

The Ridgeline

Newsletter of the Blue Ridge Wildlife Center

Issue 30

Bats!

How they Play a Beneficial Role in Our Ecosystem

The Big Move | Feeding Birds Ed 101 | Oiled Barn Owl | Nature Camp | 2016 Wildlife Interns



Moving Forward

Dear Friends of Wildlife:

Wow, what a Baby Season! The move to the new facility and all of the associated changes did not slow the steady influx of young orphaned and sick wildlife babies that continue to arrive on our doorstep. Among the many, there were the usual large groups of American Robins, Chimney Swifts, Virginia opossums, Red foxes and raccoons. There was also the odd lot of Green Herons, mink, a Yellow-billed Cuckoo, and a very unusual number of Carolina Wrens (see article page 8). We continue to be moved by those who take time out of their day to stop and bring these animals to us for treatment. We could not do our work without you.

The Center is now permitted as one of only two wildlife hospitals in Virginia. This is important for our patients, who, when they arrive, have already undergone some sort of trauma. We no longer need to transport them to another facility for X-rays and/or surgery. Our on-site radiology room and surgery are just two of the many advances we can offer to our patients. Individual species rooms, a well-equipped laboratory, and our excellent veterinarian await.

Our wonderful team undertook our busy Baby Season and a move into our new facility (see page 4), all at the same time. Either one of these activities would be enough. The move was carefully orchestrated and Center work went on as usual. Our team of Dr. Jennifer Riley, Heather Sparks, Jennifer Burghoffer, Jessica Andersen and Franny Crawford deserve kudos for their dedication and hard work. Our call for volunteers for the Big Move generated an outpouring of support. We can't thank you all enough.

The Center relies on our summer intern program for invaluable help. These youngsters come from colleges and universities locally and around the country and generally are provided accommodations from wonderfully generous members of our community. How can we ever thank these Interns or their host families for their contributions to the well-being of our native wildlife? (See page 7). In this issue there is a list of our interns and their hosts. If you should see them anywhere, please let them know their contributions are important.

Finally, our work is not supported by any government agency. We rely on private donations and foundation grants for all our income. Please help us continue our work with your generous and ongoing support of our events, our newsletter, and our year end appeal. It's not just about our native wildlife but also about educating future generations to revere wildlife and preserve their habitat.

With best regards,

Lisa Goshen
Chair
Board of Directors

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The Blue Ridge Wildlife Center is a 501 (c) 3 charitable organization established to provide assistance to native injured and orphaned wildlife and other helpful information to the public in northern Virginia, the Shenandoah Valley, and beyond. The Center provides quality rehabilitative care for wildlife and operates the **Wildlife Hotline at 540-837-9000.**

The Center also presents environmental education programs for people of all ages. Schools and organizations are invited to call for scheduling and fees.

The Center relies on private donations exclusively. It receives no funding from federal, state, or local governments. Contributions are tax-deductible.

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Cover Story:

Beneficial Bats Need Your Help

Every winter, it never fails that we'll get calls about bats, whether they've accidentally made it into someone's home or they've been woken up and are found outside and on the ground before the weather has turned for the spring. We take these bats in and overwinter them since it is too cold to release them outside. By the time summer comes around, we start getting calls about baby bats being found on the ground.

Bats play an extremely important (and beneficial) role in the ecosystem, each individual capable of eating thousands of bugs every night. Big Brown Bats, our most common bat patient, mate in the late fall just before hibernation; fertilization, however, does not occur until early spring, allowing the mother bat to give birth after the weather has sufficiently warmed up, promising enough insects to both care for herself and her nursing young. This year we had three female bats give birth to babies during the winter, much earlier than they originally would. This is due to the rehabilitation environment. Here they are given plenty of food and kept in a warmer environment than in their usual hibernating state, imitating the warmth and food abundance of spring. Due to emaciation, injury, or illness, we cannot safely allow many of our bat patients to hibernate, so we continue feeding them through the winter so we can monitor their healing. Though unusual in their timing, these babies got a head start into the spring and summer. By the time they were properly exercised and released with their mother, we had also taken in 14 other individual babies, who are currently in our outdoor bat



Cover photo and left: Red Bat mother with her pups.
Above: Four orphan Red Bat pups.
Below: An example of a pup catcher under a bat house.

enclosure, practicing their flying and insect-hunting skills.

