The Rid Rid Seline Newsletter of the blue ridge wildlife center USUE 55 | FALL 2022

How Wildlife Survives in Winter

This Eastern Red Bat recovered and was released this fall.

Preparing for the New Year



This time of year, the hospital at Blue Ridge Wildlife Center is a different sort of place.

There are no nests of loudly chirping chicks, no litters of fox kits, opossum joeys, or baby bunnies. Our phones aren't ringing 100+ times each day with calls from concerned community members who witnessed an injury or found an orphaned animal.

Although we still have dozens of patients overwintering with us, and new patients are coming in every day, we know that it is nothing compared to what's coming.

Because once the weather starts to warm, and wildlife becomes more active, babies are born!

Just like wildlife prepares for the cold winter months, our Center spends the winter months preparing for the upcoming 'baby season'.

Each generation of young wild animals has a right to live, yet each year they face more and more challenges. From losing a parent to vehicle collisions, to interactions with domestic pets, or injuries from lawn equipment, our goal is to give them a chance to survive and do their jobs within our ecosystem.

And every year, as our overall patient load increases, we have to start preparing earlier and earlier to ensure we are ready. Storing away food, medication, and supplies like a squirrel caches acorns.

We have successfully made it through previous baby seasons because of the support we receive from people like you! If you haven't already, I hope you will consider making an end of year donation to help us prepare to welcome the next generation of wildlife in need.

On behalf of all of us at Blue Ridge Wildlife Center—Happy Holidays and thank you for everything you do for our native wildlife!

With gratitude,

radfin

Annie Bradfield

ABOUT BRWC

Blue Ridge Wildlife Center is a 501(c)3 organization caring for native wildlife by integrating veterinary medicine, rehabilitation, education, and research.

BRWC is located in Boyce, Virginia on the Burwell van-Lennep Foundation's property on Island Farm Lane.

The Center relies on private donations exclusively. Contributions are tax-deductible.

BLUE RIDGE Wildlife Center The Ridgeline

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Newsletter designed by Dara Bailey Design.

How Different Species Survive the Winter

Winter is here—as humans, we will get through the next few months by cranking up the furnace, wearing cozy slippers, or drinking hot cocoa. But what about wildlife? In the winter months, food is often scarce and being exposed to freezing temperatures can be deadly if unprepared. Luckily, our native wildlife have a few tricks up their sleeves!

Many animals get through the winter by entering a period of dormancy, or inactivity, but there are a few different types: torpor, hibernation, and brumation.

Torpor is a low-energy state of involuntary physiological suppression where an animal's breathing, heart rate, and sometimes body temperature will decrease in order to conserve energy. The process is primarily triggered by low environmental temperature and food availability. As a result, their metabolism slows down and they may become unconscious!

Animals in torpor retain the ability to "snap out of it" and awaken at any time, though it requires them to expend significant amounts of energy. This expense is generally outweighed by the energy conserved by going into torpor. Some animals regularly experience brief periods of torpor overnight to survive the cold, ("nocturnal torpor") where they fully reawaken each morning to perform usual behaviors.

A longer period of seasonal torpor is sometimes referred to as "light hibernation". These animals spend the bulk of the winter months in a deeper-than-usual sleep, but still awaken regularly to hunt, forage, urinate/defecate, and even give birth. As with nocturnal torpor, all physiologic function returns to normal whenever the animal is awake.

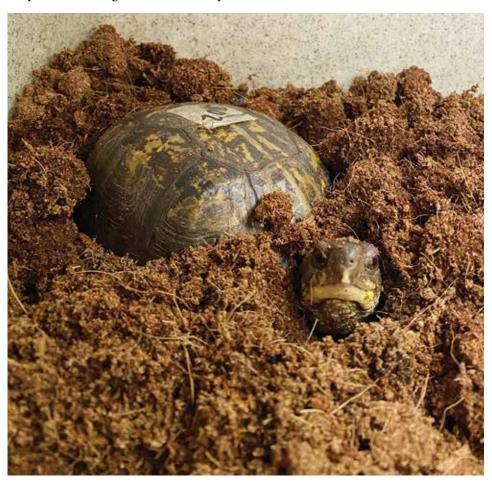
True hibernation is an extreme variation on seasonal torpor—a long-term, ultra-low-energy state that only mammals enter, primarily in response to hormonal changes and light cycles.

