

TRAILBLAZER

April/May/June 2016



*Supporting Oregon Ridge Park
and Nature Center for 34 years*

AMAZING AMPHIBIANS

By Winny Tan
Naturalist and ORNC Director

While hiking outdoors to observe nature from late winter into spring, one can't help but notice new sounds that are becoming louder and more persistent, especially as evening rolls around. It's no longer just the sounds of birds or foxes finding mates. The snow has melted and rain showers are scattered here and there, leaving plenty of water, and the weather is moderate. This is the perfect time for frogs and salamanders to start migrating back to their breeding ponds, if they aren't there already, to mate and lay eggs — and many are not quiet about it!

Various amphibian species emerge at different times. Each individual species of frogs or salamanders has its own time frame, a natural appointment with vernal ponds and stream pools at the same time each year. One species or another will be actively breeding from spring through the summer months, though some species coincide and share a time frame. If all species bred at the same time, it would be chaotic and sometimes deafening. Have you ever visited a pond in the spring or lived near one? The mass of male frogs and toads calling can be so loud that conversation can be heard only by yelling loudly.

What is an amphibian? Amphibians are discernibly different from reptiles. Amphibians are salamanders, newts, toads and frogs, all vertebrate animals with soft, permeable skin that can breathe and soak in water. Their shell-less eggs are jelly-like and must be laid in water or damp places. They go through different life stages, called *metamorphosis*, starting as larval, gilled tadpoles and transforming into air-breathing adults with lungs. Some salamanders and frogs lack lungs, depending entirely on their skin for respiration. They are *ectothermic*, or cold-blooded. They cannot regulate their



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ORNC COUNCIL SPEAKER SERIES

WATCHING BIRDS THROUGH THE LOOKING GLASS

By Carolyn F. Mathur, PhD
Emeritus Professor York College of Pennsylvania

April 18, 2016, 7:30 PM

Dr. Carolyn Mathur is relatively new to birding and bird photography. During her presentation, Dr. Mathur will describe her journey through the looking glass of her camera into the world of birding, illustrating her talk with many beautiful images of the birds she has discovered along the way. She will explain the transformation she experienced going from a casual birdwatcher to a somewhat obsessed birder. Being a new birder comes with many challenges, such as finding the

birds, then identifying the birds, and finally figuring out how to photograph the birds in a way that helps with identification. She had to learn birding lingo and etiquette, sometimes from people she met with similar interests, and she had to get into Ebird and start her “life list.” The first year of birding can be daunting, but also exciting, since everything is new. Like most birders, she discovered that her birding adventures turned her into a “lifer!”



Dr. Mathur taught and conducted research in microbiology for 39 years at YCP. During that time she did extensive environmental consulting for utilities in Pennsylvania, spent one semester as a Fulbright Scholar in Malta, served as president of the Pennsylvania Academy of Science, and was Chair of the Biology Department at the college. Her avid interest in birds began four years ago while birding with friends in Florida on a search for the elusive and brilliant Vermilion Flycatcher! This April she began her tenure as President of the York Audubon Society in Pennsylvania.

WINDOW INTO THE WORLD OF FUNGI

By Tovi Lehmann, PhD
Maryland Master Naturalist
for Audubon Naturalist Society

May 16, 2016, 7:30 PM



fairies. Mostly hidden under the surface, fungi have evolved their own solutions to life's persistent problems. Gaining the recognition for their pivotal role in shaping the living world, they now reshape fundamental perceptions of biologists.

Following his dream to study wild animals, Lehmann has studied gerbils (and their fleas) in the wild, parasitic nematodes that cause *onchocerciasis* (river blindness), and the black flies that transmit them to people. For twenty years he has studied the ecology of the African malaria mosquito, arguably the second most dangerous animal in the world. His travels have provided him the opportunity to work with African colleagues, spending weeks in villages where he experienced the culture, rhythm, beauty and wisdom of Mali. He earned his PhD in medical entomology at the University of Arizona and has written or co-authored over 90 scientific publications. He also volunteers as a Maryland Master Naturalist in the Audubon Naturalist Society to pursue his interest in fungi and develop educational programs on the natural history and ecology of mushrooms.

MUSIC IN THE WOODS

OREGON RIDGE NATURE CENTER'S
ANNUAL FESTIVAL OF TRADITIONAL MUSIC
IS MOVING TO A NEW DATE!