In addition to these babies, we also received a mother Red Bat with three of her babies still attached to her. Unlike Big Browns, who leave their babies at the maternal colony while they go out hunting, Red Bat mothers carry their babies with them. Red Bats do not roost in colonies; instead, they roost in trees alone, imitating what looks like a dead leaf hanging from a branch. Red Bats can have up to four babies, but as the babies get larger the mother bat will have difficulty flying with the extra weight, and will drop 2-3 of their young. After several good meals and assurance that the mother and all the babies were healthy, we put the mother Red Bat outside with her young. She took two of



her three babies and left one, who we continued to raise, in addition to another individual baby Red Bat found on the ground as well.

Since bats are so important to the ecosystem, we encourage tolerance and humane exclusion techniques when sharing a space with bats if at all possible. Pup catchers are available to place beneath areas where maternal colonies are known to be to help prevent babies from landing on the ground, and allowing them to climb back up to the roost themselves, or allow Mom to come down and carry her baby back as well. Always give the Center a call before handling bats of any age, as well as for any questions or bat advice! ■

The Big Move!



Since the beginning of the year, staff and volunteers at the Center have been cleaning, sorting, packing, and labeling all extra supplies in the cottage, preparing for the move into our new facility. Finally, in mid-June, we were granted occupancy of the building, and sent out a call to all regular volunteers, as well as through our email contact list, for help with our big day. We were stunned by the response. Over 20 helpers showed up on a Saturday morning, bringing pick-up trucks, furniture dollies, and lots of enthusiasm! For the next eight hours, this crew, led by our head rehabilitator, moved all of our current patients and more than 80 percent of our supplies to the new building, including file cabinets, medical supplies, refrigerators and freezers, and 10 years worth of patient records. Despite the organized chaos of a big move, daily activities at the Center did not stop—we even took in our first patient of the new facility in the middle of it all! ■



Clockwise from left: The old 800 square-foot cottage served as the home of the Center for 12 years; Ashley Faulk unloads a bin at the new basement level; Karen Haney loads a car full of wildlife in care; Hillary Davidson carefully moves an education ambassador snake in its reptarium.



Stay Tuned!
Our next issue will feature our new 8,200 square foot state-of-the-art Wildlife Hospital and Rehabilitation Center. We're still unpacking!



To Feed or Not to Feed?

Many wildlife lovers enjoy watching birds at their feeders and ponds, but it is important to remember that providing food to wild birds is not always in their best interest. Improperly balanced or improperly presented diets can cause physical abnormalities and even assist in the spreading of disease.

Avian pox is one viral disease of wild and domestic birds that we occasionally see at the Center and luckily, it is something that you can help prevent! Several avipoxvirus strains can cause disease in birds including songbirds, gamebirds and, less commonly, raptors in our area. Infection typically leads to a skin-level form of the disease that causes blisters on featherless regions of the bird. These skin lesions, most commonly on the face, progressively develop into wart-like lesions, and then dry out to form scabs. When the lesions grow too large, they begin to impact vision and feeding abilities, which leads to emaciated, weak birds that are much more susceptible to predator attacks or other diseases.

Pox scabs, in addition to feathers and skin dander from infected birds, can cause disease in healthy birds that are infected through small cuts or abrasions on their skin. The infectious viral particles are stable in the environment long-term and over time, these particles accumulate where birds frequently come into contact, such as at bird feeders.

