WILDLIFE REHABILITATORS OF NORTH CAROLINA

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Message from the President

Asking for help is encouraged, helping others is vital

I watched the Olympics in Rio De Janeiro pretty much every night while the games were on. I admit it, I may have been addicted to the Olympics, but in a good way. It was inspiring and encouraging to see athletes from all over the world congratulating each other, even helping each other. They compete against each other, but they also learn from each other. They need each other.

I have recovered since then and it got me thinking - wildlife rehabilitation is a team sport. It starts with the people who find the animal and take the time to call for help or deliver the animal. Then volunteers, staff, veterinarians, and donors all go to work together, often for weeks and months, one patient at a time. The common goal is simple - 2 minutes of glory, a.k.a. the release of that one bird or mammal or turtle back into the wild.

I believe wildlife rehabilitators should never stop learning and one of the better ways to learn is from each other. If you don't know something, start asking around. Look for legitimate resources, talk to people face to face, but don't believe everything you see on the internet unless you know the source.

Conferences are a great way to get lots of one-on-one time with well-known rehabilitators at the larger facilities. But don't count out the individual rehabilitator – because they are forced to work on their own in many cases, with fewer resources and fewer helping hands, licensed rehabilitators working out of their homes might be more likely to develop a unique way of handling a challenge. While you're attending a conference you should consider visiting nearby wildlife facilities. It's amazing what you can learn by touring a big or small place and by talking to their staff and volunteers.

There are many individual rehabilitators and wildlife centers all over the country. All those folks collectively work on tens of thousands of patients every year. They are bound to come up with new and innovative ideas. Hopefully they are sharing those ideas through publications, tours, emails, and talks at conferences. You should make it your mission to learn from their mistakes and successes, for the animals' sake. At the same time, I encourage you to teach others, to share your success stories and your mistakes.

The minute you stop learning, you fall behind.

Turtles On The Move!

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

Photograph by John Althouse

Turtles are more complicated than they look, and getting to know each species of turtle that calls North Carolina home is a challenge for staff and volunteers at the Outer Banks Wildlife Shelter (OWLS) in Newport, NC. Turtles come in different shapes (although they all resemble a circle), sizes, coloring, capabilities and live in a variety of habitats. They represent the oldest of all living reptiles, and have undergone little change since their beginnings early in the Triassic period of history. You'll find turtles throughout North Carolina, from the Coastal Plain to our mountains in the west. Overall, twenty species of turtles, belonging to six different families inhabit North Carolina. Five of these species are sea turtles and one (the Eastern Box Turtle) is terrestrial which means it lives primarily on land. The rest are semi-aquatic, inhabiting North Carolina's ponds, wetlands, and other water bodies. We, on the coast, leave the rehabilitation efforts of sea turtles like Loggerheads, Leatherbacks and Kemp Ridley's to the Karen Beasley Sea Turtle and Rehabilitation Center crew at North Topsail Beach. They care for the guys and girls who need to eventually get back to the ocean. Our focus is land and semi-aquatic turtles; Box, Yellowbelly & Redbelly Sliders, Diamondback Terrapins, Spiny Soft-Shells, River Cooters, Bog, Painted, Mud, Spotted, Musk and the Common Snapping Turtle or often referred to as an Alligator Turtle.

Turtles are admitted to shelters for a variety of reasons. We've seen them injured by fishing gear (mainly hooks or line wraps), litter, lawn mowers, a dog that held it a little too tightly in his jaws; also suffering from upper respiratory infections due to environmental pollutants such as pesticides, eye or ear infections, broken bones and quite often, hit by a car, which usually results in crush injuries and shell fractures. As with any wild animal admit, the injury or disease will determine the treatment plan. If a turtle's injury is beyond our areas of expertise and requires extensive surgery, we will transport the turtle to the Turtle Rescue Team at North Carolina State University's College of Veterinary Medicine. The greatest threat to turtles is habitat loss, particularly destruction and degradation of aquatic habitats. The destruction of terrestrial habitat surrounding wetlands and ponds which is required for nesting, and hibernation for some species, poses significant threats, forcing turtles on the move to find new habitat.

