emergency management.

Greetings,

The below update includes an update on the current Atlantic hurricane season, a debrief from the recent Zoo Ready meeting for Veterinary Services district 4, information regarding the role of Carfentanil in the US opioid crisis, and an announcement regarding National Preparedness Month. If you have any questions about the material provided or suggestions for future content please contact me at azielinski@aza.org.

Updated: Hurricane Season Outlook

As we enter the peak months (August – October) of the Atlantic's hurricane season, the National Oceanic and Atmospheric Administration (NOAA) has updated their outlook (http://www.cpc.ncep.noaa.gov/products/outlooks/hurricane.shtml) to predict a 60% chance of an above normal hurricane season, up from the 45% chance predicted in May. This updated outlook predicts a 70% chance of each of the following: 14 – 19 named storms (including 6 named storms so far this season), 5 – 9 hurricanes, 2- 5 major hurricanes, Accumulated Cyclone Energy (ACE) of 100%-170% of the median (including the ACE of the 6 named storms so far this season). With this update there is a 30% chance that the Atlantic will have a normal hurricane season, and only a 10% chance of a below normal season. There is no official outlook on landfalls of these storms as that will be dependent on daily weather patterns.

Up to date news, predictions and advisories regarding tropical storms can be seen on the National Hurricane Center site, http://www.nhc.noaa.gov/. Safety tips and resources to assist you in preparing for a hurricane can be found here: http://www.nws.noaa.gov/om/hurricane/index.shtml .

Zoo Ready: District 4 Meeting Debrief

In June the ZAHP Fusion Center traveled to Austin, TX to conduct the Zoo Ready meeting for Veterinary Services District 4, focusing on enhancing foreign animal disease response communication channels, with an additional one-day workshop on Contingency Planning for the Exotic Animal Industry. Beyond being a learning experience, these well attended meetings gave participants from over 30 exotic wildlife facilities the valuable opportunity to connect with their state regulatory officials, federal agency and program representatives, and leadership from various wildlife associations. This 3-day meeting was highly successful, with a more diverse audience of exhibitors than ever before and participant feedback consistently citing the value of having regulatory and industry partners in the same room to discuss the potential impacts of disease and disaster. Thank you to the Texas Disposal System's Exotic Wildlife Ranch for generously hosting this meeting!

Carfentanil Information

The United States opioid crisis continues, with 6 states and 4 tribal nations declaring public health emergencies to date. The usage of fentanyl has been covered frequently in the news because coming into contact with even trace amounts can cause a potentially fatal overdose. This issue caused the United States Drug Enforcement Agency (DEA) to issue a warning to first responders on the dangers of fentanyl exposure. Those of you in the exotic animal industry are likely familiar with Carfentanil, a 100 times more powerful analog of fentanyl used by veterinarians to anesthetize large mammals such as elephants and rhinos. Carfentanil has been discovered in opioids sold

ZAHP Update *(continued)*

on the street for recreational use and has been implicated in human exposures and deaths. Veterinarians that have worked with this drug understand the risk, undergo training with regards to handling the drug and are careful to take the necessary precautions to prevent accidental exposure.

According to Wildlife Pharmaceuticals USA, the supplier for many of the anesthetic agents used by zoo and wildlife veterinarians, there is currently NO legal supply of Carfentanil for the United States. In discussion with the Food and Drug Administration, Wildlife Pharmaceuticals voluntarily agreed to withdraw its FDA approval of Carfentanil 19 July 2017 due to this potential for misuse.

Carfentanil overdoses have not come from diverted supply of this agent from zoos. The drug is likely coming into the US through Canada or Mexico from clandestine labs in China and elsewhere. Even though China has banned the export of Carfentanil, smuggling is occurring.

Veterinarians that have worked with this drug understand the risk, undergo training with regards to handling the drug and are careful to take the necessary precautions to prevent accidental exposure. Unfortunately, as it becomes more prevalent on the street, there is a great risk of first responders and the general public being unknowingly exposed to Carfentanil.

Preparedness Month

September is National Preparedness Month (NPM), and this year's theme is "Disaster's Don't Plan Ahead. You Can." This is a great reminder to look through your emergency plans and consider conducting a drill at your facility. There a number of great resources available at http://ready.gov/September .

If you are an AZA facility and would like to participate in their coinciding National Preparedness Initiative please have your drill coordinator email AZA Safety Committee member Rick Holzworth at holzworthr@jacksonvillezoo.org for more information.

If you would like to join the distribution list feel free to email Ashley Zielinski at azielinski@aza.org

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Barn Owls Come to Coastal NC

by Tonya Weil

April 7th 2017, I had just gotten home from working at Possumwood Acres when I got a call about baby Barn Owls. We get calls for Barn Owls, but they never are. Barn Owls do not live here in our coastal region. We have had one or two over the years but they come from Pink Hill, NC that is the closest population we know about. The person was driving to meet one of my volunteers from Goldsboro. My volunteer wanted to know if I wanted to meet to pick up the babies. First, I tried to get the owlets back with their parents but then I was told the crazy story; they were in a deer stand and the people did not see them and took the deer stand down because it could no longer be on the property. Yet, 5 owlets, only days old and 3 eggs, were all packed up somehow with no injuries, on an hour long trip, before being discovered once home?