NEW DATE: SATURDAY, JUNE 4, 2016

NEW TIME: BETWEEN 2 TO 9 PM

It's FREE!
COME RAIN OR SHINE!

In case of rain, the venue moves
inside the Nature Center.



FEATURED EVENTS

Bring lawn chairs or blankets for your comfort.

- Listen to Local Musicians & Bands Play Folk, Bluegrass, Rock and More
- Bring Your Instrument and Join a Jam Session
- Learn about the Dulcimer
- Visit the Vendor Booths
- Enjoy Crafts, Face painting, and Animal Encounters
- Buy a Hotdog at our Stand or Buy other Food Fare from the Food Truck
- And More Surprises in Store
- End the Night Roasting S'mores at the Campfire

OREGON RIDGE OFFERS FUN FROM SPRING TO FALL

NATURE QUEST

An Adventure in Your Own Backyard

Nature Quest is a great opportunity to experience the outdoors and be active with friends and family while discovering some of the best parks and trails in Baltimore County. Travel the trails — some on foot and some in a canoe or kayak — to find trail markers at Oregon Ridge Park, Benjamin Banneker Park, Cromwell Valley Park, Marshy Point Park, Lake Roland, Honeygo Regional Park and the Maryland Agricultural Center. There are special rewards for those completing five or more trails! To get started, all you need is a Nature Quest Passport.

Those who complete at least five trails are eligible for FREE admission to Baltimore County's celebratory *Nature Quest FEST* (location, date and time TBA). Anyone can attend the Fest, but there is a fee for those who did not complete five trails. If you have completed five trails, call 410-887-4156 to register or do so at one of the participating parks, and hang on to your Passport! It is your ticket for free admission to the Fest.

To learn all about this unique outdoor adventure, get your Nature Quest Passport now at one of the participating parks or at Wegmans, or online:

www.oregonridgenaturecenter.org



NEW PROGRAMS COMING IN MAY

Spring is finally here and the Nature Center has introduced a few new programs to our calendar. Please call ahead for reservations (410-887-1815) to these May events:

April 30th and May 1st – *Beaks, Bills and Talons* will help you discover all things *birds*! The staff will introduce you to different types of birds that make Oregon Ridge Park their home. Donation: \$5/\$3 members.

May 7th and 8th – *Mother's Day Morning Tea* is an opportunity to spend Mother's

Day with Mother Nature. Enjoy a morning walk to observe the abundant nature in the Park, and then relax in the meadow picnic area with a hot cup of tea and cookies. Donation \$6/\$4 members.

May 14th and 15th – *A Morning in Mining History* leads us on a trip back in time when Oregon Ridge was a mining town. Explore various historical sites and take a tour of the Peter Goff Museum, a replica miner's house. Donation \$2/free for members.

TRAIL GUIDE TRAINING KICKS OFF THE FALL SEASON

September 6-9, 10 AM – 1 PM

Oregon Ridge is always looking for enthusiastic volunteers who love learning and the outdoors, and who are willing to share nature's wonders with children. Trail Guides are trained to lead walks for visiting schools, both public and private, seasonally from Tuesday to Friday. These volunteers lead groups of about 10 students on a hands-on, memory-making nature adventure through the Park. The topics of this fall's training include: Habitats, Insects, Native Americans of Maryland, and the Chesapeake Bay.

There is no minimum time commitment, and no experience is required. The \$20 training donation for all incoming participants includes valuable resources distributed during the training, as well as monthly field trips for continuing education. After 40 hours of service, a volunteer receives an ORNC T-shirt and an official name tag. Call or email the Nature Center, if you are interested in signing up!



Look what a group of school children found with a Trail Guide on a hike this spring - SALAMANDER EGGS!

MAPLE SUGAR WEEKENDS WERE SWEET!

Fantastic! An estimated **6000** people showed up for our tree tapping, syrup-making weekends this year. Some of our visitors came from Delaware and Virginia. The staff and volunteers worked nonstop leading crowds to the sugar bush to tap trees and gather sap from maples and black walnut trees. Mother Nature provided just the right conditions for a super successful maple sugar season — warm days and freezing nights. The sap flowed so prolifically with each tapping, that the Nature Center was able to make five quarts of black walnut syrup (photo below) and one quart of maple syrup! Most of the maple candy sold out on the first day, and two more orders from Dennis Farms were needed before it was all done.

Maple Season came accompanied by its brother, Mud Season. The beautiful warm weather melted the snow and thoroughly thawed the ground, creating muddy fields where we park overflow cars for big events. We appreciate the kind-hearted visitors who helped others get their vehicles out of their muddy situations.

Without hours of volunteer help, the Nature Center would not have met the needs of all of our festival visitors. Thank you goes out to these great folks who helped out with tours, historical sugaring demos, evaporator talks, tastings, syrup and candy sales, parking, and prepping/cleaning for the event:

Alisa Anania
Gary Anderson
Debbie Bacharach
Anna Beard
Nancy Berger
Lindsay Bull
Gail Burns
Lindsay Caplan
Chelsea Connor
Jim Curtis
Marcia Dysart
Jimmy Francis
Olivia G
Marsha Hall
Sybil Hebb
Joan Hoblitzell
Carol Johnston
Beth Keyser
Paula Mackey
Erin McCleary

Ellen Mering
Kevin O'Neill
Ozella Oden
Christina Panousos
Alan Penczeck
Possidente Family
Ned Renner
Maddie Rozics
Geneveva Salazar
Zi Smith
Bob Stanhope
Michele Steinitz
Martha Sybert
Linda Tice
Paul Waldman
Emilio Wanis
Pam/Megan Ward
Dulaney High
School Key Club



MEMBERS!

Tippy Terrapin says,

THANK YOU SO MUCH!



To the 52 people who became new members and the 41 members who renewed at the this year's Pancake Breakfast. If you weren't able to make it to the breakfast, **PLEASE RENEW TODAY!** See the back page for details.

WHAT'S COMING UP IN SUMMER AND FALL!

SUMMER PROGRAMS FOR ALL AGES!

Summer Calendar Coming Soon!

TRAIL GUIDE TRAINING

September 6 to 9, from 10 AM to 1 PM
\$20 Donation. (See Article on Page 4)

HONEY HARVEST FESTIVAL!

Mark your Calendars NOW for
October 1 and 2, 11 AM to 4 PM
IT'S FREE AND TONS OF FUN!

30TH ANNUAL PANCAKE BREAKFAST TOPPED RECORDS!

Our super attended Maple Sugar Weekends were celebrated by the best attended Pancake Breakfast on record: 1368 pancake loving supporters. It also topped the record for fundraising, bringing in \$11,705 (which includes \$3,571 from maple sugar weekends) to help create new exhibits, programs, and outdoor features. For 30 years, the Pancake Breakfast has attracted young and old, singles and families, ORNC Council members and non-members, who love the Nature Center and Park and support all that it does.

There were a few *original* Council members attending the breakfast this year: Jean Worthley, ORNC's first Council president (and the host/creator of MPT's Hodge Podge Lodge in the 70's - 80's); Bob Stanhope, the Center's first director (lower

left photo with Winny Tan); Lynn DeWitt and Cas Warfield. (See lower right photo with Cas on left, Bob, Jean, Lynn.) Another visitor was one of our earliest, all-around fantastic volunteers and board members, Ray Reinsfelder, who spent many, many years as a Trail Guide at ORNC. Senator Ben Cardin and Baltimore County Councilmen David Marks and Todd Crandell joined us as well.

Thank you, John Canoles, for setting up the spectacular Box Raffles that grossed a whopping \$2,535! (See **BOX** on page 7.)

A special thanks goes to the Planning Committee (names boldly highlighted below), especially Co-Chairs Erin and John McCleary, who coordinated this fun tradition for the first time this year.

A melodic thank you goes to the bands who provided the musical backdrop to the

merriment: *Oregon Ridge Dulcimer Band* and *The New Southern Cow Tippers* played Saturday, and *Mayo on the Hotcakes* and *Will Play for Fish* performed on Sunday.

Last, but not remotely least, we want to thank the 53 people who joined the Council and the 41 who renewed during the Pancake Breakfast.

President Pat Ghingher sums up our feelings about the wonderful volunteers who make it all happen at Oregon Ridge:

Many, many, many thanks to everyone for making this year's Pancake Breakfast the BEST EVER! When I took time to look around at the breakfast, I was, as always, astounded at the number of volunteers we have there and how many are present and past Board members. By volunteering at all of our events, you make ORNC what it is. You are the BEST!

