



Habitat Herald

A Publication of the Loudoun Wildlife Conservancy

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www.loudounwildlife.org

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Feathers - The Essential Finery

by Ginger Walker

Nothing is more intrinsic to the survival of a bird than feathers. Wings are necessary for flying, but other flighted creatures, such as insects and bats, go without feathers. Mammals possess hair, a compression of dead cells and pigment, and feathers are basically the same material. However, the shape and structure of a feather fulfills the vital needs of birds, aiding in aerodynamics, conservation of body heat, and even the attraction of a suitable mate. Stiff flight feathers on the wings and tail make flying possible. The stiffness of tail feathers help in balancing while perching and steering while flying. Waterproof contour feathers cover a bird's body, protecting the skin. Down feathers lie beneath the contour feathers, keeping the bird's body warm. A bird can fluff its down feathers for added insulation on cold nights.

Some birds spend hours each day preening. The word *preen* carries with it a connotation of vanity, but well-groomed feathers can mean the difference between life and death for a bird. Clean feathers with "zipped" barbs help birds fly quickly and escape danger. A bird with mussed feathers will have a hard time flying and will find itself vulnerable to predators. Most birds also have oil glands on



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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 Nicole Hamilton.

You can also visit us at:

www.loudounwildlife.org

A Word from the President

by Nicole Hamilton

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The Price of Development

I drive along our roads and see another forest bulldozed. I see the trees stacked neatly side by side like Lincoln logs. I see soil overturned. I see the tangles of vines and thickets and shrubs, once shelter for many animals, now piled, ready to be burned. I see life disrupted.



I see this change and I wonder....I wonder about the life that lived there.

I wonder about the box turtles and wood turtles that lived in the leaf litter, now pushed to one side. Are they buried in the soil? Crushed by the bulldozer?

I wonder about the frogs that clasped the tree branches as they fell — did they leap to safety? Where could safety be found?

I wonder about the salamanders that migrated a half mile or more to the secret vernal pool that laid nestled in the forest bottom — a wetland that was never known or noticed....except perhaps by the driver of the bulldozer who wondered why his equipment sank more deeply into that part of the forest floor. Did the 30-year-old salamander leave the pool before her home was overturned? What would she return to next year if she had departed in time?

Continued on page 3

A Word...*continued from page 2*

I wonder about the caterpillars and other insects, busily playing their part in this dance of life that was the forest ecosystem. There is no role for them now.

I wonder about the foxes, raccoons, opossums, owls and woodpeckers who were raising their young here....their nests and eggs now smashed, their burrows and babies gone.

I wonder why we call this “development” and why the cost of this development never includes the true price paid.

There is magic in our woods, our wetlands, our fields. It is the magic of life and diversity, yet we plow it under and raze it to the ground. What price are we willing to pay for “development?” How deep will we reach into our pockets before we realize that without nature, we are poor?

nicole

**Feathers...***continued from page 1*

their bodies. They gather oil on their beaks and “comb” it through their feathers to waterproof them. Water will never reach the down feathers of a well-preened bird. Even in extremely cold weather a bird will happily bathe in a heated birdbath to clean its primary and contour feathers. The down feathers will keep the bird’s body warm and dry even though its outer feathers are wet.

A number of bird species have specially adapted feathers to fulfill the unique needs of that species. Owls, which rely on their sense of hearing to capture prey at night, have primary feathers with a fuzzy edge that works as a “silencer.” Broad-tailed Hummingbirds have feathers with a different function – their wings produce an extremely high-pitched noise when they fly. This sound functions as a territorial warning. Water birds, including ducks and gulls, have especially dense plumage compared to birds that don’t spend time in water, and arctic birds have a greater number of feathers in winter compared with birds that spend their winters in warmer climates. Ptarmigans even grow special fluffy feathers over their feet to keep them warm on the arctic tundra. Egrets, Mourning Doves, and some parrots have special “powder down” feathers that aid in preening. These special feathers break down into powder which the bird then distributes through its plumage to improve waterproofing and general feather condition. (When a Mourning Dove crashes into your glass door or window, it is this powder down that leaves a ghostly outline behind.)

Some feather adaptations do not fulfill any apparent need but simply reflect the lifestyle of the bird. For example, Cedar and Bohemian Waxwings have waxy deposits on the tips of their smooth feathers. The color of these drops varies depending on the color of berries or other fruit the birds happen to eat. The redness of House Finch feathers also varies with diet. Plumage variations based on geographic location, but unrelated to diet, are also seen. Common Yellowthroat plumage varies across the country. Yellow-rumped Warblers fall into two classifications: “Audubon” Warblers with yellow chins are seen in the west, while “Myrtle” Warblers with white chins are seen in the east. Red-shafted Northern Flickers found in the western part of the country have reddish feathers under the wings and a red mustache stripe. Yellow-shafted Northern Flickers found in the east have yellowish feathers under the wings and a black mustache.

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Feathers ...continued from page 3

Colorful plumage plays its greatest role during the mating season. A number of studies have linked bright color to mating success. The male cardinal with the most blazing plumage will probably have first pick of the females. Male Goldfinches acquire their characteristic bright-yellow feathers during this time; the females remain a dull greenish-yellow. Egrets and herons grow stunning plumes for the breeding season, and Mourning Doves develop iridescent patches on their throats when it is time to mate. