



Habitat Herald

A Publication of the Loudoun Wildlife Conservancy

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www.loudounwildlife.org

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The Amphibians of Loudoun: Frogs, Toads and Salamanders — Oh My!

by Nicole Hamilton

Frogs, toads and salamanders are our local amphibians. Most amphibians live a dual life. Beginning in the water where eggs are laid, they soon develop as tadpoles with a swimming tail and gills, living and breathing under water. Then, over days or months of transformation, they develop legs and lungs and soon begin their lives on land. Here they establish home territories with food, sheltered spaces and areas for hibernation.

Frogs and toads typically live four to nine years, but some salamanders can live thirty to forty years, or more. During their adult lives, frogs, toads and salamanders can be found in woods, by streams, in gardens, and in and around ponds. As tadpoles, they are found in streams, ponds, and temporary or vernal pools.

While many of our amphibians breed in permanent ponds, in and along streams, and in forests, many others depend on vernal pools. Vernal pools are interesting habitats. Found in fields and woods, these pools are temporary in that they dry out by summer. Yet, they fill with water in late fall and early spring, providing a place for tadpoles to develop without the risk of being eaten by fish. Amphibians that breed in vernal pools are imprinted by the specific conditions and elements of the pools where they are born. They remember the mineral contents and composition of the water and specific algae they tasted as tadpoles. After amphibians mature and it is their time to breed, they will receive cues in the environment triggering them to leave their normal dwelling areas and migrate a half a mile or more to return to their maternal wetland areas.

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The Loudoun Wildlife Conservancy is a non-profit 501(c)(3) group of volunteers who share a common goal of protecting and perpetuating natural habitats for the benefit of both people and wildlife. Contributions are tax-deductible to the extent allowed by the law.

The Loudoun Wildlife Conservancy Board meets the first Tuesday of each month. Board meetings are open to all members. For more information, or to suggest topics for discussion at upcoming meetings, contact Tom Bjorkman.

You can also visit us at:

www.loudounwildlife.org

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A Word from the President

by Nicole Hamilton

As we celebrate our ten-year milestone and reflect on our accomplishments of the past, we also look to the future. Through our ten years, we have established a solid foundation. We have regular speaker programs and field trips that draw upon a wide network of local and regional experts; a stream-monitoring program that is recognized and respected by the county; bird and butterfly counts that have the longevity and citizen participation to provide good data on local species; solid partnerships with organizations like the Virginia Bluebird Society, Audubon Naturalist Society, Friends of Banshee and Virginia Native Plant Society. We also have a track record for speaking out to promote sound environmental stewardship through our Position Papers, Letters to the Editor, our excellent newsletter, and participation in public input sessions to the Board of Supervisors.

Over the coming years, we will build upon this foundation, which is a very solid one. To prepare for this, we are documenting our processes and getting our internal workings more focused and refined. This will help us as we bring in more volunteers to help. Looking forward, we will expand our programs and field trips, offering programs in some new places, like the Broadlands Nature Center and Claude Moore Park. We will revisit programs that were successful in the past that we haven't done for awhile, but we will also brainstorm new programs that appeal to people across the county. We have a new population in Loudoun. Our audience is full of new faces who need to touch nature and whom we need to touch.

In the area of monitoring, we will expand the things we monitor to include amphibians. We will take a look at more indicator species, so that we can tie the data to habitat and use the data to draw conclusions. We have a great model for

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A Word...*continued from page 2*

monitoring through our stream monitoring and bluebird monitoring and have demonstrated that we can do it well.

This leads to our advocacy. We need to tell the story. We need to take the data we gather in the fields, in the forests and in the streams, and we need to turn all of this into action. I keep thinking – when the last Whip-poor-will of Loudoun sang its song, it told us its tale of habitat loss. We need to tell these stories before the habitat is gone, before our wildlife and the diversity are gone. And, we need to answer the question “so what if they are gone?” We need to take this story to the people and to our elected bodies to help inform and influence the outcomes so habitat is preserved and decisions are made with the environment as a key priority.

However, in cases where habitat is lost, we will not turn away with our heads held low. We will tell the story of what we have lost. We will work to help landowners restore habitat and live in harmony with nature and wildlife. This is the harder road. It takes longer to restore than to preserve what Mother Nature created. It will never be quite the same, but it will be better than conceding to the ecological wastelands of lawns and other poorly designed and managed habitats.

This is where I see us going – full steam ahead into the future! Reaching out, educating, gathering data, being the voice to tell the story and offer solutions. And, where habitat has been lost, we will work to fix it. This path offers us a variety of ways to reach people. We will reach out to the casual nature observer who enjoys exploring and learning. We will work to engage the curious who understand the basics and want to go a little deeper in the learning – to get their feet wet in counting and collecting information and drawing conclusions from it. We will support and encourage the nature lover who has the drive and passion to speak out or do something to create the change our wildlife needs to survive.

The road ahead is difficult and steep, but I can’t imagine a more important road to travel. I’ve been haunted lately by a quote – “a greater mistake was never made, than by he who did nothing because he could only do a little.” I see this as a marathon and a relay – we are in this for the long haul. But to be successful, we need the helping hands of each of you, our members. We need the help of those of the past ten years holding and guiding the hands of those of the coming ten years. I look forward to a future with each of you as we work together to preserve, protect and restore the habitat of Loudoun, for the benefit of all creatures, great and small.

Amphibians of Loudoun...*continued from page 1*

This often huge but mostly unseen migration event is called “Big Night,” and it is a big night indeed! During a heavy spring rain, the forest floor comes alive with migrants following their inner calling as they emerge from their burrows or winter dwellings and make their trek over leaves, across roads, and through a multitude of obstacles to return to the vernal pools where they were born. Some towns close entire strips of roads during these “Big Night” migrations. This allows the salamanders and frogs to cross safely from their forested areas to reach their breeding pools. In making this journey, they are continuing a ritual that has gone on for the last 330 million years – returning to the pools of their ancestors.

Unfortunately, more and more frequently, the salamanders and other amphibians that depend on temporary wetlands and vernal pools will emerge in spring during the “Big Night,” and if they are not killed by cars as they cross roads and are not eaten by predators as they make this journey, they will arrive at what was their pond or pool only to find a parking lot in its place. Because the specific elements of these pools have been imprinted on these animals when they were born, they often will not relocate to another pond or pool but instead will return to the forest and try again the following year, hoping in vain that their pool will return. Entire local populations of amphibians are eliminated in this way due to our not taking care to protect and preserve both their forested homes and their wetland breeding areas.



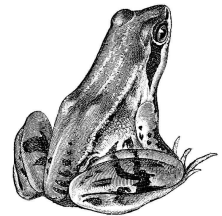
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*Amphibians of Loudoun...continued from page 3****Loudoun Species***

Here in Loudoun, we have eight species of frogs, three species of toads, and thirteen species of salamanders. They can be found in your neighborhoods, around your homes, and in your local parks and open spaces.