Photograph by John Althouse

Sadly, thousands of turtles are

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Turtles On The Move! *(continued)*

crushed every year by cars on North Carolina's roads and highways, which brings us to the question of the day regarding turtles and those who care about them. How do you move a turtle out of the road? The first thing you want to do is safely position your car on the side of the road, (with your hazard lights blinking) to ensure you do not put yourself or others at risk while you rescue the turtle. It would be great if you just happened to have a pair of work or rubber gloves in the car but most people don't. Just wash your hands after handling the turtle because they can carry salmonella like most other animals do, including pet cats and dogs. Gently pick up

Photograph by John Althouse

a turtle and move it out of harm's way, in the direction he or she was heading. What you shouldn't do is pick up a turtle and move it to what you, as a human, deem to be a safe spot. They always have a good turtle reason why they are heading in the direction they are going. There is a certain time of year, usually April through June, when turtle crossing is quite prevalent because mates need to be found and eggs need to be laid. If it is a sizeable turtle, especially a snapping turtle, you can use a stick, shovel or broom to push it off the road. Never put your hands or feet near a snapping turtle. A snapper has a neck the length you wouldn't believe and will be able to reach some part of you. Their vice-grip jaws can cause serious injury. Also, never pick up a turtle by the tail. That hold could easily damage their vertebrae. BUT above all, when moving a turtle from potential disaster in the road, please be CAREFUL and DO NOT put your life at risk. Turtle moving only applies when you are driving down a road where YOU CAN stop and move about safely.

You might be wondering why they cross the road in the first place. It doesn't seem smart when you consider turtle speed versus vehicular speed. They can't truly make a serious run for it when they finally do see

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Turtles On The Move! *(continued)*

Photograph by John Althouse

an approaching automobile. Turtles genuinely need to cross the road because, quite simply, they were here before the road existed and ancestral mapping is instinctual. So, a turtle trying to cross the road is not heading in the wrong direction. Her instincts are telling her where to go. They cross the road, moving from one body of water to another to find mates, expand territory, find nesting sites, and lay eggs, sometimes pausing to bask on the warm asphalt along the way. The turtles day-tripping out into traffic are usually females heading for that predetermined nesting site. Turtles mature slowly and most are unable to lay eggs before age ten. Eggs will be laid in spring and early summer and can number only 3 to 8 for a Box and up to 20 to 40 for a Snapper. The female will usually spend an hour digging her eggs' nest before depositing and may take an hour covering and camouflaging the nest area. So, it's a meticulous and tedious process. The mortality rate for eggs and hatchlings is very high, but when one makes it, barring any other catastrophe, man induced or other, land and semi-aquatic turtles can live fifty or more years. And in those years, that turtle will directly impact other fauna and wildlife species through seed dispersal, helping to clean our waterways and as a scavenger, tidying up a lot of dying, dead and decaying plant and animal matter. Three cheers for one of the "garbageman or garbagegirl" species in the wild! Let's keep these environmental partners on the move!

We're giving away money !

by Mathias Engelmann

(I bet I have your attention now)

The WRNC Board of Directors recently voted to increase the grant amounts awarded every year. Starting with this application cycle, each of the two cage grants and the two Chimney Swift tower grants will be in the amount of $500. In addition, we have increased the number of symposium scholarships from two to three. These scholarships are awarded to deserving individuals who cannot afford the hotel and registration cost for the annual symposium.

If you want (almost) free money, go to WRNC's website for more information and application forms.

Effects of Feeding Wildlife…Food for Thought

by Halley D Buckanoff

Wildlife enthusiasts will often put up bird feeders or provide food to wildlife both in an attempt to assist wildlife presumed in need as well as to engage with wildlife. Wildlife rehabilitators may also provide supplemental food to hand-reared or rehabilitated and released wildlife. However, this practice of providing an easily accessible food source, especially for prolonged periods, may be negatively impacting our wildlife.

Food for thought, consider the implications of long-term supplemental feeding post-release… could it affect assimilation into wild populations? If dependent on humans for food could the animal become a nuisance to others? If the provider should leave for a period of time will the animal be able to fend for itself? Could it put them at greater risks for diseases, competition and predation?

"When young wild animals are taught to depend on a human-provided food source, they may not fully develop essential foraging skills." Progressive Animal Welfare Society (PAWS), Lynwood, WA. While short-term supplementation post-release may assist captive cared-for animals as they transition to the wild, human-based foods offered long-term may not be helpful to acquiring essential survival skills. Offering at least a portion of wild diets and/or presenting the diet in a more naturalistic and enriching way (i.e. clipping berries to branches/perches and hiding foods in the enclosure) may help develop techniques that will enhance their chances of survival.