THANK YOU ONE AND ALL! YOU ARE GRADE-A VOLUNTEERS!

Alisa Anania
Carole Armor
Gary Anderson
John Bainbridge
Nancy Berger
Chris Blume
Gail Burns
Mike Burns
Ann Canoles
John Canoles
Noot Canoles
Chelsea Connor
Jim Curtis
Mary Ellen Dyer
Marcia Dysart
Lilly Enderson
Lucilla Facchon

Lynn Faulkner
Maureen Flynn
Jimmy Francis
Georgette Frederick
William Fuerer
Susan Genovese
Katie Georgantas
Jay Ghingher
Pat Ghingher
Sybil Hebb
Joan Hoblitzell
Karen Jackson
Pam Jarrell
Mark Kander
Monica Kander
Jerry Kirkwood
Dorothy Kirkwood

Bill LaBarre
Holly LaBarre
Sue Leslie
Carol Mantagna
Ron Mantagna
Walter Massey
Nancy Mattingly
Erin McCleary
John McCleary
Angie McDaniel
Steve McDaniel
April Melato
Dan Melato
Ellen Mering
Bradley Moore
Ruth Moore
Colleen Neely

Maura Neely
Nan Neely
Kevin O'Neill
Christina Panousos
Cheryl Parish
Beth Petterson
Ava Possidente
Lucia Possidente
Maggie Possidente
David Power
Laurie Psoras
Ned Renner
John Rigley
Joe Salvaggio
Mary Scott
Mary Jane Shanks
Jeff Shue

Jessica Shue
Jim Smith
Zi Smith
Michele Steinitz
Derrick Tan
Linda Tice
Anne Verch
Elizabeth Verch
Paul Waldman
Dave Ward
Josh Ward
Meghan Ward
Pam Ward
Alex Waugh
Lou Witt
Kay Zamah





Photos by Stephen McDaniel
www.mcdanielphotography.com



Brooks Robinson photo donated by John McCleary
McCormick basket donated by
Rick Gill, VP Consumer Research

Boordy Basket
Ladew topiary 4 passes
TurfValley golf 4 some
Earth Treks 2 climbing passes
Pam's Real Estate Services package by Pam Jarrell
Mt. Washington Tavern Dinner for 4
Aruba Sun and Spa \$50
Ginna's Wine Basket donated by Ginna Naylor
Millstream Cellars Package
Two Brooks Huff Gift Certificate
Two Honey Baskets by Nancy Berger
REI Donation
Michele's Granola Donation
Brick Bodies Membership
2 Bird Feeder packages by Darlin' Corey Farm



**We are Grateful to these
Generous Contributors
to this year's BOX RAFFLES!**



BEN WETZEL: A Dependable Ridge Runner

Ben Wetzel decided to become a Ridge Runner to fulfill his boy scout service hours. Since he loves animals, it was an easy choice. He discovered he not only enjoys caring for animals, but he also enjoys educating people about them while he is on duty. His favorite animal in the Center is Ruby the Corn Snake. She is gentle, brightly colored, and loves to wrap herself around his arm. Ben especially enjoys showing her off because, "I can let visitors pet her and tell them all about her."

Ben is a sophomore at Dulaney High School, with a 3.5 GPA. His

favorite subjects are World History and Art. He plans to attend college upon graduation. During his spare time, he likes camping, learning about knot lore, and playing video games. His favorite pastime is reading, especially fantasy and science fiction such as *Lord of the Rings*, the *Tapestry Series*, *Harry Potter*, and *War of the Worlds*. At home Ben cares for his two dogs, mini goldendoodle Tucker and Coco, a shihpoo.

Ben thinks one of the best things about being a Ridgie is making new friends. One of his Ridgie friends, Scout, plays a part in a funny story he tells about Licorice the Rabbit's escapades when she got loose in the classroom. Licorice must have been excited and hard to catch. Ben explains, "When Licorice was loose in the animal room, Scout made *me* clean up all the poop and pee that Licorice left behind!"