Frogs: *Cricket, Spring Peeper, Upland Chorus, American Bullfrog, Southern Green, Pickerel, Wood and Grey Tree Frog*

Most of the frogs in our area like to live in grassy areas along streams and ponds. The Pickerel Frog stays close to water and, if startled, dives in to escape predators. Green Frogs prefer to stay at the waters edge, although young may venture off into moist fields. When intruders enter their territory, they issue a warning call and leap into the pool. Green Frogs eat a variety of invertebrates such as beetles, caterpillars and worms but will also eat small frogs, fish and small mice. They in turn are eaten by larger frogs, like the Bullfrog, as well as by wading birds and turtles.



Some, like the Chorus Frog, are rarely seen but can be identified by their short rasping trill that has been compared to the sound made by running a fingernail over the teeth of a comb. Similarly, our Spring Peeper is rarely seen except during the breeding season in late March and early April when they can be seen crossing roads trying to get to their breeding areas. Their collective “peeps” are some of the earliest sounds of spring. After laying their eggs, Spring Peepers will return to thickets and moist woods to forage for insects.

The Cricket Frog is a non-climbing member of the tree frog family. Because they lack the enlarged toe pads to climb, they move in yard-long leaps. As their name indicates, their call is similar to a cricket and can be heard April through July.

Most everyone will recognize the sound of a Bullfrog with its deep “jug-o-rum” call. While the Bullfrog is our largest frog, able to eat young snakes and small birds, it takes the longest to develop. The tadpoles take almost two years to transform and two to three more years to reach maturity. Bullfrogs are also territorial, such that if a male enters the territory of another, a wrestling match may ensue. Unfortunately, Bullfrogs have been introduced to many areas through pond and garden shops, and, because they are so large, they easily eat other frogs, sometimes eliminating local populations of other native species.

The Wood Frog, unlike the other frogs of our area, typically lives a distance away from open waters. It prefers the moist, forested woods for its home but returns to ponds and vernal pools for just a few nights each year in the cold of winter to mate and lay its eggs. Arriving at the pool early provides its young with the time to grow before the aquatic predators that eat young tadpoles arrive at the pool in spring. By the time these predators arrive, the Wood Frogs have almost fully developed and are “getting their legs” for dry land.

Toads: *American, Fowlers and the recently reconfirmed Spadefoot*

Many of us have encountered American Toads in our gardens — keeping cool under the vegetation or perhaps even taking up residence in a “toad house” made just for them. You can tell a toad from a frog by its skin. Toads primarily have bumpy skin while frogs, for the most part, have smooth skin. Toads also tend to have shorter legs than frogs and walk or make small hops rather than taking the long leaps of a frog. Unlike frogs, toads are adapted to drier habitats. Rather than finding them streamside, you are more likely to find toads burrowed into moist soil under vegetation when the air is dry or sitting in a shaded puddle of water.



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AUDUBON NATURALIST SOCIETY WATER QUALITY PROGRAMS

The water quality of Loudoun County's streams is integral to the well-being of local wildlife and is an indicator of overall ecosystem health. Most of Loudoun County's streams support diverse communities of aquatic life, but in the nation's third-fastest growing county, these irreplaceable resources are under daily threat of destruction and need constant vigilance. Streams and shoreline habitats provide food, shelter, and travel corridors for animals and many of the migratory bird species that make their seasonal journeys across our landscape.

Stream Monitoring classes are taught by Cliff Fairweather of Audubon Naturalist Society (ANS). As our volunteer base grows, the LWC, in partnership with ANS, Loudoun Soil and Water Conservation District and the North Fork Goose Creek and Catoctin Watershed Committees, plans to establish stream monitoring teams for every watershed in Loudoun County. These programs are made possible, in part, by grants from the Virginia Chesapeake Bay Restoration Fund and the Virginia Department of Environmental Quality.

Please join us for one of our sessions.
They are educational, good for the environment, and fun for the entire family.

Classes are held at the **Rust Sanctuary** in Leesburg, VA — ***Reservations for these programs must be made at least two weeks in advance using the registration form on page 6.***

MACRO-INVERTEBRATE IDENTIFICATION I: ORDER LEVEL

Section 1.2R: Sunday, August 7 (1:00 - 4:00 p.m.) — Classroom

Section 1.3R: Sunday, August 21 (1:00 - 4:00 p.m.) — Field

Section 1.4R: Saturday, October 15 (10:00 a.m.—1:00 p.m.) — Classroom

Benthic macro-invertebrates, boneless creatures that live under flowing water are important indicators of stream health. Learn how to identify the major groups of these organisms, including aquatic insects and crustaceans, to the taxonomic level of order (e.g., *Ephemera* or Mayflies). When registering, specify a single section or any combination of sections. Prospective monitors should sign up of and take at least one classroom and one field class.

For more information go to www.audubonnaturalist.org.

PROTECTING LOUDOUN'S STREAMS AND WATERWAYS

If you are interested in becoming a stream monitor, please fill in the following form and mail it to:

Stream Monitoring Project
c/o Audubon Naturalist Society
ATTN: Cliff Fairweather
Rust Sanctuary
802 Children's Center Rd, SW
Leesburg, VA 20176

Name: _____
Street: _____
City, State, Zip: _____
Phone: (H) _____ (W) _____

List the Classes and Dates you are interested in:

Class	1st Choice	2nd Choice

List the Stream you are interested in monitoring:

1st Choice	2nd Choice

If neither of those streams is available, are you willing to help monitor a site designated by the Project?

☐ Yes ☐ No

Are you interested in being one of our Team Leaders?

☐ Yes ☐ No

Would you be interested in helping us with some of our administrative functions (typing, maintaining our database, or record-keeping)?

☐ Yes ☐ No

For more information on any of the programs please contact:

Audubon Naturalist Society — Cliff Fairweather (703) 803-8400

LWC PROGRAM CALENDAR

Space is limited for many of these programs.

Please call the designated program contact for further information and to reserve your spot.

BIRDING BANSHEE – Saturday, July 9,, 8:00 a.m. Join the Loudoun Wildlife Conservancy and the Friends of Banshee Reeks at the Banshee Reeks Nature Preserve for the monthly bird walk. Because of its rich and varied habitat, this part of the county is a birding hot spot. Please bring binoculars. *Questions: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, July 16, 10:00 a.m. to 12:00 noon. Join the Loudoun Wildlife Conservancy and the Friends of Banshee Reeks for one of our free, summer butterfly **and dragonfly walks**. We will investigate some of Banshee's many diverse natural areas and identify all of the butterflies and dragonflies we can find. If you own binoculars, please bring them. *Questions: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*



BIRDING THE BLUE RIDGE CENTER – Saturday, July 23, 8:00 a.m. On the fourth Saturday of each month the Loudoun Wildlife Conservancy leads a bird walk at the Blue Ridge Center for Environmental Stewardship (BRCES). This beautiful 900-acre preserve is located on Harpers Ferry Road, Rt. 671, in northwestern Loudoun County. Only a few miles south of Harpers Ferry and the confluence of the Potomac and Shenandoah rivers, the property includes meadows in the valley and heavily forested slopes on the Blue Ridge. Meet at the Neersville Volunteer Fire Station on Rt. 671 at 8:00 a.m. *Questions: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

ANNUAL LOUDOUN COUNTY BUTTERFLY COUNT – Saturday, August 6, 9:00 a.m. Join the Loudoun Wildlife Conservancy on its ninth Annual Butterfly Count, centered in the Waterford area. No experience is necessary; novices will be teamed with experienced leaders in each segment of the count. Come out and have fun while contributing to butterfly conservation. Counters will also be visiting butterfly gardens in the area which stretches from White's Ferry in the east to the Appalachian Trail and the Blue Ridge Center for Environmental Stewardship in the west and from Point of Rocks south to Lincoln. This annual, mid-summer count, modeled after Christmas Bird Counts, is sponsored by the North American Butterfly Association. *For more information or to register and receive directions, contact Nicole Hamilton at 540-882-882-4839 or nhamilton@loudounwildlife.org.*



BIRDING BANSHEE – Saturday, August 13, 8:00 a.m. See the July 9 listing for details.