Photograph by Mathias Engelmann

"Feeding can create unintended conflicts with humans. Wild animals that are used to being fed by humans commonly lose their fear of people. Animals that are unafraid of people will approach them for food, and are sometimes mistaken as rabid, aggressive or mean, then killed for that behavior. An instinctive wariness of people is important to a wild animal's survival" (North Carolina Wildlife Resources Commission). Discouraging human associations with food is important, especially during pre-release conditioning. Continuing to feed animals post-release will just increase the risks of habituation and the likely-hood that the animal will be reliant on humans for food and survival. We can't assume that the animal will only positively associate with its primary caregiver. We don't necessarily know if that loss of fear of one person impacts loss of fear of others and/or reduces wariness of any possible threat.

Another controversial aspect of wildlife feeding is not just food recognition nor the dependency on human-based food, but the unnatural congregations at readily available food sources. "When wild animals gather for food handouts, it can cause crowding and competition. These unnatural conditions increase the chances of fighting and injury among animals. It can also increase the spread of diseases...."(Humane Society). So while we may think we are providing food to assist our recently released rehabilitated patients, whom may be a little more naïve than their wild reared counterparts, we may actually be putting them at greater risks; the food provided may be inviting close contact with conspecifics increasing disease transmission, inviting predators in, or encouraging more aggressive individuals to out-compete them. If you are going to provide short-term or occasional food, it may be more advantageous to spread it out rather than put it in a feeder or in one place.

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Effects of Feeding Wildlife…Food for Thought (continued)

"It seems highly likely that natural selection is being artificially perturbed, as feeding influences almost every aspect of bird ecology, including reproduction, behavior, demography, and distribution." (Robb et al.). And it's possible that this affects other species besides birds as well. While seemingly helpful, it may be more advantageous to not continuously provide a readily available food source for our wildlife.

For additional reading on this topic:

https://www.paws.org/library/wildlife/feeding/

http://www.humanesociety.org/animals/resources/tips/feed_wildlife.html?referrer=https://www.google.com/

http://www.ncwildlife.org/Portals/0/WildlifeProblems/documents/Feeding-Wildlife-Hazards.pdf

http://www.nytimes.com/2016/01/10/magazine/why-do-we-feed-wild-animals.html?_r=0

Robb, G. N., McDonald, R. A., Chamberlain, D. E. and Bearhop, S. (2008), Food for thought: supplementary feeding as a driver of ecological change in avian populations. Frontiers in Ecology and the Environment, 6: 476 –484. doi:10.1890/060152

WRNC is looking for committee members

by Mathias Engelmann

In case you don't know, WRNC board members serve on various committees. These committees are responsible for putting many of our goals into action. A great example is the symposium committee – team members work on the "Nuts and Bolts" of this event for months in advance to ensure that everything happens as planned. Committee members typically correspond via email because they are all busy leading a normal working life or being a wildlife rehabilitator/educator (or both).