Ben has two more years with us as a Ridgie, and we will keep him busy. He doesn't hesitate to help at special events and serves as a Counselor in Training every year at summer camp. Last year he got a kick out of playing Iron Ore Man, a fictional 1850's miner who lived at Oregon Ridge and succumbed to an untimely death at the old furnace. Ben enthusiastically ran through the woods, bringing the spooky story of Iron Ore Man to life for all the campers. Sometimes his acting was a little *too* believable! Ben is also quick to show off his scouting skills by helping to set up campfires.

If you enjoy animals and nature, join the Ridge Runner Team. Ridge Runners volunteer after school or on weekends. They help at all of our events and are indispensable for our animal care. Just call Jessica Jeannetta on Tuesday through Friday to set up an interview, 410-887-1815.

THANK YOU FOR YOUR GENEROSITY!

For the first time since the Council's first fundraising efforts to get the Nature Center started, we sent out a request for donations to help us bring to fruition some major projects, including some ambitious exhibits and a renovation of the library, exhibit hall, and auditorium. We want to thank all of the donors who responded to the 2016 *Giving Card Donation* campaign.

Anonymous in honor of Millie Dreier
The Crafton Family in honor of Hanna Crafton
The Green Family in honor of Bob Green
Mrs. Jean Worthley
The Collins Family
Mr. and Mrs. David A. Power
Ann and Noot Canoles
Mrs. Linda Tice
Mr. Barry Daly
Patrick Dorn in honor of Austin Luera
Michael Borowitz and Barbara Crain
Anonymous in honor of Ruth Conard
Mr. William Rothauge



Anonymous in honor of the wonderful
Nature Center Staff
Mary Jane Shanks in honor of Ginna Naylor
Diane Griffin
Ann and Jack Kerns
Tom and Carol Lewis
The Sharpless Family
The Rollfinke Family
The Savage Family
The Johnston-Nicora Family

PLUS 12 anonymous donors

SCOUTS RE-ROUTE PARK TRAILS

Oregon Ridge's Park trails are well loved; however, some trails are showing signs of age. As you hike you may notice ruts, ditches and other holes that seem to be getting larger and larger with every passing rainstorm. This erosion is creating *trail gullies* that divert water from the Park trails, causing pollution of our local waterways.

While hiking in the Park this spring, you may be surprised to see that two of the Park's popular trails have been re-routed. Both the Blue Trail and the Tan Trail have sections that have been closed and the trails re-routed so that hikers can continue to enjoy the trail for years to come. Oregon Ridge was lucky to have two Eagle Scout candidates, Gabe Madro from Troop 340 (Blue Trail) and Tony Schaffer from Nentico Lodge #12 (Tan Trail), step up to the challenge. During the fall and winter, both scouts worked diligently to carefully plan, organize, and implement the new trail sections, allowing the sections of trail with severe erosion issues to be closed off. The new re-routes not only have environmental benefits, but also improve Park safety for the enjoyment of many hikers who utilize the trails throughout the year. The next time you are in the Park, be sure to check out these new sections of trail!

If you know any scouts who may be interested in completing an Eagle Scout project in the Park, please have them contact the Nature Center. If you are interested in helping to improve our trails, consider joining our Trailblazers Team. This group gets down and dirty working on projects to make the Park a more enjoyable place for all! Call the Nature Center to sign-up!



TRAILBLAZER STAFF

Editor/Design/Layout: Mary Jane Shanks

CONTRIBUTORS TO THIS ISSUE

Writers: Jessica Jeannetta, Betsy Kadow, MJ Shanks, Winny Tan

Photographers: Karen Jackson, Steve McDaniel, ORNC staff

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Articles/graphics for Sept/Oct issue due July 11.

**Color versions of the *Trailblazer*
can be seen on our Web site.**

NATURE CENTER STAFF

<i>Director</i>	Winny Tan
<i>Naturalist/CS1</i>	Jessica Jeannetta
<i>Administrative Asst.</i>	Betsy Kadow
<i>Building Maintenance</i>	Pat Bedgar

Part-Time Naturalists:

Andrea Barnett	Eric Mazur
Rob Bonfante	Shoshana Nachman
Lindsay Caplan	Sarah Smith
Karl Dotterweich	Laura Soder
Mary Genovese	Melissa Tillery
Betsy Kadow	Pam Ward

Seasonal Naturalist:

Lorien Covelly
Lauren Leffer
Cole Snyder

Building Attendants: Noot Canoles
Shea Sandifer

own internal body temperatures and rely on environmental temperature sources like the sun to warm up and the shade and water to cool down.