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, August 20, 10:00 a.m. to 12:00 noon. See the July 16 listing for details.

MYSTERIOUS CREATURES: Sunday, August 21, 3:00 p.m. *Registration Required.* "Mysterious and little known creatures live within reach of where you sit. Splendor awaits in minute proportions." – E.O. Wilson. Join Cliff Fairweather of the Audubon Naturalist Society on a field trip exploring the mysterious world of summer's insects at the Banshee Reeks Nature Preserve. We will take some time to explore the different creatures busy at work pollinating flowers, setting traps for other insects, excavating homes, hunting on the wing, or using camouflage to escape detection. Their shapes and colors, habits and habitats will be discussed. The world of insects is intricate and diverse – come learn about how they fit into this remarkable web of life – their splendor awaits! We are likely to see dragonflies, damselflies, butterflies, caterpillars, spiders, beetles of all kinds, and even an assassin bug or two. *Registration required – contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

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BIRDING THE BLUE RIDGE CENTER – Saturday, August 27, 8:00 a.m. See the July 23 listing for details.

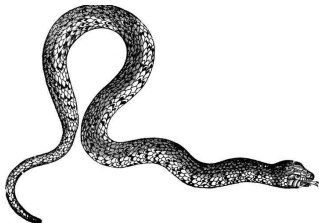
BIRDS, BUTTERFLIES AND WILDFLOWERS AT THE BLUE RIDGE CENTER FOR ENVIRONMENTAL STEWARDSHIP – Saturday, September 3, 8:30 a.m. to 11:00 a.m. Join the Loudoun Wildlife Conservancy and the Potomac Valley Audubon Society on a general, natural history walk (about three miles long) at this beautiful preserve in northwestern Loudoun County. We should see butterflies using the late summer wildflowers as well as early migrating birds. The Blue Ridge Center for Environmental Stewardship is located on Harpers Ferry Road, Rt. 671, a few miles south of Harpers Ferry and the confluence of the Potomac and Shenandoah rivers. Meet at the Neersville Volunteer Fire Station on Rt. 671 at 8:30 a.m. For more information contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.



BIRDING BANSHEE – Saturday, September 10, 8:00 a.m. See the July 9 listing for details.

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, September 17, 10:00 a.m. to 12:00 noon. See the July 16 listing for details.

SNAKES AND AMPHIBIANS – Wednesday, September 21, 7:00 p.m., Audubon Naturalist Society's Rust Nature Sanctuary, 802 Children's Center Road, SW, Leesburg. Alarmed and fascinated by snakes, but intrigued by frogs and salamanders? Come learn more when Liam McGranaghan, noted local wildlife biologist, presents a program on our area's snakes and frogs and their varied behavior. This free program is sponsored by the Loudoun Wildlife Conservancy.



BIRDING THE BLUE RIDGE CENTER – Saturday, September 24, 8:00 a.m. See the July 23 listing for details.

Questions about the above programs –
contact Joe Coleman at 540-554-2542 or jandkcoleman@erols.com.
For up-to-date information on our programs check our web site at www.loudounwildlife.org.

Amphibians of Loudoun...continued from page 4

In the vegetable and flower garden, toads will eat thousands of insects and are an excellent alternative to insecticides. Toads eat ants, beetles, earwigs, snails, mosquitoes, slugs, caterpillars, moths, earthworms, wasps, and more.

During their mating period, the male will send out a trill lasting 30 seconds or more to call prospective females. If other males are around, they will vary their pitch to differentiate themselves. The eggs are laid in pools and marshes, and the tadpoles feed on algae. After four weeks, the toadlets emerge and disperse into woodlands and garden vegetation. If you happen to live near a breeding pool, you may notice tiny toadlets in your lawn on a mid-summer day. Give your lawn mower a break for a couple of days while this new generation makes its way to the woods or denser vegetation of your garden or yard.

Salamanders: *Jefferson, Spotted, Marbled, Northern Dusky, Seal, Northern Two-Lined, Three-lined, Long-tailed, Northern Spring, Four-toed, Red-backed, White-spotted Slimy and Northern Red*

Salamanders are a quiet, reclusive bunch, primarily active at night hunting for slugs, earthworms, and various insects. They require healthy forests and good water quality to live and breed. Because of this, having salamanders is an indication of a healthy ecosystem. However, forest clearing, draining of wetlands, filling in wet soils, and impaired water quality in streams and ponds threaten their survival. Many salamanders live under objects just at the waters edge of a stream or pond, but many others live in rotting logs and leaf litter or in burrows within the forest.

With salamanders, there are water breeders and land breeders. The Spotted Salamander is a water breeder that lives in secret underground burrows for the majority of the year. Heavy rains in February through March trigger its internal cues to migrate to the breeding ponds to join in courtship rituals. With this species, the male deposits spermatophore in shallow, woodland waters or vernal pools. Then the female picks up the mass and fertilizes the eggs which she leaves in an egg-cluster mass attached under water to plants and twigs.

Marbled Salamanders are another fascinating species. This salamander breeds in the fall, migrating to dried out vernal pools where the male and female mate. The female selects a micro-depression under the organic debris in this dried vernal pool and waits with her eggs, guarding them, waiting until the late fall rains come and the pool fills with water, which causes the eggs to hatch. The young tadpoles then live under the ice through the winter, eating zooplankton. By spring, they are large enough to feed on newly developing tadpoles of Spotted Salamanders.

The Jefferson Salamander is one you can encounter at the Audubon Naturalist Society's Rust Nature Sanctuary in Leesburg. They live underground in forests up to a half-mile from their breeding pool. Thus, they are not often seen except during their migration to and from the breeding spot. They are the first of the salamanders to migrate in the winter and can be seen traversing the snow and leaf litter in the rains of March, with the ground only partially thawed and ice often still on the pond or pool. They do not reach sexual maturity until their third year but live to be as old as forty.