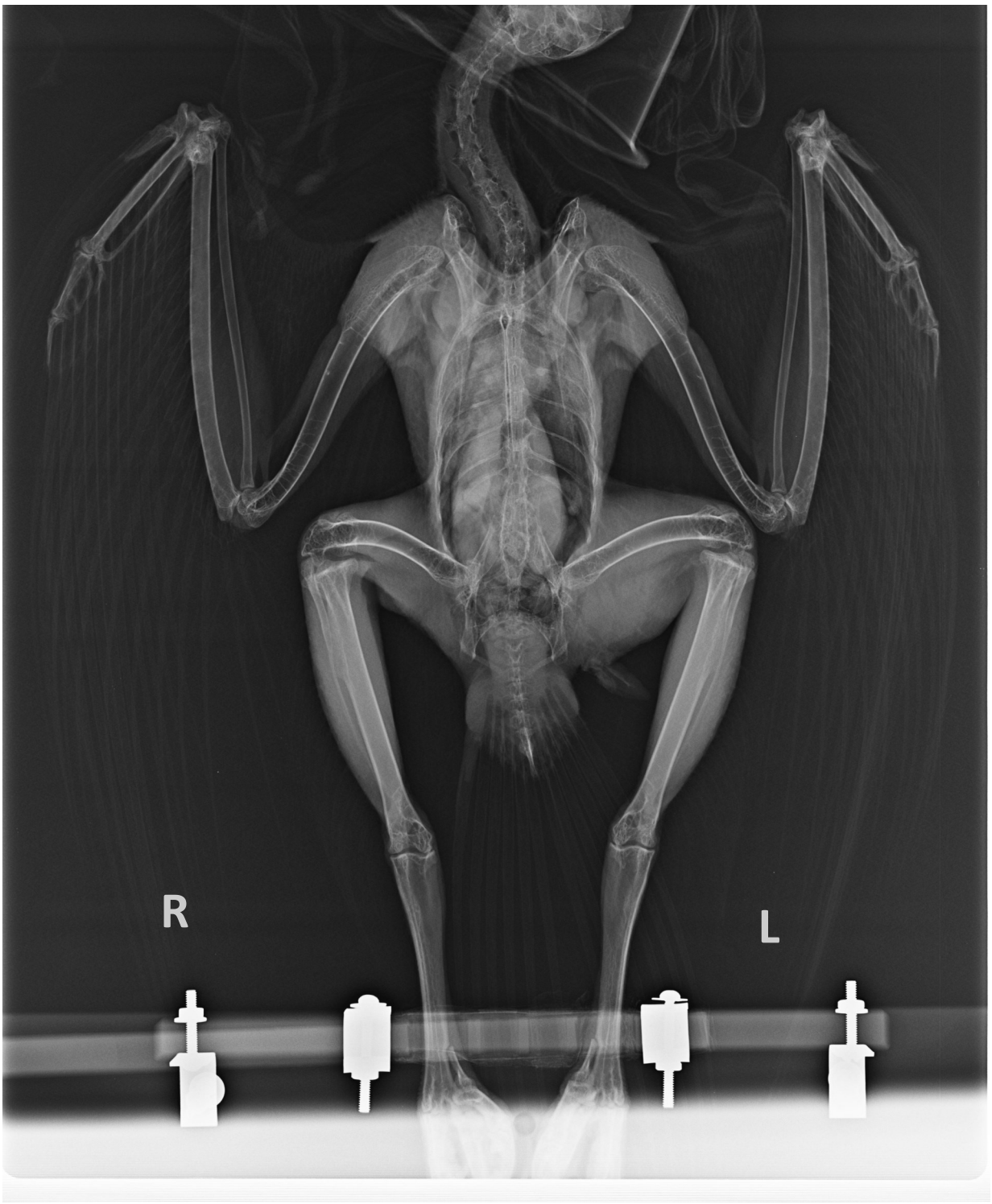
The good news is that you don't have to be a board member to help out on a committee. We are always looking for individuals with particular skills or interests. Check out the following committees and contact a board member if you are interested in helping.

- Symposium
- Cage Grant
- Chimney Swift Tower Grant
- Nominating
- Emergency Disaster
- Newsletter
- Newsletter Rework/Edit
- Training
- Rabies Vector Species Rehabilitation
- Website Committee
- Membership

Do You See The Fracture?

by Mathias Engelmann

Take a look at this radiograph of a Red-tailed Hawk. Can you find the fracture?



Look on page 9 for a clue

Tales From The Field

by Kelley Odell

One evening while on vacation in the wilds of New Hampshire, I received an urgent turtle rescue call from a lady in NC. Not a turtle expert myself, I decided put her in touch with the NC State Turtle Team. So, while scrolling through my contacts list for the phone number I asked the caller:

KELLEY: "has the turtle been hit by a car?

CALLER: "Oh! I don't think so."

KELLEY: "What is wrong with him?"

CALLER: "I don't know"

KELLEY: "why do you need a turtle rehabber?"

CALLER: "well, the turtle is laying in the mulch beside my mother- in- law's door step."

KELLEY: "Oh! I see, and that is a problem because??"

CALLER: "She is afraid he will get in the house, so she wants him moved."

KELLEY: "Oh!"

CALLER: "I think he might live in the pond behind the house"

KELLEY: (Ya think, I thought to myself.) "Oh! Is it a snapping turtle? Does it have a long tail?" (Wondering to myself why they couldn't just move the darn thing.)

CALLER: "No, it's a regular turtle."

KELLEY: "Well then, just move him away from the door. Can you do that?"

At that point, the caller hollered "can ya'all move this turtle?" A reply, came from a distance. "What turtle?"

CALLER: "Should we take it to the pond?"

KELLEY: "Wonderful."