Once hibernation is initiated, changes in bodily function are drastic, with overall metabolic rate reduced to about 1-5% of normal! Going into near-complete inactivity means true hibernators cannot easily awaken and do not emerge to forage, although they may slowly cycle into brief awake states every few weeks to eat and eliminate inside the den.

Animals must prepare for hibernation by "fattening up", storing food, or building secure dens to ensure their survival through this highly vulnerable period. Even the simple act of waking from hibernation pre-



Eastern Red Bats can remain active throughout winter but will go into torpor if it gets too cold, roosting under loose bark or on the ground underneath piles of leaf litter for insulation. Even more reason to leave your leaves!



Woodland Box Turtles will dig burrows in soft soil before entering a state of brumation.



Though they will stockpile food for winter, Eastern Chipmunks are not true hibernators. They go in and out of torpor every few days to eat and defecate, occasionally leaving their burrow during warm spells.

During brumation, many species completely shut down to the point where they cease breathing, digesting food, or even circulating blood altogether.

maturely can be fatal, as the huge energy expense may not be recoverable using their limited resources.

Brumation is another extreme variation on seasonal torpor experienced by ectotherms (reptiles and amphibians), considered the "cold-blooded" equivalent to hibernation. Because these species cannot create their own body heat, their internal function is directly linked to external temperature.

Shelter-seeking behavior can be seen in turtles and tortoises that burrow underground, or some amphibians that bury themselves in the mud at the bottoms of ponds. Others may not shelter at all, and simply freeze over! During brumation, many species completely shut down to the point where they cease breathing, digesting food, or even circulating blood altogether. Brumators "thaw out" when the weather warms, and some may take these opportunities to drink water intermittently throughout winter.

Of course, there are numerous other species that do not enter dormancy at all. By now, many have already completed their migration to locations with warmer temperatures or plentiful resources. Birds are commonly known to migrate thousands of miles, some making the entire journey nonstop. Check out our Rehab Corner on the next page to see how you can help migrating birds do so successfully!

Even those that remain behind and active during the winter months often develop unique adaptations to better survive in cold environments. They may grow a thicker coat of fur that changes colors to hide in snowy landscapes, generalize their diet to include atypical foods, or huddle up with other members of their species for warmth.

Regardless of their winter strategy, wildlife are built to survive and have an impressive array of strategies to survive harsh conditions!



Groundhogs are true hibernators. They can drop their body temperature by over 60°F, maintaining a heart rate of five beats per minute and respiratory rate of two breaths per minute!

Rehab 🕂 Corner

Fall Migration

With the end of summer comes fall migration, an annual journey taken by billions of birds across North America from their summer breeding grounds to their wintering territories. Many migrants move at night, using the positioning of the stars and the moon as their guide. Some birds travel up to 2,000 miles total to get to these distinctive locations!

With migration comes an influx of birds we don't often see needing our help. With this long journey, you can imagine there are a variety of dangers involved, many of which are unfortunately human-made. Reflective windows can be confusing, showing a skyline or trees to fly towards, when in reality they collide with a glass pane at dangerous speeds. Artificial lights can make the night sky difficult to see, or attract birds in the wrong direction.When paired with reflective windows and buildings, disorientation can create a "trap" for migratory birds who can't figure out which direction to fly, causing more collisions.

Want to help wild birds? Get rid of reflections by using decals, paint, or blinds



Hooded Warbler.

to break up the "scene" that birds see in your windows. There should be no more than 2" between decals, painted pictures, or other items used so that birds won't try to fly between them. Turn unnecessary indoor and outdoor lights off at night.

Limited remaining habitat can also make it difficult for birds to find enough food on these long journeys, so when possible, leave your native plants and don't use pesticides. That way, there will be plenty of safe foods available should you get some weary migrants in your backyard!

Check out some of these infrequently encountered bird species we've received throughout migration, many of which were either window strikes or hit by cars.



Eastern Whip-poor-will.



Brown Creeper.



Common Yyellow Throat.