In the garden, you may have encountered the Red-Backed Salamander. It is one of our more common species. This salamander fills an important role in the food chain for forest dwellers, especially turkeys who scratch them up from the leaf litter as the turkeys forage for food in spring. Unlike our water breeding salamanders, the Red-Back Salamander lays its eggs on land, often in the cavity of a rotting log. The female stays with the eggs as they develop to guard them from predators. She keeps them moist by coiling around them. With this salamander, the larvae develop directly into their adult stage. Another interesting



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point is that land breeding salamanders do not have lungs. They breathe entirely through their skin, which makes moisture a critical element in their ability to survive. This salamander can often be found in leaf litter and under logs, but they also live in burrows under ground. They prefer mature forests with deep soil and leaf litter, rocks and logs.

Amphibians in the Garden

Frogs, toads and salamanders are extremely beneficial to the backyard gardener. In springtime their choruses are a pleasure to hear, and when we are lucky enough to catch a glimpse, they are wonderful to watch as well. Many will even sit still for a bit for you to take their picture. In the garden, they eat numerous insects often seen as pests. Just one Cricket Frog can eat 4,800 insects in a season. If you had ten in your garden, they would consume 48,000 insects.

Living the Dual Life

The word amphibian comes from the Greek, “amphi” and “bios,” meaning two lives. It is this duality that makes them both so unique and a “sentinel species” as an indicator of environmental quality and health. Why are they an indicator of environmental health? The first reason is that many of our amphibians are both aquatic and terrestrial animals and, therefore, can show evidence of the broader environmental impacts of our actions. When wetlands and streams where amphibians breed are filled in or compromised by pollutants, or when forests where they live and hibernate are torn down, it impacts their ability both to reproduce and survive. Whole populations are affected, in addition to other species up and down the food chain.

A second reason that amphibians are an indicator of environmental health is that their skin is permeable. While this helps them regulate their body temperature by enabling them to absorb and release water, it also makes them vulnerable to absorbing pollutants. Even as adults, frogs, toads and salamanders absorb water through their skin rather than drink it. You will often see a frog or toad sitting in a puddle in summer, warming itself with the sun, yet also absorbing water through the skin on its belly and legs to stay hydrated. When they absorb polluted or impaired water or come in contact with soils and lawns treated with fertilizers, herbicides and pesticides, they also absorb these chemicals. Air pollution affects them, too. On the many bad air days we experience through the summer, pollution is dense in our air. When it rains, the pollution falls to the ground as acid rain, and the frogs, toads and salamanders absorb this pollution as well.

Next Steps

Amphibians have been on this earth for over 330 million years. Able to adjust and adapt, they even made it through the last two mass extinctions. Yet, starting around 1989, a serious decline in amphibians across the world was being noticed and reported by scientists on every continent. Deformities and extinctions rose at an exponential rate, and the reasons seemed unclear. Today, at least 32% of amphibians around the world are threatened with extinction, and 43% are having population declines. Here in Loudoun we are building at an incredible pace, replacing forests, fields and wetlands with malls, parking lots, lawns and roads. There is no way that the frogs, toads and salamanders can keep pace with this development. However, it would be a shame to let their disappearance go without notice and without our trying to establish a protocol to protect their habitat.



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ANS Environmental Education Programs

*The following classes are given by the Audubon Naturalist Society at the Rust Sanctuary in Leesburg, VA.
Please contact Cliff Fairweather at cliff@audubonnaturalist.org or 703-669-0000
for more information or to register.*

Family Programs **(For beginners of all ages)**

Fees: ANS members: \$7 per child (\$5 for each additional child); nonmembers: \$10 per child (\$7 for each additional child). Please note that additional child discount is for siblings only. Adult participation required; adults do not pay fee unless otherwise noted. All programs require registration, but drop-ins are welcome!

Wild Nightlife

Friday, July 8 (8:00 — 9:30 p.m.)

Ages 4 & up (with adult)

Whooo's awake at night?? On this special night hike we will search for signs and sounds of owls, opossums, bats and other nocturnal friends and discuss their adaptations for life after dark.

Nature for Toddlers

Wednesday, July 6 (9:30 — 10:30 a.m.)

Ages 2 & 3 years (with adult)

Friday, August 26 11 (9:30 — 10:30 a.m.)

Tuesday, September 27 (9:30—10:30 a.m.)

Come and explore nature with your toddler! Join us for a single day or several days and learn how to teach your child about nature. Each day we will read a story and investigate an animal that lives at Rust. A craft and a short hike will be included during our time together. If your toddler needs a ride during our hike, please bring a backpack (strollers are not appropriate for the trails).

SPECIAL FREE PROGRAM

Vultures in our Midst

Sunday, July 31 (1:00 — 3:00 p.m.)

Join us for a presentation about and a celebration of our local vultures! Virginia vulture rehabber Mattie Libre will join Lisa Couturier, author of the recently released "The Hopes of Snakes and Other Tales From the Urban Landscape," a book about urban wildlife. Come and learn about vultures: an often misunderstood but vitally important bird.

This program is free, but space is limited. RSVP at 703-737-0021 or cliff@audubonnaturalist.org.

Annual Meeting and 10-Year Celebration – A Good Time Was Had By All!

The Annual Meeting was one of our best yet. The Rust Sanctuary was a sanctuary indeed as we were serenaded by Flycatchers, Grosbeaks, Chimney Swifts and countless other avian friends. The weather was beautiful, sunny and warm enough so we could have dinner and the meeting outside on the back lawn beneath the trees.

As guests arrived, they were greeted by Ellie Daley and the Evans siblings – Lily, Emma and Hank. Members came from across the county to enjoy a lasagna dinner with salad and delicious fresh breads donated by Leesburg's own Eclectic Gourmet.. During dinner, guests enjoyed the melodic tunes of Tabby Finch and Sam Morgan who played the hammered dulcimer and fiddle.

Peggy Coontz of the Blue Ridge Wildlife Center introduced us to Stanley the Opossum who was quite friendly and has incredibly soft fur! Peggy provided us with a wealth of information about opossums and Stanley served as a great ambassador for his species. Stanley had his own special dinner of grapes and carrots which he thoroughly enjoyed.

The business part of the meeting started at 5:00, with Nicole Hamilton, President of Loudoun Wildlife Conservancy, giving an overview of the state of the organization and a look to the future. Two members, Gem Bingol and Bob Lyon, were recognized for their sustained participation, leadership and impact on LWC. Gem was recognized especially for her contribution to the stream monitoring program as well as her continued role as advocate for habitat. Bob was recognized for his leadership in establishing and maintaining our annual butterfly count, tracking the flight patterns of Loudoun butterflies, and developing a terrific record of Loudoun's moths. Recognition was also given to the Audubon Naturalist Society for their continued partnership with LWC. Cliff Fairweather accepted a donation on behalf of ANS. Members also approved the revised Bylaws. The revised Bylaws had been posted to the website for prior review and were available at the meeting for further reference.