CALLER: "Ok."

KELLEY: "Have a great evening."

CALLER: "Thanks again."

KELLEY: "Good night."

Do You See The Fracture? *(continued)*

Here's your next clue—a close-up of the shoulder region of the same radiograph. Have any ideas yet?

Look on page 17 for the answer

How To Age A Barred Owl

by Mathias Engelmann

Determining the age of a Barred Owl is fairly simple - theoretically. The flight feathers are the key and there are a couple of important points to keep in mind:

- The only time a Barred Owl molts an entire set of flight feathers is during the nestling/fledgling period. All those flight feathers will be uniform in length, color, pattern and signs of wear.
- During every molt after that, Barred Owls replace a limited number of flight feathers every year. There is a certain order and symmetry to this molt. Only a few feathers are replaced at any given time to ensure the bird can still function normally.
- Juvenile flight feathers show a slightly different pattern than adult flight feathers. Typically, the **outermost three or four stripes or bands** on each primary and secondary are **narrow in juvenile birds and wide in adults.**
- Daily activity results in wear and tear on flight feathers.
- Over time, feathers will fade in coloration. New feathers tend to be darker, old ones paler.
- The normal molting season for adult Barred Owls lasts about 6 months starting in late April or May. Sometime around October the molt will be suspended, only to resume the following spring.

Pic 1 **All Photographs by CRC**

Why is it important to know the age of a Barred Owl? If you are rehabilitating a bird, it might be good to know if your patient is an experienced adult bird or a juvenile just out of the nest. Or maybe the next injured Barred Owl delivered to your facility was found near an active nest. Wouldn't it be great to know if your patient is an adult and possibly one of the parent birds.

In the photograph on the right, notice the difference between the brown, pale juvenile feathers and the gray, darker adult feathers. Notice also the width of the last 2 bands of these feathers.

Pic 2

Continued on page 11

How To Age A Barred Owl (continued)

We'll follow a hypothetical Barred Owl along as it ages over the years.

Our owl was hatched in the spring of 2016. Until it can fly long distances, it is aged as "Local" or "L". At this age all flight feathers are still developing or "in blood".

Pic 3

Pic 4

Our Barred Owl (BDOW) pictured above is aged as L – all flight feathers are in blood and still fairly short

Age codes for birds

L – Local : a bird too young to fly, such as a downy baby
HY – Hatching Year: a bird hatched in the current calendar year that can sustain flight
SY – Second Year: a bird hatched during the previous calendar year
TY – Third Year: a bird hatched 2 calendar years ago
AHY – After Hatching Year : a bird hatched during the previous calendar year or earlier
ASY – After Second Year : a bird hatched at least two calendar years ago
ATY – After Third Year : a bird hatched at least three calendar years ago

Continued on page 12

How To Age A Barred Owl (continued)

We'll jump ahead to the summer of 2016. All flight feathers (primaries and secondaries) are now fully formed and uniform in length, color, wear and pattern. Our owl will have some downy feathers left on its head and body for at least a few more weeks.

Pic 6

Our BDOW is now aged as HY (Pics 5-7)

All flight feathers are fully developed and show similar patterns (bands), similar wear, length and coloration. The outermost four stripes (2 light and 2 dark ones) are the most important ones to look at. Note that if you admit this owl on January 1st, it would be aged as SY. **Pic 5**

Pic 7

Notice the last three bands—all narrow.

Continued on page 13

How To Age A Barred Owl (continued)

We jump ahead to January 2017. The same Barred Owl (Pic 8) is now aged as SY (second year). There should not be any downy feathers left anywhere, including its head. It looks like your "average" Barred Owl. Without closer inspection you could not tell it apart from a 3-yr old Barred Owl.

Pic 8

It is now the summer of 2017. Our Owl is 14-16 months old
Molting season has started and new flight feathers are growing in (Pic 9).
Notice the difference in the color – new, darker feathers contrast with older faded feathers. Also notice the width of the outermost stripes/bands, closest to the tip. The new adult feathers have much wider stripes.