Bald Eagle Chest Wound

This immature Bald Eagle was brought to us after it was found unable to fly at a Prince William County landfill. Upon exam, no broken bones were found, but the bird had a severe wound to the keel (chest), indicating this bird may have been suffering from issues for quite some time. Thankfully, with treatment and wound management, this eagle steadily healed until the wound fully closed. After conditioning and spending some time reacclimating outside in our circular flight enclosure, this eagle was released home!

Copperhead Eye Infection



This Northern Copperhead was found in a homeowner's yard with an obvious eye issue. After being sedated for an exam, our staff discovered that the snake had an infection beneath a retained spectacle! After treatment and a successful shed, the affected eye reduced in swelling significantly, and this snake was successfully released!

Did you know? It is illegal to raise or rehab a wild animal without the appropriate license and permits. If you are located in Virginia, use this website to find a licensed wildlife rehabilitator near you: dwr.virginia.gov/wildlife/ injured/rehabilitators/.



The chest wound photos above show the progress of healing (l to r) of this young Bald Eagle.

Dog-Attacked Virginia Opossum Moms

We had not one, but TWO dog-attacked mother opossums come in to us within a week of each other.. One mother suffered from a dislocated femur which was causing discomfort and pain, prompting our veterinarians to perform a Femoral Head Ostectomy. This is a surgical procedure where the head of the femur is removed, but the musculature and scar tissue surrounding the area heals to hold the leg in place and allow for proper movement and support. This momma recovered quickly and after physical therapy and acclimation outdoors, she was released with her babies in tow! The second mother was in much worse condition upon examination. The dog attack had left her with multiple puncture wounds over her chest and back that perforated into her lungs, requiring her to be on oxygen support for multiple days. However, within a week, she was eating on her own, moving around, and moved out of oxygen into regular hospital caging. Just a few short weeks later, she was also moved outdoors and subsequently released with her babies as well!





WILDLIFE NEWS

Northern Watersnake Surprise!

Our staff was in for a surprise when this Northern Watersnake presented with a hook stuck in her mouth. After the hook was removed, we took radiographs to confirm there weren't any additional hooks or other foreign bodies further down the gastrointestinal tract. Nothing foreign—but there WAS something else—baby snakes!

About a week after being brought in, this snake gave live birth in her aquarium to nearly 30 healthy babies! Since these snakes are born completely independent, they were released after a few days of monitoring back where mom was found. Mom was also released shortly afterwards once her course of treatments were finished.

Melanistic Infant Squirrels



These may look like a mix of species, but these babies are actually both Eastern Gray Squirrels! The darker morph seen in this litter is melanistic, when there is more pigment than their gray phase. It is currently being studied whether this darker morph has advantages living in more urbanized areas compared to gray morphs living in rural areas. This was one of many fall litters of squirrels we have received and successfully released!





State-Threatened Wood Turtle Shell Repair

This female Wood Turtle was brought to us after being struck by a car, causing severe shell fractures with concern for exposure of the coelom (body cavity). Since Wood Turtles are state-threatened in Virginia every individual is extremely important! This patient is doing well and we expect her to be ready for release next spring!





Q&A with Alysa Everly

Front Desk Coordinator

Meet our newest staff member and front desk coordinator, Alysa Everly

Q. What interested you into working here with us, at the Blue Ridge Wildlife Center?

A. What interested me most in working at the Blue Ridge Wildlife Center was the love and passion for wildlife that just radiates from the staff and volunteers here. From my very first visit I was amazed by the love, care, and dedication that is put into the animals at the center. I knew immediately that this was an organization that I wanted to be a part of, so when the position opened up I couldn't say yes fast enough.

Q. What does a regular day, as the Front Desk Coordinator, look like for you?

A. A normal day at the front desk normally consists of answering phone calls and questions about wildlife emergencies as well as nuisance wildlife issues, writing patient updates, doing intakes of new patients, and sometimes on slower days bothering our wonderful vets for little tidbits of their vast knowledge.



Call for Volunteers!



Have you always wanted to work with wildlife, but don't have the time or resources to dedicate to becoming a home rehabilitator? Want to educate people on the issues surrounding wildlife and help our communities become better stewards of the environment? Love working on simple or complex construction and building projects? Consider becoming a volunteer!