Darrell Schwalm gave special recognition to the Science Fair winners: Alex Seebeck for his continued success with his project, "HE(L)P Barred Owl (*Strix varia*) Habitat in Loudoun County, Virginia, USA," Alyssa Sanow, for her project on "The Impact of Non-Nitrogen-Based Super-Phosphate Fertilizer on Hemlock Woolly Adelgid Infestation and Hemlock Growth", Claire Nawojchik, for her project on "The Comparison of Small Mammal Populations in Two Differing Field Habitats at Banshee Reeks Nature Preserve," and Stephen Spurlock, for his project on "Natural Resource or Natural Disaster? Population Dynamics of Whitetail Deer in Loudoun County". Darrell also thanked our volunteers, especially David and Carol Ward, Mark Mozak, Carol Evans, Mary Gustfson, Steve Cawthron, Kendra Redmon, and Tammy Worcester for their work on our Catoctin Creek Stewardship Days.

Joe Coleman gave the results of the International Migratory Bird Day bird count and bird-a-thon. Laura Weidner had exceptional success with the bird-a-thon, getting over 30 pledges and raising over \$1000 for Loudoun Wildlife Conservancy. Thank you Laura and to everyone who pledged!!

At the conclusion of the meeting, guests had a few more minutes to place final bids on silent auction items which enabled LWC to raise funds for upcoming programs and events. Bertie Murphy helped keep things on track throughout the silent auction, helping answer questions and making time check announcements. For the silent auction, we had 23 items with starting bids ranging from \$5 to \$275.

Continued on page 13

Annual Meeting ...continued from page 12

Following the auction, our panel speakers, Jocelyn Sladen (Virginia native Plant Society), John Hadidian (Humane Society of the United States), and Jeff Wolinski (Wetlands ecologist and consultant). They talked of our local habitat treasures, the urbanization of wildlife, and ideas on how steps can be taken to protect habitat in the midst of development.

At the conclusion of the meeting, our Secretary, Elizabeth and her naturalist-in-training Lily Evans announced the silent auction winners as well as door prize winners.

THANK YOU! to our Silent Auction Donors:

Handcarved Wooden Walking Stick by Darrell Schwalm

Thoroughbred's Grill and Brew Pub Gift Card

CD: "Cloud Cover" by Tabby Finch

Gazebell bird feeder from The Bird Feeder

Painted pottery sign: "Tree Hugger" by Dale Ball

Aerial Sightseeing Tour from Gil Hamilton

Creep & Crawl Gift Card

Lavender Door Gift Card

Twigs Beaded Tote Bag

Painting: "Zinnias" by Dale Ball

Painting: "Common Buckeye" by Karen Coleman

Handmade Tile: "Carousel Horse" by Pam Forbes

Painting: "Monarch Butterfly on Thistle" by Vernie Schnetzler

Book: "Hawks and Falcons" by Maria Mudd Ruth

Book: "Owls" by Maria Mudd Ruth

Child's Hand-smocked Dress by Jane Schwalm

Painting: "Peregrine Falcon" by Virginia Trevianius

Big Jar of Honey from Jeff Pfoutz

Weekend at Ox Camp on Little Stoney Creek from Ellie and Phil Daley

Book: "Loudoun by Feet" by Rich Gillespie

Magnolia's at the Mill Gift Card

Drawing: "Owl Moon" by Linda Bowman

Tuscarora Mill Gift Card

Catoctin Creek Watershed Project – Status Report

by Darrell Schwalm

Trees, Trees, and More Trees – It's not often that you can get over 50 people out on a Sunday afternoon to plant trees. But when you have an enthusiastic coordinator like Mark Moszak, a supportive landowner like David and Carol Ward, a tree planting expert like Forester Carol Evans, and a number of Girl Scout troops to plant, it can all come together. That is exactly what happened on April 17 when about 500 trees and shrubs were planted in a pasture floodplain along the South Fork Catoctin Creek downstream from Waterford. The purpose of the planting was to create the type of natural forested riparian buffer that existed before the trees were cut long ago to create the pasture.



Catoctin Watershed Project banner



Girl Scouts planting trees

LWC was able to organize and hold the riparian tree plant activity thanks to a grant we received from the Virginia Department of Environmental Quality. The grant money is being used to help educate and involve the community in solving serious water quality problems in Catoctin Creek. Well, community involvement was what we sought, and community involvement is what we got!



Nicole Hamilton and Gem Bingol with LWC display at event



Jeff Wolinski demonstrating fish monitoring

Continued on page 15

Catoctin Creek...*continued from page 14*

Stream Clean-up Provided Second Stewardship Event – Not to be outdone, the Taylorstown community and the Lovettsville Boy Scouts came out in force the following Sunday, April 25, for another stream stewardship event. Boy Scout Troop 962 was on the creek in canoes by 9:30 AM beginning their trash clean-up. When they arrived at Taylorstown Bridge, hamburgers and hotdogs were on the grill, and stream monitoring displays and demonstrations were ready. Everything was set up on the Ruth and Ray Cheronis property next to the bridge. Kristi and Peter Larson, LWC stream monitoring team leaders, collected aquatic insects from Catoctin Creek and showed them to the event participants. Jeff Wolinski loaded up his backpack electrical charger and demonstrated how to monitor fish in the creek. Phil Daley led a nature hike along the stream floodplain where Virginia Bluebells were in bloom. Ann Larson was in position at the Taylorstown Store with display materials on the history of the Taylorstown community. Approximately 70 people signed-in for the event, and not a single hamburger or hot dog was left.



Boy Scout canoes at landing during lunch break and stream stewardship events



Scouts looking at the fish captured during the monitoring demonstration

What's Next – LWC needs help organizing additional stewardship activities to support state efforts to improve the water quality in Catoctin Creek. LWC wants to begin a bacteriological monitoring program in the watershed starting in May. We need people who can help collect water samples and deliver them to Leesburg for analysis during a week day. In addition, we want to help citizens in the Taylorstown area to start a Friends of Catoctin Creek organization, and we need help to organize and support this initiative. And, finally, we need help to organize some type of stream stewardship activity in the Purcellville area to support protection of the South Fork Catoctin Creek. If you can help with any of these activities, please go to the LWC website at www.loudounwildlife.org and sign-up.

VOLUNTEER FOR BUTTERFLIES:

An ongoing butterfly count, coordinated through George Mason University and the National Wildlife Federation, is searching for volunteers. Using butterfly gardens in the Washington DC/northern Virginia area, the study is investigating the effect of urbanization and pesticides on butterfly species. If you would like to participate in the study, it's really very easy! From May to November 2005, you will be asked to survey the butterfly species in your garden and send in your results. You can submit your data over the internet or on hard copy. There is no cost to you — the coordinators will provide all the information you need to get started and help with species identification. To join the study, visit www.butterflystudy.org to register. Thanks for your interest!

Welcome Frogs into your Garden — Build a Frog Pond

by Nicole Hamilton

Frog ponds are a wonderful addition to any garden. They can be as large or as small as you want and can be quite rewarding. The basic needs of frogs, toads and salamanders include plenty of moisture, shelter and food. This means providing water, native plants of various heights and types, and rocks and logs.