Cleaning your bird feeders regularly is one of the easiest things you can do to help prevent the spread of this virus and it is an important part of being a responsible feeder of wild birds. Bird feeders should be cleaned frequently, as often as once weekly if possible, especially during times of frequent use. One recommended method is to empty the feeder, remove debris such as stuck-on seed or fecal material, then spray with 10% bleach solution and allow to air dry. Rinse with water and fully air dry before refilling.



Be sure to clean the ground around the feeders as well as uneaten seeds, hulls, and other waste may be dangerous if ingested by birds or pets and may attract unwanted rodents or other wildlife.

In addition to assisting in the spread of diseases like pox, it is important to remember that feeding wild birds can lead to malnutrition and associated physical abnormalities. Water fowl that we feed in the clinic receive a very specialized diet, balanced to meet their unique needs. White bread, the most common food fed to ducks, is just as poor a choice for them as it is for us humans. Though fine in moderation, ducks that are commonly fed by humans tend to fill up on these empty calories and avoid eating natural, nutrient-rich foods.

Depending on the type of food being fed, different nutritional abnormalities can arise. Unfortunately, some are so severely affected that they end up at the center as patients. This year we have had two Mallards that presented with fractures of an unknown cause. These events occurred just two weeks apart and both birds came from the same property. After taking x-rays, we realized that these did not seem like typical traumatic fractures, but rather fractures that are caused by abnormalities in



Feeding white bread to ducks is a poor choice of nutrition and should be avoided.

the bone itself. These types of fractures are typically caused by bone cancer or osteoporosis in humans and some pets. Although the abnormalities seen in these duck bones could be caused by many different things, the most likely scenario is improper nutrition caused by local humans feeding poorly balanced diets of bread, biscuits, or popcorn.

Young waterfowl can also be severely affected by this type of malnutrition. When they eat this type of food they receive inappropriate amounts of protein and vitamins which cause a bony abnormality in the wings commonly referred to as "angel wing" due to the bowing outwards of the wings themselves. This improper skeletal development leads to an inability to fly which ultimately causes death in these birds. With early intervention, bandaging, and proper nutrition,



Nature Camp's New Face

After years of offering one camp per week over a two month period, the Center expanded the program this year to include five days per week for two different age groups. Some campers came only for one or two days, but many signed up for the whole week. Subjects covered each day highlighted the wildlife ambassadors at the Center, allowing the children an up-close and personal connection to the lessons. The children enjoyed games and activities that highlighted the topics of each day, such as playing in the pond and "How Many Bears Can Live in a Forest?", and tracking our Arctic Fox, Snow, through the woods.

Wildlife Discovery Camp would not have been possible without Camp Directors Steve Martin and Kristi Titus of Leesburg Elementary School and the wonderful camp program they developed. When a camper was asked what he liked about camp, he said "**Everything!**"



cases that have been found early can be treated at the clinic, but as with most medical conditions, preventing it entirely is the goal.

Feeding bread and other unbalanced diets can cause other health problems in addition to the skeletal issues such as obesity, organ diseases, and general immunosuppression making animals more susceptible to other types of illness. Having large amounts of free food available can also lead to overcrowding of animals which itself causes increased interaction between individuals and therefore increased incidence of disease. Moldy bread, which is often fed accidentally, also has the potential to cause serious and sometimes fatal fungal diseases in these animals.

We live in an amazing area to see a great variety of wildlife. In order to continue having this privilege, we need to do what we can to protect our native species. We encourage everyone to enjoy the native wildlife and become educated on how you can help. Next time you want to have a nice family outing enjoying wildlife, consider taking your children to a local pond just to observe waterfowl and other wildlife. Teach your children about how the ducks are finding food on their own and why this is best for them. Remind your children that ducks need a healthy diet, just like they do, to grow into strong, healthy adults. Explain to your children why you are cleaning the bird feeders in your yard, just as you would teach them about washing their hands to prevent the spread of colds and other diseases. Lastly, always remind young ones to treat wildlife with respect and never chase or throw rocks at animals, but to quietly observe from a distance without disturbing them.