In Maryland, there are 21 species of salamanders and 20 species of frogs and toads. One of the first local amphibians to venture out of winter dormancy is the wood frog. While other frogs are buried deep in the ground below the frost line or partially buried in pond mud, wood frogs hibernate in deep cracks and crevices in logs and rocks or just below the leaf litter. These hibernacula are not well protected and the wood frogs can freeze. Amazingly, they do not die from this condition. The ice crystals that form within their vital organs would kill most other animals, but wood frogs are among some of the lucky critters whose bodies contain high concentrations of glucose that prevents the frog from fully freezing! A dormant, partially frozen wood frog can appear dead, since breathing and heartbeats have ceased. However, as it warms above freezing, a wood frog's body thaws and its heart and lungs start up again. So, when you hear the quacking calls of thawed wood frogs at night, you are really hearing Mother Nature's reality version of the "Night of the Living Dead," and you know winter is ending and spring has sprung.



Calling is key to finding a mate. When there are so many males of one species calling, perhaps joined by the calls of a few other frog species, it can be very competitive in this nocturnal setting, especially if you are the size of a paper clip. This is the case of the spring peeper. Despite the distinguishing dark "X" on the backs of these frogs, their small size and tan coloration provides perfect camouflage in their natural habitats. As their name implies, the spring peeper male makes a peeping sound. A chorus of calling male peepers sounds like sleigh-bells when heard from a distance. The quality of the call that attracts the female is a loud, high pitched, and frequent peep from a suitable male. Males also emit a lower-pitched whistle to ward off other males from coming too close to its calling site. Younger males, whose calls may not yet be up to snuff, learn to be quiet and hide nearby. These satellite males wait near *fit* males, hoping to intercept unsuspecting females, or they wait until a *fit* male leaves, then they steal the territory in hopes of catching a late female hopping by.

Sometimes, we call a particular frog-breeding season the *frog frenzy*. One example is the American toad. The male suitors, which are much smaller than their female counterparts, must sit in the pond and give off a long trill sound lasting between 4 to 20 seconds to attract the females to their location. Their calls can become frantic and loud, as they are competing with hundreds that have returned to the same pond (or lake, marsh, wet meadow, puddle, ditch) year-after-year to mate. Once a female approaches, he will attach himself to her back until she is ready to lay 2,000-20,000 double strands of gelatinous eggs, which he will externally fertilize simultaneously. This attachment period is called *amplexus*. Sometimes, what he grabs is not the American toad female he was expecting. In their *frog frenzy* to mate, males have been found in a state of *amplexus* with other species of frogs, other males, or even inanimate objects! If other males discover a mating pair, they may try to intercept, latching onto the female as well. Unfortunately, when multiple males find one female, she could be caught in a wrestling match, called a "toad ball." If the first male fails to fend off the invaders, the female could drown if



Top left: Male American toad calling. Bottom left: Wood frog egg cluster. Bottom right: Toad ball (multiple males trying to mate with one female)

she cannot swim up for air. To prevent this, a ready female will hold very still during amplexus so as not to attract the attention of other nearby males. If a female is not ready to lay eggs, she will vibrate her body so the male will release quickly. Male toads will also vibrate and give a peep when mistakenly grabbed by another frenzied male. “Uhhh, wrong frog, man.”

The elusive spotted salamanders are mostly subterranean, coming out at night to feed. They are often only “spotted” by amphibian lovers during the breeding period. Their yellow spots are a warning to potential predators that they are toxic. They leave their forest habitat to mate, making a long journey to a vernal pool. Vernal pools are commonly found in springtime in moist, low-lying forests near floodplains. These pools or ponds are temporary and will eventually dry out later in the year, making them less suitable or inviting for established populations of fish, which are major predators of amphibian eggs, larvae and sometimes adults. This makes vernal pools fantastic places for amphibians to breed. The first warm, heavy rains of the year signal spotted salamanders to migrate out of their forest burrows, following the same route to the same mating pool every year. At these times, roads can be covered with these yellow-spotted salamanders and many other amphibians trying to reach their annual destination. Unfortunately, cars crush many. Others are succumbing to acid rain and other environmental impacts such as habitat loss. Unlike the noisy frogs, salamanders make no sound, so the males that do make it to the vernal pools leave chemical cues for a female to follow until she reaches her male of choice, or the spermatophore packs that he left for her to find, and the mating process begins. The female spotted salamander can mate with multiple suitors or pick up various spermatophores as a way to ensure genetic diversity.