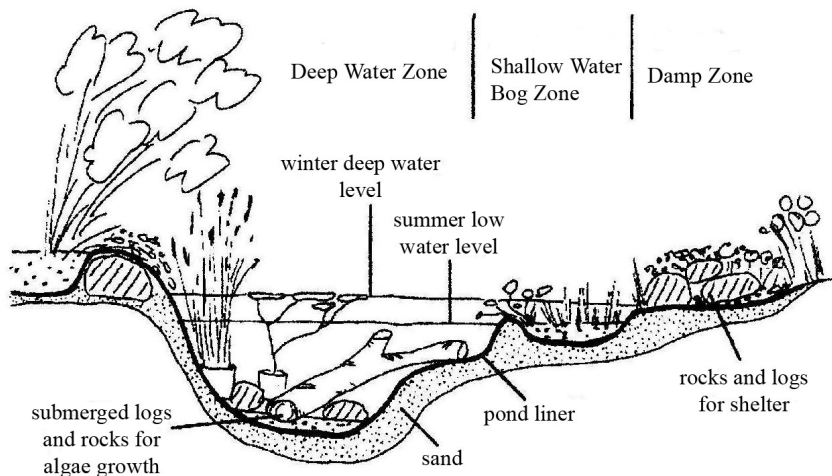
Materials Needed:

- Plastic pond liner — this keeps the water from seeping into the ground. Select a liner that is resistant to ultra violet light and specifically made for outdoor ponds. Liners not made for ponds are often toxic to amphibians and will break down over time. You will also need to determine how large a piece of liner to purchase. To do this, determine the maximum width, length and depth of your pond. Then, multiple the maximum depth by 3 and add that to the maximum width and length. This will give you enough extra liner to allow the plastic to be secured around the edges.
- Wet sand
- Gravel
- Water
- Rocks and logs
- Native water plants

Steps to Building Your Pond:

1. **Select the Site:** When selecting your site, keep in mind that tadpoles need shade. Your pond should be placed so that it is in the shade about 70% of the time. Once you have selected the location, create the outline on the ground with a piece of rope or garden hose to determine the shape and dimensions you like. If you can see the outline from your house, look at it from different windows and locations to make sure you like the shape. Mark the outline on the ground with spray paint.
2. **Dig the Hole:** Ideally, there should be three levels in your pond: a deep end, a shallow bog-like zone, and damp wetland-like edges. By creating these different levels, you will have a deep area that enables both escape from predators and hibernation in winter, shelves for plants that add interest to your pond as well as hiding places for tadpoles, and nice sloping sides that facilitate entry and exit to the pond. Digging of the pond should be done in stages. When you start digging, begin about 3 inches outside of your outline and remove the topsoil. Save this off to the side so you can replace it later. After the topsoil has been removed, dig the pond itself by starting in the middle and working outward so you can form the shelves and slopes. Slopes should be at about a 20-30 degree angle. Shelves should be about 6-10 inches below the water. Avoid vertical walls since animals, including adult frogs, toads and turtles, can become trapped in your pond.

(Continued on page 17)

Frog Pond...*continued from page 16*

SOURCE: Amphibian Research Centre

Levels:

Deep end: One end of your pond should be approximately 3 feet deep so frogs can winter over in the mud and not freeze to death. Dig 2-3 inches deeper than the final depth of your pond so you can take into account the 2" of sand, the liner and rocks.

Shallow, bog-like area: These shallower areas will provide shelving which allows you to have a variety of plants and heavier vegetation. This provides refuge for tadpoles.

Wetland, shallow edges: Ponds need to have sloped sides so adult frogs, toads, salamanders, small mammals, box turtles, and others can easily get in and out. You can also add a natural "ladder" to facilitate escape. This could be a floating log that is secured to the edge of the pond at one end or a mesh that extends from the soil to below the water line.

Along the shoreline you can create different habitats such as rock gardens, a cattail area and wet meadow. Also, a shallow shoreline helps keep your pond liner intact through the winter as the water freezes and thaws.

Be sure your pond is level so the water will not drain out. To do this, lay a 2' x 4' board across the width of one end of the pond. Set a carpenter's level on the board and make sure that the edge of the pond is level. Add topsoil to the edge if it is not and continue this process until you are certain that the entire pond edge is perfectly level. If the edges are not level, the liner will show where it is higher than the rest and could leak water where it is lower.

3. **Inspect:** Inspect the liner before installing it to make sure it does not have any holes. It will be easier to work with the liner if you do this step on a warm sunny day as the liner will warm up and be more flexible. Next, remove all sharp objects (roots, rocks, twigs) from the excavated area and tamp down the soil so it is hard and level.

Continued on page 18

Frog Pond...continued from page 17

4. **Add the Sand:** Lay a base of wet sand at least 2 inches deep to cover the whole pond bed.
5. **Position the Liner:** Place the liner into the excavated area and use bricks or rocks around the edges to keep the liner in place. Cut out large pieces of extra liner but save some in case you need to make repairs in the future. A typical liner will last 7-15 years, but there may be need for an occasional repair.
6. **Add the Water:** Bring the hose over and fill the pond with water. The weight of the water will settle the liner into shape in the pond. As the pond fills, you may need to stand barefoot in it to make sure the liner settles in evenly and is not pulled in one direction or another. Bury the liner under 6 inches of dirt along the edges and keep it hidden under stones.
7. **Add the Plants:** Let the pond stand for 3 days to let chlorine in your water evaporate. Then, add your plants, submerged rocks and logs. Emergent and submerged plants should be planted in pots with a layer of gravel on top to keep the soil from floating out. Use bricks and stones to help vary the heights of plants. Plants should cover about 50-70% of the pond surface. Native plants provide shelter and shade within the pond and around pond edges. These helps regulate water temperature and provide safe spots for amphibians to rest and escape from predators. Plants should be placed at the edges of the pond for eggs to be laid and for tadpoles to hide and feed. Let grasses grow up around the edges of the pond so froglets have a place to hide when they first emerge from the pond. Rock piles and logs around the edges will also provide a nice, varied habitat. Use a variety of plants: trees, shrubs, grasses, sedges, lilies and ferns. Around the pond, include a log or two and rock piles with openings for toads.
8. **Enjoy:** Wait and watch for amphibians to find your oasis.

Other Considerations:

In winter, you will need to keep a small opening free of ice in the water so that oxygen will continue to enter the water. Hibernating frogs will need this. A small bird bath deicer works well, or you can melt the ice with a pan of warm water.

When you need to top off the water in your pond, remember the water needs to be chlorine and chemical free. Therefore, if you are on city or county water where chlorine is added, or if you add chlorine to your well water, you will need to let the water stand for a few days in buckets before adding it to your pond. This is very important if amphibians are present.

Algae need to be present for the tadpoles to eat. When you first set up your pond you may experience an algae bloom. Resist temptations to clean this out. It is a natural phase for the pond. Once the nutrients in the pond become balanced, the algae will reach an acceptable level appropriate for the plants and animals present. Algae thrive on light and excessive nutrients. To decrease light you can add more plants, and the algae will compete for the nutrients and become less pervasive.

Do not include fish in your pond because they eat tadpoles. Filters and pumps will also kill your tadpoles. They will be sucked in and whirled as if in a blender.