Photograph by Possumwood Acres staff

As we all know, no one raises babies better than Mom and Dad! I cannot lie though, I knew from the location, the nesting site, and the number of owlets we had our first clutch of Barnies coming to Possumwood! I was excited, as were our volunteers. It was the first week of April and we were not feeling the baby season blues, YET! They arrived about 2 hours later. They were not dehydrated and all looked healthy. Mom and Dad were doing a good job. I called our Director to let her know what we had and then called Dr. Joni at Cape Fear Raptor Center (CFRC) to tell her I was coming in for a health check.

Two nights later, one of the eggs hatched and I could hear peeping in one other egg. I could not believe the eggs were still viable after all the transporting. The owlets were all under a week old. The 2 eldest came in at 75 grams, eyes closed and the smallest was 20 grams, I believe it was only a day old because when the other one hatched it weighed in at 19 grams. During the first week, I fed the owlets every 3-4 hours or whenever they got restless. Then tragedy hit. The 2nd to smallest one was dead one morning. It was eating fine the night before and had been gaining weight everyday but was dead in the morning. It was heartbreaking and I felt awful. I hate when I lose animals. That probably seems odd to say because I work at a facility that takes in over 1,000 animals every year. Wildlife tends not to have the best rate of survival. I am a passionate person though and I feel it every time I lose a patient. This would be a good time to mention, PLEASE make sure you take care of yourself!!! It is important to have a way to decompress or someone that you can vent to. I went to see Dr. Joni the next day. All the owlets were in good health and even though I knew it was not my fault the little one died, she gave me a hug and the reassurance that things just happen. I am very lucky to have Toni O'Neil and Dr. Joni as my friends and colleagues. They are always available to me and to them I am extremely grateful. I hope every rehabber has a support system as great as I have! If you don't, you need to get one.

I decided to leave the last egg that was piping and the two youngest at CFRC. I then continued the journey of

Barn Owls (continued)

raising four amazing Barn Owls for release. I remember reading in a message from the Wildlife Commission in March about the Barn Owl being considered for the Species of Concern List in NC. Here is the link to the notice- http://www.ncwildlife.org/Fishing/Whirling-Disease/wildlife-commission-will-hold-public-hearings-on-state-species-listings

You can click on the downloadable list from this page. The finalized list will not be out until October but I still felt it important to get these owls banded. I wrote to a couple people with Audubon in hopes of doing some kind of reintroduction but no one wrote back. I did talk to someone that has been monitoring Barn Owl boxes she put up in the Cape Fear area but no Barn Owls have been sighted in the area for many years. We decided to send them to our VP's area in Greensboro. Barn Owls live in that region and there was an old barn we could release them in,

Feeder wearing a Barn Owl mask to prevent imprinting and habituation; Photograph by Possumwood Acres staff

Photograph by Possumwood Acres staff

plus she was near in case they needed help. Now the easy part, getting them banded, or so I thought!

After about 8 unanswered emails to USFWS and Banding Lab and 2 banders not authorized to band Barn Owls, I decided I was going to see Mathias Engelmann at Carolina Raptor Center! It was not the best scenario by any means but it was the only scenario that got our owls banded. Mathias advised he thought it best to release the same day we got them banded so weather permitting we set a date to release Aug. 19.

Release Day! We started at 7am catching four unpleased Barn Owls and packing each one separately to avoid injury. Four crates and two Barn Owl boxes and we are on the way to Charlotte. Five hours later we met with Mathias who did a final health inspection and banded our angry birds. Then off to Greensboro where we met Alison Castillo our VP. She had her husband Rueben build two boxes and I had my husband Chris build two

Barn Owls (continued)

more boxes. First, we walked around the 11-acre release area and evaluated box sites. We got the boxes put up and then it was time. I took one out at a time and let them go in the barn. We left a bunch of mice for them just in case they wanted an easy meal or had trouble the first couple of days. They are free and now I am a worried mother that just sent her babies out into the harsh wild. Alison texts me when she hears them. I feel better knowing someone is near in case they get into trouble. I know it's silly to worry so much but I gave these birds so much time and effort and even though I am doing the right thing by them I still can't help but worry. Rehabbers are compassionate people and even though we don't cuddle the animals we still form an emotional bond to these wild animals. I think it would be odd not to worry after you release your babies or adult patients.

I am still hoping that someone contacts me back about a reintroduction project. We know a healthy Barn Owl population exists in Pink Hill. We could easily start expanding from that population over towards the coast more. Especially if we took Barn Owls that come into rehab from other NC rehabbers and started an expansion on that known population. Maybe one day rehabbers will have more impact on the decisions made for our state wildlife. It would be nice to start a management program now instead of waiting until the Barn Owl becomes an endangered species.

Lastly, Thank you to all those I mentioned in the story. I could have never gotten the owls released the way I wanted without your help and guidance.

Photograph by Possumwood Acres staff

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