Volunteers help us in many different areas

around the Center—Docenting, Rehabilitation, Construction, Administrative, Transport, and so much more! Volunteers only need to commit to a minimum of five hours a week, and we're accepting new volunteers for most days throughout the week! Checkout our application online and e-mail it into us—we can't wait to hear from you!



blueridgewildlifectr.org/volunteer

Q. If there's one thing you could advise people about wildlife—what would it be?

A. My best advice for wildlife is, when in doubt, always ask a professional, there is no such thing as a dumb question, and it can never hurt to ask! It is always important to remember that wildlife were here first, and we need to learn to live with them. One of my favorite sayings is "the animal isn't crossing the road; the road is crossing the forest" and I think that is an important concept to keep in mind when dealing with 'nuisance' wildlife no matter the species.

Q. Is there one particular moment you've had working with BRWC that sticks out to you?

A. Although not a specific moment, it is the times when callers go above and beyond to make sure an animal gets to us that always stick out. People will call about something and often are unsure if there is something wrong with the animal but are still willing to take hours out of their day or even be late to work just to get the animal the care they need and that always really touches my heart.

Enrichment in Rehabilitation

Rehabilitation, although a lifesaving process, is not always a walk in the park for our patients. There are numerous stressors that accompany long-term care, and it is our job as care professionals to reduce and manage these issues. To treat physical discomfort we might use pain medications, but how do we manage mental stress? Enter... enrichment!

Enrichment is an essential part of caring for any captive animal, just like providing proper nutrition and veterinary care. It encourages the use of species-appropriate natural behaviors by introducing novel stimuli or objects in order to allow animals to exercise choice in their environment, stimulate cognitive reasoning, and act on natural instincts.

There are several categories of enrichment, including (but not limited to!):

Sensory enrichment: Auditory, olfactory, and visual experiences in which we may provide mirrors, novel scents, or recorded sounds (like native bird calls) for patients.

Environmental enrichment: Usually a change or addition of surroundings, which may include new logs, rearranging cage "furniture", or creating natural den areas. Cognitive enrichment: Often used in tan-

dem with other forms, these encourage the use of problem-solving techniques to accomplish a goal. This includes hiding food in puzzle feeders, Kong toys, and foraging boxes for patients to uncover.

Food enrichment: Offering items outside of an animal's prescribed diet, which may include interesting cuts of meat and bone, dried fruits, live insects, etc.

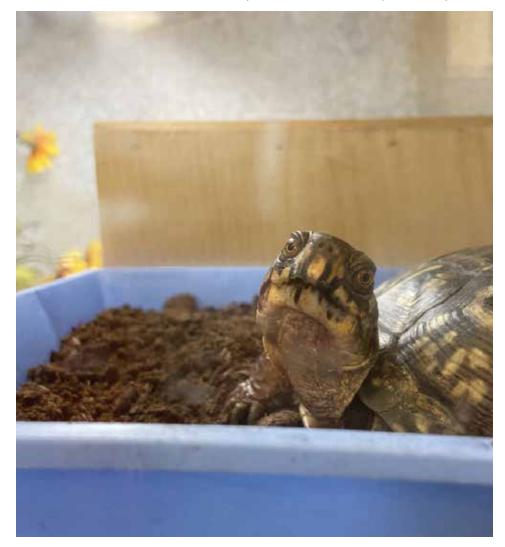
Social enrichment: Achieved by housing patients with conspecifics (members of the same species) or allowing them to smell and see other individuals through caging, if placing them together is not safe. This is



Using boxes or puzzle feeders to present the diet allows patients to use their natural foraging skills when eating and provides mental stimulation.



Natural items like leaves, wood, dirt, and sticks provide enrichment for many of our wild patients.



especially vital to prevent imprinting with infants or juveniles, as they will properly self-identify and learn behaviors from their own species. Enrichment in a wildlife rehabilitation setting looks a little different for each patient and at each stage of the healing process. Once patients are stabilized, we can provide items to stimulate their instinctual drives to reduce stress, encourage exercise, and prepare them for release.

A typical patient enclosure at any stage includes the "basics," being suitable perches, hides, and accessible food and water. Once patients are improving and eating on their own reliably, staff can provide more complex enrichment like foraging opportunities, dig boxes, climbing materials, bathing pools, and more. These types of enrichment are especially important for longer-term patients, like overwintering reptiles, to encourage mental and physical exercise as they await release.