Please do not purchase frogs or toads or relocate them from other areas. In both cases, you could be introducing species that are not native to your area. This has had terrible effects on local populations — especially where bullfrogs have been introduced. They eat native frogs, toads and salamanders and will move into other ponds outside your backyard decimating local populations. You could also be introducing

Continued on page 19

diseases that could impact local populations. The best thing to do is to build the pond and let your native frogs, toads and salamanders find you. If you build your pond in the fall or spring, migrating animals may encounter your pond. It may take a year or two for amphibians to take up residence but be patient, and they will find you!

Additional resources:

Video: "A Practical Guide to Water Gardening." This video provides step-by-step instruction on setting up a pond, as well as tips and ideas for plantings in and around the pond. Tips on using plantings to control algae and instructions for making bog gardens are also provided. Available through the Loudoun County Public Library.

"Ponds and Water Features," American Horticultural Society. A small book that shows the basics of setting up a pond, including the different levels such as bogs and shores along the pond. Good explanations on both what to do and why. Available through the Loudoun County Public Library.

"Building Garden Ponds: 10 Step-By-Step Projects," by Bryan Hirst. This book has some nice examples of natural ponds as well as drawings showing the side views. Available through the Loudoun County Public Library.

Lilypons Water Gardens, Buckeystown MD. Lilypons has all sorts of pond supplies as well as a wide variety of native American plants. They can also be found on the web at: www.lilypons.com.

Websites: There are numerous websites that provide information on setting up ponds, although many are geared for fish.



Welcome Toads into your Garden – Set up a Toad Abode

by Nicole Hamilton

Toad houses are a fun addition to the garden. When you select one, make sure it has an open bottom since toads like to burrow into the moist dirt to keep cool. Also, be sure the door opening is not too small. Most of the toad houses commercially available have openings that are too small for our toads to fit through. For our American Toad, the opening should be 3-4 inches wide. The toad house should be placed under vegetation so it will be a cool refuge in the summer sun. You can also make your own toad house. Something as simple as a board or large flat stone held up off the ground a few inches by two rocks will form a welcome cover for your toads. Another idea is to dig a small hole, about 4 inches deep, and fill it with loose dirt and sand. Then build up a rocky retreat with an inside chamber area about 4-6 inches high where the toads can stay cool on a hot day. Try to have two entrances to your toad abode so the toad is able to escape if, for example, a snake comes in one door. If you do not have a water feature in your garden, a shallow pan with an inch or two of water and a few rocks for resting will also be appreciated.



"To create a little flower is the labor of the ages."

— William Blake

INSECT ID: Widow Skimmer Dragonfly (*Libellula luctuosa*)

The Widow Skimmer Dragonfly is one of our common garden and pond residents. It has a steely blue body area and dark patches that go all the way to the base of the wing. The males have white patches in the middle of each wing, while the females and immature males do not. This dragonfly got the “widow” name because, unlike most other dragonfly species where the male stays near the female after she lays the eggs, the male in this pair leaves her after the eggs have been laid. As with other dragonflies, eggs are laid in ponds where they hatch. The nymphs live in the water, molting and growing until they are ready to emerge from the water and then molting a final time to reveal their wings. Perching on vegetation where they watch for prey, the widow skimmer will eat thousands of mosquitoes, biting flies, midges and other insects in the garden and around ponds.



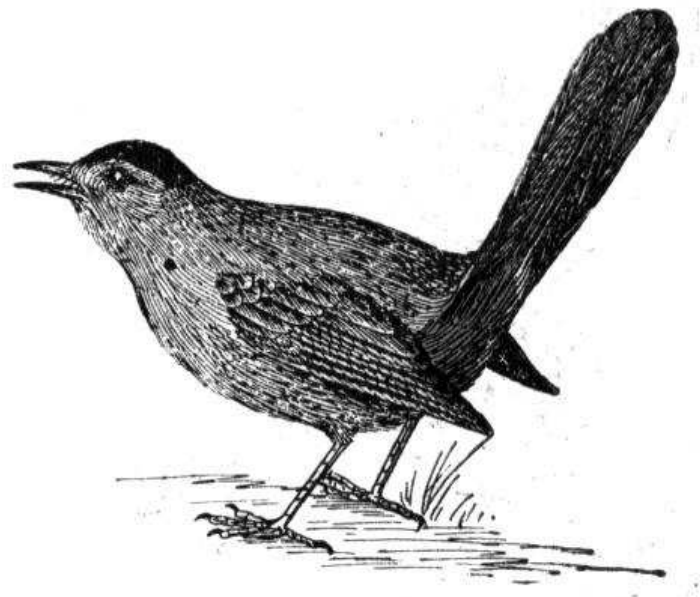
NATIVE PLANT HIGHLIGHT: Butterfly Weed (*Asclepias tuberosa*)

Butterfly weed is a low-growing member of the milkweed family. It has colorful orange flowers that bloom from late spring through early fall. Unlike other milkweeds, it has a watery sap rather than a milky sap. Although it grows well in the garden, it may not flower until it is well established. To get through dry summers, it stores water and food in a large taproot. Because this taproot runs deep and is brittle, it does not transplant well, so digging it up often kills the plant. The best way to bring butterfly weed into your garden is through seeds or young plants from the nursery. A wide variety of butterflies, including monarchs, swallowtails, painted ladies, American ladies, red admirals, fritillaries, hairstreaks and hummingbird moths, readily visit the orange blossoms of butterfly weed. From the bird world, ruby-throated hummingbirds are also attracted to the blossoms. While monarch butterfly caterpillars readily feed on common milkweed, a “taste test” shows that they are not as fond of butterfly weed. It may be that the leaves are too tough for the younger caterpillars to eat, and the leaves may not contain enough of the milkweed poison. Butterfly weed has also been known as “pleurisy root” because it has been used in the past to treat bronchitis and other lung problems.



FEATURED FRIEND: Gray Catbird (*Dumetella carolinensis*)

The Gray Catbird is a member of the Mimidae family. They are dark gray with a black cap and a chestnut color under the tail. Its cat-like calls from a brush or thicket are a clear sign that there is a catbird in your midst. Like the mockingbird, catbirds are mimics, but when catbirds sing the song of another bird, they generally just sing it once and may add their own slight variations rather than repeating the song as the mockingbird will do. Catbirds enjoy living streamside and at forest edges with vine tangles and low dense vegetation. They will also take up residence in our backyards if we have dense shrubbery and berries for them to eat. An interesting behavior with catbirds is in their nest building – both the male and female will build a number of nests which they abandon only to have the female build the final nest that is used. Nests are generally three to ten feet off the ground. During nesting, the female broods the blue eggs while the male stands guard not far from her, scolding any intruders that come near. If a cowbird manages to lay an egg in her nest, the catbird will eject the unwanted egg. While she incubates her eggs, the male will often bring her food. Catbirds favor berries such as those from the dogwood, holly, inkberry, winterberry, raspberries and even poison ivy (which actually is a great wildlife food). These birds also eat insects such as ants, beetles, caterpillars, spiders and grasshoppers. However, insects make up a smaller proportion of their diet when berries are plentiful. In rearing their young, they will feed them insects until just before they are ready to fledge, at which time the parents will introduce berries to their diet. Migration for catbirds takes place primarily at night. They will fly as far south as Panama but also will winter in Florida, Louisiana, Texas and other Gulf states. If you have catbirds in your yard and want to attract them to a feeder, you can put out dried cherries, raisins, and various grapes and berries. In early spring, if they arrive before the insects are available, catbirds will also eat small nuts like chopped peanuts and unshelled sunflower seeds. Catbirds also love to bathe, so a birdbath or sand bath will also attract these birds to your yard.