We are able to successfully treat many of the birds that we see here at the center with pox lesions and even some of the young ducks we see with bony abnormalities caused by malnutrition. However, it is best for us and these birds to prevent the disease altogether. Thank you for helping us protect our wildlife! If you are concerned about a wild bird that seems debilitated by these issues or others, please give us a call! ■

Rescued Oiled Barn Owl Gets Squeaky Clean at the Center



being waterproof, a problem for many birds that rely on water for food and to get away from predators. Without this waterproofing, the feathers also can't help keep a bird warm, which poses problems in the winter for birds that are year-round residents here in Virginia. Birds are constantly preening their feathers to clean and keep them in shape, causing them to ingest the oil which can make them sick. Thankfully, this Barn Owl only required four baths, yet still used almost an entire bottle of Dawn dish liquid. He is currently undergoing flight conditioning in our flight cage before being released! ■

Oiled wildlife is a persistent problem in our civilized world. Most oiled wildlife are water or shore birds, where spills from rigs or tankers get caught in the tides and easily come in contact with floating and fishing birds diving beneath the surface. Recently, we received a Barn Owl that had fallen into an open-reserve oil tank on the side of a crane. Thankfully, workers in the area found him in the tank and were able to bring him to us for clean-up and supportive care. He was given fluids and examined for injuries, and once stable we began the tedious process of washing the oil from his feathers.

Although dangerous to all wildlife, oil causes multiple problems for birds in particular. Oil damages the feathers' ability to be used for flight, grounding the bird which makes it difficult to hunt, leading to emaciation and starvation. It also prevents the bird from



These photos show the oil-soaked Barn Owl before (top left) and after his bathing treatment at the Center (above). He is now recovering in our flight cage to strengthen his wings before he is released.



? Did You Know

Barn Owls typically live in cavities and hollow trees, but can very often be found in barns, churches, and other buildings. They prefer to hunt in open areas for small rodents, and swallow their prey whole. Barn owls can eat up to 1,000 mice per year. Regurgitated pellets (undigested bones and fur of prey) are used as nesting material by the females.

New Season, New Faces

Every summer, college students from across the country travel to help the Center during its busy season. Some come for the experience; others for college credit. Some are required by their schools to complete research or another project to present to their professors the following year. Two of our interns, returning for a second summer, were the recipients of grants to fund their research at the Center.

Two of our interns, returning for a second summer, were the recipients of grants to fund their research at the Center. The following articles are brief summaries of their topic and methods conducted during their internship. Their work will continue once they return to school.



Our 2016 wildlife interns with the Center's Wildlife Rehabilitators from left to right: Jessica Andersen, Josie Dicks, Jane Braswell, Jennifer Burghoffer, Abigail Bierman, Sarah Modlin, Erin Balsler, Elizabeth Barber, Abigaile McCue, Kaylyn Schneider, Emily Ashcraft, Gina Rutledge, Heather Sparks.

Red Fox Coping Styles

By Jane Braswell, Intern



Thanks to the generosity of Mr. and Mrs. Fierson, my college awarded me a grant to return to BRWC for a second summer internship. Though the thrill of baby season was enough to draw me back, my predominant focus this summer has been collecting data for my study: Coping styles and correlative hormone levels of orphaned, juvenile Red Foxes (*Vulpes vulpes*). Coping style can be understood as personality. Luckily, BRWC has let me conduct this research using the 20 fox kits currently being raised. My methodologies entailed a 24-hour filming session and fecal collection every two weeks. For course credit this coming fall, I will assess each individual's behavior within five categories: Activity, Sociability, Boldness/Wariness, Hierarchy, and Neophobia; the latter of which is arguably the most interesting aspect of my experiment. Neophobia is a fear of novel things. To assess this characteristic, I conducted separate filming sessions, for which I placed a strange object in the center of each cage. These objects included a squeaky dog toy, a pine owl-

nesting box, an opossum urine soaked towel, and a hanging tire. Each object was intended to peak the foxes' interests, rather than intimidate them, with a variety of visual, olfactory, and tactile stimuli. This also beneficially doubles as enrichment.