Check out our CRAFT CORNER on the next page for directions on how to make two easy enrichment items at home with recyclable materials! This is a great activity to do with family and friends of all ages during the holiday season. Completed enrichment items can be donated to the Center or your local wildlife rehabilitator if they are able to accept them. to your local wildlife rehabilitator or center!

If you are interested in donating your finished items to BRWC, please call (540) 837-9000 between 9:00 am-5:00 pm to arrange drop-offs.



How to Make Your Own Enrichment Items for Donation

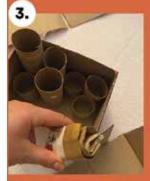
DIY PUZZLE BOX



Gather supplies. You will need cardboard scraps, a small box, scissors, and paper tubes.



Cut the top off of the box and cut your tubes into varied sizes.



Arrange tubes in the box. If you run out of tubes, strips of scrap cardboard can be rolled into tubes and used to fill the box.

4



Your finished box should resemble this one! Feel free to use **non-toxic** paints, crayons, and markers to decorate the outside.

REHAB NOTE!

Enrichment boxes like these help keep our patients stimulated and mentally calm during care. Food items can be added to these boxes to increase foraging drives and decrease stress.

DIY HOLIDAY MACHE



Gather supplies. You will need a cardboard box, newspaper, flour, bowl with 2 cups of water, and scissors.



Cut newspaper into ~3" strips. Mix 1 cup of flour into the 2 cups of water. Use hands or a whisk to smooth the mixture.



Dip strips of newspaper into flour mixture. Wring out and cover box in even layers. Allow to dry 24 hours before decorating.



Once dry, decorate the box with **non-toxic** crayons, paints, and markers. Feel free to channel the holidays or free style it!

REHAB NOTE!

Paper mache boxes are great enrichment for both our resident animals and patients. They introduce a new smell and texture, while remaining non-toxic and safe. Boxes can be stuffed with scented paper, food items, or made into an advent style foraging box.



HOW YOU CAN HELP NATIVE WILDLIFE IN YOUR OWN Backyard



Planting a diverse selection of native grasses and plants in place of a monoculture grass lawn can create shelter and food sources for native pollinating insects, birds, and other wildlife.

These plants have also evolved with our local environment and climate which helps save time, energy, and money on yard maintenance.

Talk to your HOA if they have grass length requirements.

TIP: Check your yard before mowing to avoid hitting baby bunnies, reptiles, or amphibians with your lawn mower!

Phytolacca americana American pokeweed

Leave Your Leaves and Woody Debris

Leaf litter, dead/downed trees, and brush piles provide valuable shelter and food for wild animals from insects to toads, bats, etc.



This means less work for you because you don't have to rake your leaves! Your soil will thank you as well, as the decomposing leaves will provide valuable nutrients.

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Avoid Feeding Wildlife

You can help prevent disease spread by reducing unnatural wildlife congregation and preventing habituation.

A wild animal could become unafraid of you, making them more vulnerable to another human who may want to harm that animal.

Water Feature or Pond



12

Creating a water feature or pond on your property can provide drinking water or a natural feeding ground for wildlife by encouraging native flying insects that are food for birds, bats, frogs, toads, and salamanders.



Turn Off the Lights

Not only does this save energy and money for you, but it can prevent birds from feeling disoriented while migrating at nighttime.



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ABC Birds
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Place Window Decals

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Researchers estimate up to one billion birds die every year from window collisions.



TIP: Place decals no more than 2" apart across your windows to help prevent birds from colliding with the reflective surfaces.

Leash Your Pets or Build a Catio

Leash your pets when outdoors to prevent them from coming into contact with wild animals which could lead to injury or disease spread.

TIP: Spend quality time and provide adequate enrichment for your pets like leash walks, catios, and toys for indoor activities.





ABC Birds

Scan the QR codes to find out more information about each topic.



Audubon Society Native Plant Database



Virginia Native Plant Finder



Put Up Bird and Bat Houses

As more habitat, nesting, and roosting sites are destroyed, you can try to help your neighborhood wildlife by putting up artificial nesting and roosting sites for native birds and bats.