Pic 9

A few important abbreviations and definitions:

BDOW – the official abbreviation for Barred Owls as determined by the American Ornithological Union

Primaries – the 10 outer flight feathers, originating along the metacarpals

Secondaries – the 12-17 inner flight feathers, originating along the ulna

Remiges – collective term for all primaries and secondaries

Feather in blood – the feather is actively growing and the feather shaft is filled with blood

Every bird ages by one year on January 1st

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How To Age A Barred Owl (continued)

Jump ahead to the fall of 2017 – our Barred Owl is now 16-18 months old, still called SY, and has finished molting for the year. It did not replace all of its juvenile flight feathers, so now we have a mix of old/faded juvenile feathers (narrow bands) and new, slightly darker adult feathers (wider bands) (Pic 10).

Pic 10

Pic 11

You can hopefully appreciate the difference in the color of the feather shafts between old and new feathers. This is most noticeable on the dorsal (back) side of the feathers and is sometimes the best clue to determine age.

Notice that in Pic 11, a close-up of several old, faded feathers, the off-white portions of the feathers are actually almost completely worn through.

Spring of 2018 – our owl is now about two years old and is starting to molt again. It is aged as TY or ASY (both are correct, but TY is more accurate). The owl will replace the last of the juvenile flight feathers this summer.

Fall of 2018 – Molting season comes to an end. Now our owl has only adult flight feathers. (Pic 12) That means all of them have wide stripes near the tips. However, some of these feathers are a year older and show signs of wear and fading.

2019 and beyond—Our owl will continue to age by 1 year every January. It will molt a number of new flight feathers every summer. From 2019 on, early in the year, before the next molting season commences, we can age it as ATY.

I hope this makes sense. I will tell you that, just like everything else, it takes practice to get good at aging birds. Good Luck!

Pic 12

Make Room In Your Wardrobe For The "NEW WRNC T-SHIRT!" by Linda Bergman-Althouse

The new WRNC short sleeved, crew neck T-Shirt is Chestnut Brown and will look GREAT on everybody, earth tones usually do!!!! All T-shirts will be for sale during Symposium 2017!!! The brown we selected is a rich color that showcases our WRNC appliqué quite nicely. We still have our Galapagos (deep blue-green) and Heather Indigo Blue (light blue) available as well. The new shirts range in multiple sizes from small to XXL and are $12.00. The remaining inventory of Galapagos and Indigo will be $10.00 each. Don't forget to pad your budget to make sure you pick one (or a few!) up. Check them out, and if you want yours early or need a unique gift for someone special please contact Linda Bergman-Althouse, WRNC T-Shirt Guru, at 910-358-1596 or lbergman@ec.rr.com to make mailing or pick up arrangements. Besides personally wearing one proudly to let people know who we are and what we do, they make excellent gifts as well!

Chimney Swift Tower Grant Program - Grant Award Increased!" by Linda Bergman-Althouse

The 5 January deadline for the Chimney Swift Tower Grant program is only one Holiday Season away!!! So, NOW is a good time to think about your Chimney Swifts' needs and wants for next year. The opportunity for monetary assistance, which has been increased with WRNC Board Member proposal and approval from $300 to $500, is available through our organization to effect much needed alternative habitat for Chimney Swifts in our North Carolina communities. Cage Grants are also available for wildlife rehabilitators who are WRNC members, have the room and want to increase the excellence of their rehabilitative process. Construction of alternative habitat for our feathered environmental partner, the Chimney Swift, encourages them to return and thrive in our state. If you or your organization have noticed the loss of Chimney Swift habitat (possibly due to the capping of chimneys) or a decrease in numbers of Chimney Swift presence, you or someone you know may also see the need and choose to construct and maintain a Chimney Swift tower. Such a tower should entice the residency of Chimney Swifts, these acrobatic insectivores who vacuum the sky at dawn

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Adult Chimney Swift

Chimney Swift Tower (continued)

and dusk ridding our areas of pesky flying bugs, especially the dangerous mosquito. WRNC is now offering a $500.00 grant and the Paul & Georgean Kyle Adult book, "New Habitat for America's Mysterious Birds (A Construction Guide)" to assist you or your group in the undertaking of this valuable conservation project and can award three grants per year. Please refer to WRNC's website http://ncwildliferehab.org for details of eligibility and application requirements for the CST grant program. For further questions feel free to contact the WRNC Chimney Swift Tower Grant Coordinator, Linda Bergman-Althouse at 910-358-1596 or lbergman@ec.rr.com.

Jim Fulcher (and Linda) from Sneads Ferry, NC

Chimney Swift Tower constructed with WRNC financial assistance in 2016 by Karin Reynolds, Wildlife Rehabilitator from Whippoorwill Wildlife Sanctuary, Denver, NC.