Though amphibians seem bountiful, especially in ponds during the spring breeding frenzy, their population is in global decline. They are considered to be the “canary in the mine” as environmental bioindicators. Where you find no amphibians or amphibians in distress, the habitat has been compromised with pollutants, exotic predators, or environmental threats like diseases. Since the amphibian’s skin is so porous, chemicals can seep through. Deformities (or malformations) are occurring in natural populations of amphibians. Chemical stressors from pesticides, heavy metal contaminants, and pH changes have negative effects on their mortality, growth and development, immune systems, and reproductive success. Introduced animals from human releases can start and spread fatal diseases. Chytridiomycosis and Ranavirus have led to deaths in many once healthy populations of adult and larval amphibians and attack reptilian species as well. In addition, introduced animals also prey on native amphibians and/or outcompete them for resources. Other threats have been and still are habitat loss, road kill, and over exploitation in the animal trade. Maryland species are not exempt from these declines and we have observed mass deaths in our own ponds at Oregon Ridge.

There are always solutions. We can save the amphibians. First and foremost, leave wildlife alone. Taking viable, healthy

animals out of habitats reduces the chances for healthy future generations. Do not release pets or captive-held animals into the wild. These animals may look healthy and may not exhibit signs of illness, but can be carriers for diseases that wild animals lack immunity to resist. Instead, find new homes for unwanted pets. Additionally, before bringing an animal home or to the classroom, do your research and consider the long-term care needed to sustain the animal. Many lab frogs and leftover live frogs from fishing baits have been dumped into natural habitats, causing a chain of disruptions to the whole ecosystem.

Personal practices can also diminish some of the factors that put pressure on amphibian survival. When visiting ponds and streams, make sure to sanitize shoes and boots before and after going into the water. All nets, equipment, and watercrafts should be sanitized before and after entering new bodies of water. This will prevent further spread of critical diseases that could wipe out many frogs, salamanders, turtles, and fish. We recommend scrubbing down with a chlorhexadine solution containing 2% chlorhexadine gluconate (which is, in part, also used in mouthwash). A 10% chlorine bleach solution also works well, but can be hard on equipment made of plastic or rubber.

By our actions and choices, we can improve and promote amphibian populations. Build appropriate ponds using native plants in your yards or community to offset habitat destruction in other places. They will attract not only amphibians, but many different critters like birds, dragonflies, and turtles. Reduce your use of chemicals on lawns and gardens. Sustainable practices in our daily lives can lessen the runoff of pollutants into our waterways, which will also help other aquatic inhabitants like crabs and fish, as well as larger species like eagles that feed on fish.

Rachel Carson’s book *Silent Spring* forewarned of an impending spring when we would not hear the birds sing because of the continued use of DDT as a pesticide. That spurred the ban of DDT in 1972, and birds and other wildlife have recovered significantly since then, most notably the bald eagle. Now, we can make a difference. Let’s learn from the past and ensure a long legacy for all wildlife. Let there be no silent spring for amphibians.



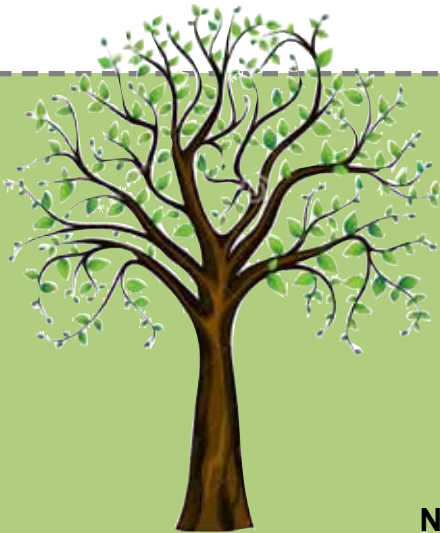


**Oregon Ridge Nature
Center Council**
13555 Beaver Dam Road
Cockeysville, MD 21030

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