TIP: Clean these out seasonally after the tenants have left.



Bird Feeders and Baths

Bird feeders can be a great way to observe your local bird neighbors and a way to learn to differentiate species. However, this is also a great way to spread disease and sometimes feeders create an easy target for predators or attract unwanted or unintended wildlife such as bears.

TIP: If you have bird feeders or baths, make sure to disinfect weekly with a 10% bleach solution, followed by a thorough rinse with water, and dry well before refilling to prevent disease spread.



Bird Friendly Coffee, Chocolate, and More!

You can feel good about enjoying your favorite food items when you are helping preserve bird and wildlife habitat at the same time!

Look for "shade grown" and "bird friendly" certified coffee, which allows natural habitat to coexist with coffee plants as a poly culture set-up with native trees in the mid-story and canopy layers. This allows migrating birds to continue to thrive even in an area of crop cultivation.

Blackburnian warbler on a coffee bush



Other items to look for include bird friendly chocolate, rice, dairy and meat products, and even beer!



Smithsonian Bird Friendly Coffee Info

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Use an Alternative to Lead-based Ammunition When Hunting

Lead is toxic andcan be fatal to wildlife AND YOU!

Please use non-lead ammunition during hunting season; you can save lives as carrion eaters (e.g. eagles, vultures, opossums, etc.) will scavenge gut piles and meat laced with lead fragments that is left behind.





Lead vs. copper comparison

Compost instructions

How to Help Mitigate Climate Change at Home

There are other simple things we can do at home to try and lessen our own impacts on climate change and ecological destruction.

A. Turn off lights or unplug electronics when not in use as some amount of electricity still flows to the plug.

B. Use reusable water bottles, mugs, straws, and cuttlery to lessen plastic waste.

C. Recycle where you can; find out from your local town government which items can be recycled or donated and where (platic, glass, aluminum, electronics, furniture, etc.)

D. Compost your produce scraps to prevent it from going to landfills; you can use this to provide nutrients for your garden.

E. Upgrade to more energy efficient electronics and appliances.

F. Collect rainfall for your garden; turn off the taps and hose!

G. Switch to electric cars, lawnmowers, and solar or wind power where available.

H. Carpool or use public transit when available; walk or ride your bike.

I. Eat locally. It takes a lot of energy to transport food; go to your local farmers' market or local food section in your grocery store.





Wildlife Mask-Querade

After a two year hiatus, we were able to hold our 2022 Annual Gala in September. 200 people attended the event in addition to eight staff members and seven ambassador animals. Muster Lane Farm, the venue graciously provided by Nicole Watson and Jason Paterniti, could not have been more perfect. We all enjoyed the positive spirit and enthusiasm.

As a result of ticket sales, sponsorships, and auction proceeds we netted nearly \$100,000! The funds raised will be crucial in supporting staff and programs, and most importantly, the wildlife we are charged to protect. We also face capital expenditures to upgrade water and other systems in our building, and as the number of our patients increase, we need more staff and volunteers to care for them. We need to accommodate them safely and prepare for future growth, especially in our education program.

We greatly appreciate the role everyone played in supporting us.

Mildlife MASK-QUERADE

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From left to right: BRWC staff members Cara Masullo, Sarah Midolo, Dr. Jen Riley, Jessica Andersen, Jennifer Burghoffer, Alysa Everly, Annie Bradfield, Heather Shank-Givens (BRWC Volunteer and Board member).

Gala Sponsors

Our deepest appreciation to our sponsors and auction item donors:

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Photos by Joanne Maisano.



FOLLOW US Image: Second state Image: Second state



BRWC Gift Memberships

Share your love of wildlife with your friends and family

Send a BRWC gift membership to a loved one and they'll receive all the benefits of membership. This makes a great gift for birthday and holidays... or just whenever! Gift recipients will receive a package with a notification of their gift and a message from you, the latest issue of *The Ridgeline*, and the annual membership gift.

Gift memberships are \$40 - but you are always welcome to give more!

Visit **blueridgewildlifectr.org** and click on the **Membership & Giving** tab to get started.

SHOP BRWC

Visit our **Gift Shop** to find the perfect gift for all your wildlife friends.