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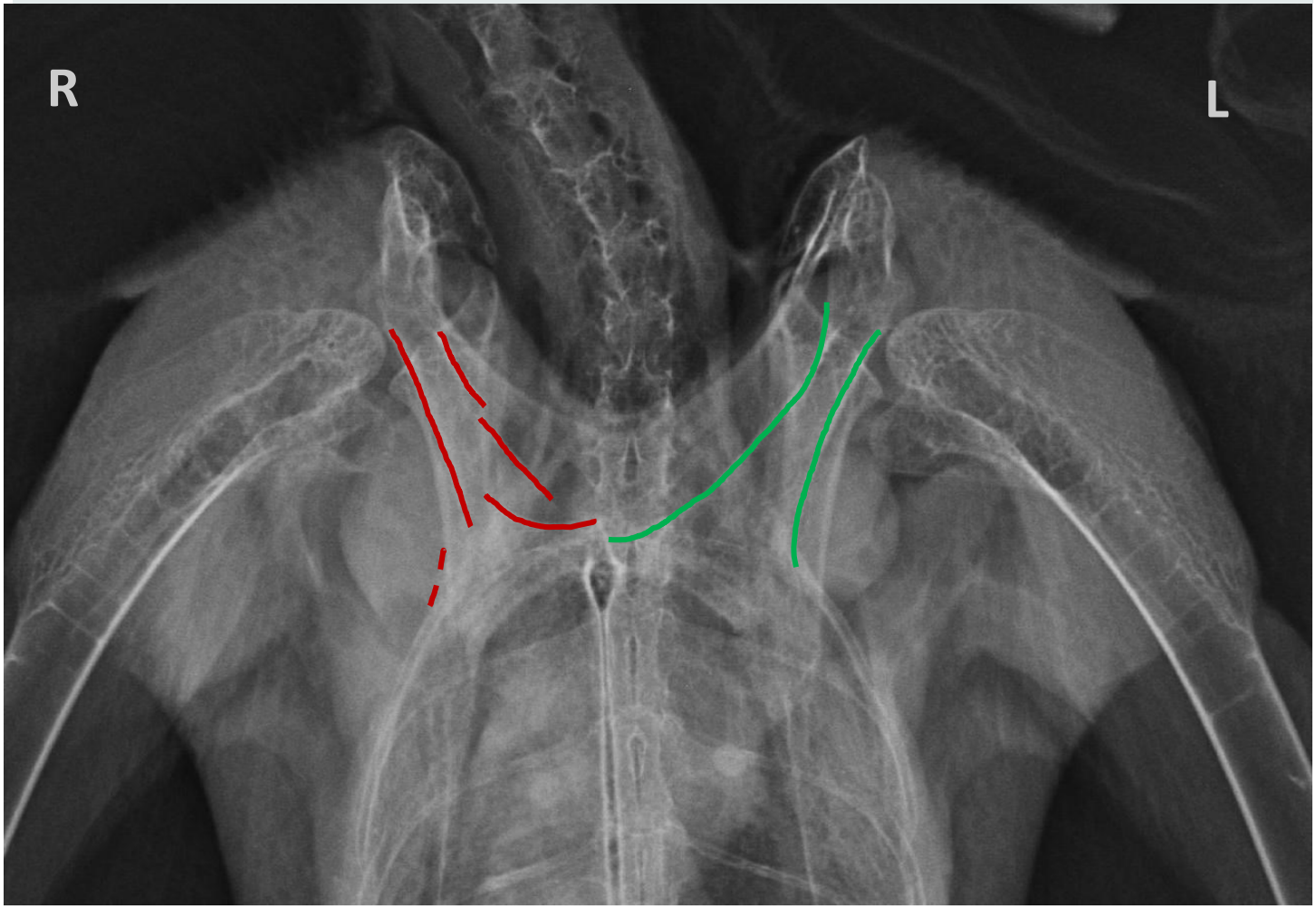
Do You See The Fracture? (the answer)



Congratulations—it's a fractured R Coracoid.

The patient was laying on its back, so "R" and "L" are reversed. Alignment of our patient was not quite perfect (body slightly rotated to the right). The "good" L coracoid edges are highlighted in green. Some of the edges of the broken pieces are difficult to see. In addition, the scapula is directly behind each coracoid and therefore super-imposed.