My hope is to find that each fox displays an individual, yet constant coping style, or more accurately, falls within a designated type of coping style, both over time and in varying environmental situations. However, for data to support

my expectation, individuals must display trends across each behavior category (i.e. a less active, lower ranking fox would have a higher neophobia score). While I hope to find that each fox displays individualistic behaviors, it's likely I'll find trends within cages (i.e. cage 1 as a collective whole is bolder than cage 2). This may be attributed to social cues (one fox approaches the new object quickly, so the others follow promptly) or to genetic similarities, as foxes are generally grouped in family packs. In an effort to find physiological evidence for possible psychologically grounded findings, I'll look for hormonal indicators in their feces associated with stress, aggression, etc. The answers are in the poop! ■

2016 Wildlife Interns and Hosts

- Emily Ashcraft**, Frostburg State College
- Abigail Bierman**, Bates College, hosted by Barbra Schirmacher
- Elizabeth Barber**, Virginia Tech, hosted by Karen Jackley
- Jane Braswell**, Franklin and Marshall College
- Josie Dicks**, Sherando High School
- Shannon Grubbs**, University of Mary Washington
- Annika Hedlund**, Rhodes College
- Abigaile McCue**, James Madison University, hosted by Susan Galbraith
- Sarah Modlin**, University of North Carolina at Chapel Hill, hosted by Susan Galbraith
- Gina Rutledge**, Sweet Briar College, hosted by Karen Jackley
- Kaylyn Schneider**, University of Mary Washington
- Ashleigh Walker**, Virginia Tech



New Website! www.blueridgewildlifectr.org • New Email! info@blueridgewildlifectr.org



Follow us on Facebook and Twitter! We post stories about the animals we rescue and rehabilitate. Learn about Virginia wildlife and some of the things that endanger them on our Facebook page.



Nature Vs. Nurture

By Abigail Bierman, Intern

Birders say they often hear the Carolina Wren long before they see one. At the Center, we rarely even see them: on average, we only admit six or seven orphaned Carolina Wrens each summer. That didn't deter me, however, from using these interesting birds for research. I am about to enter my senior year at Bates College in Lewiston, Maine, and I planned to use the Wrens, no matter how small in number, for my senior thesis research. I am studying how birds learn their song, looking specifically at whether Wrens can learn their song from a CD, or if they need an adult "tutor" bird. Carolina Wrens are perfect for this study, since their "critical period," or the age range when they have to learn their song, is the first three

months of their lives. Plus, I fell in love with the bird last summer during my first internship at the Center.

It's so easy to love these small birds. As nestlings, Carolina Wrens have tiny little tufts of downy feathers on top of their heads, "poofing" up. Plus they make adorable little peeping noises. The adult Carolina Wren is much more majestic. They are cavity nesters and hide out in brush, which is why it is often hard to see them. Yet their song, a short, three-note pattern, carries beautifully, and these curious little birds will often peek out of their hiding spot to see what's going on.

Determined to make my study work, even with a small sample size, I came to Virginia from school thrilled to find that the Center had already admitted nine orphans! And as the summer has continued, we have taken in around 30 orphaned Carolina Wrens. My research

started immediately, which involved playing a CD of various bird songs to some of the birds, and having other nests not listen to anything. Once I am back on my college's campus, I will transform the audio files into a spectrogram, or a visual representation of the sound file. Each bird's spectrogram will be compared against each other and against spectrograms of adult Carolina Wrens. I hope to see if there is a difference between the three sample sets: naturally learned song, song learned through CD, or song learned without any help. ■



The BRWC is dependent on your donations. There is no state or federal funding for wildlife rescue and rehabilitation. The BRWC depends entirely on donations to fulfill its mission. This entire region is thankful to those who have generously made it possible for us to help with so many animal emergencies!