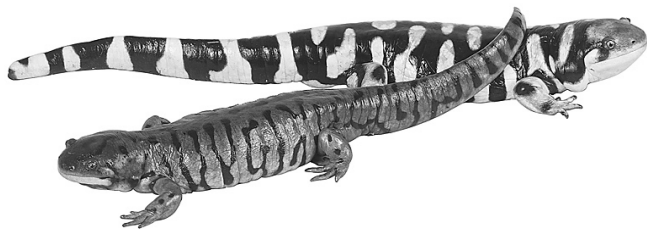


Amphibians of Loudoun...continued from page 10

Over the coming year, LWC will establish an Amphibian Monitoring program here in Loudoun. The goal of this program will be to track our local populations of amphibians and gather data so that we can influence local decision makers and establish conservation requirements before it is too late. If you are interested in being a part of this citizen-science effort and learning more about these interesting creatures and their habitats, please contact Nicole Hamilton at nhamilton@loudounwildlife.org or 540-882-4839.

What can you do to help our local amphibians? Jump in!***Go Natural!!!***

Fertilizers can cause caustic burns which kill salamanders, frogs and toads. Homeowners and land managers typically fertilize lawns, golf courses and ball fields in the fall, a time when many toads, frogs and salamanders are migrating to winter habitat for hibernation. Because their habitat has been fragmented, they are forced to cross these lawns and fields, often causing the complete demise of local populations.



Fertilizers, pesticides and herbicides are also absorbed through the amphibians' skin, so that which doesn't kill them outright can kill them through slow poisoning. Rather than using chemical fertilizers, try organic fertilizers. Insecticides also reduce the insect food supply that frogs, toads and salamanders need to be healthy. Runoff of lawn fertilizers, herbicides and pesticides into local streams and ponds also affect our amphibian populations – in the development stages

and as adults. Remember, toads, frogs and salamanders will take care of thousands of unwanted insects in your flower and vegetable gardens, but they need a healthy environment in which to live and thrive.

Garden for Amphibians

In addition to limiting chemical use, there are other things you can do in and around your gardens to welcome amphibians. Rather than hauling those leaves and brush to the dump in the fall, maintain a pile or two. These piles serve as a great place for frogs, toads and salamanders to keep moist in the spring and summer. Also, rotted logs, rock piles and non-mortared stonewalls provide ideal shelters for toads and salamanders. Immature and female frogs will often hibernate under logs and piles of stones, so these are important refuge areas. The Virginia Department of Forestry has a great brochure on building a brush pile. It can be found at: <http://www.dof.virginia.gov/mgt/wildlife/brush-piles.shtml>. They also offer a brochure focused on setting up a rain garden, which can be found at: <http://www.dof.virginia.gov/rbf/rain-gardens.shtml>.

In selecting plants for your garden, select some fragrant night-blooming plants to attract moth pollinators. This will provide more food for your amphibians as they hunt at night, and the plants will perfume your night air, too.

Restore/Protect Habitat

Without the wetland areas – the streams, vernal pools and woodland ponds – our amphibians will not survive. Many of the habitats that our frogs, toads and salamanders depend on, such as the vernal pools, are temporary, shallow pools. They fill in the winter and early spring and stay wet during the breeding period but dry up in late spring. Because they do not exist year round, they are often overlooked or do not fall under any wetland protection requirements. As a result, they are often filled in for developments. Once the wetland area is filled for development, whole populations of amphibians that have depended on that

Continued on page 23

Amphibians of Loudoun...continued from page 22

location for generations will die. If you know of vernal pools in your area, help inform others about the value of these wetland areas. Wetlands are only half of the equation, however. We also need to preserve and protect forested areas.

Help Us Monitor Our Local Amphibians

A monitoring program can help us not only to understand which species we have in Loudoun, but also can help us to track their populations and understand the relationship to other amphibians regionally and nationally. Many species that were considered common just 100 years ago are now so scarce they are rarely found. By keeping track of populations and environmental impacts, we can monitor trends and raise awareness.

Give Amphibians a Break!

Many of our roads were built between the forested areas where salamanders and frogs live and the breeding pools that they need to reach. Keep watch on that rainy day in late February, March or April and give them a break. Some towns have created salamander crossings that run under roads. If you have seen an area where "Big Night" migrations take place, let us know. If we know where these migrations are taking place, we can arrange for a school or club event to hold a "Citizen Assisted Road Crossing" to help our frogs and salamanders on their "Big Night."

YES, I want to become an LWC Member!

Membership Benefits Include:

- * Subscription to *Habitat Herald*
- * Volunteer Opportunities
- * Classes and Workshops
- * Regular Membership Meetings and Programs

Mail this form along with your payment to:

*Loudoun Wildlife Conservancy
PO Box 2088
Purcellville, VA 20134-2088*

Name: _____

Street: _____

City, ST, Zip: _____

Phone: (H) _____ (W) _____ **E-mail** _____

Please indicate your membership level:

(*membership runs from January 1- December 31)

☐ \$10 Student*

☐ \$30 Family*

☐ \$200 Individual Lifetime

☐ \$20 Individual*

☐ \$75 Corporate*

☐ \$300 Family Lifetime

☐ Additional Donation \$ _____

☐ Renewing Member

☐ New Member

Programs at a Glance

(see pages 5-8 and 11 for complete descriptions)

July

- 6 Nature for Toddlers (A)
- 8 Wild Nightlife (A)
- 9 Birding Banshee (L)
- 16 Butterflies and Dragonflies (L)
- 23 Birding the Blue Ridge Center (L)
- 26 Macro-Invertebrate Review & Quiz (W)
- 31 Vultures in Our Midst (A)

August

- 6 Annual Butterfly Count (L)
- 7 Macro-Invertebrate I (W)
- 13 Birding Banshee (L)
- 20 Butterflies and Dragonflies (L)

August(continued)

- 21 Mysterious Creatures (L)
- 21 Macro-Invertebrate I (W)
- 26 Nature for Toddlers (A)
- 27 Birding the Blue Ridge Center (L)

September

- 3 Birds, Butterflies and Wildflowers (L)
- 10 Birding Banshee (L)
- 17 Butterflies and Dragonflies (L)
- 21 Snakes and Amphibians (L)
- 24 Birding the Blue Ridge Center (L)
- 27 Nature for Toddlers (A)

A = ANS L = LWC W = Water Quality



Loudoun Wildlife Conservancy
P.O. Box 2088
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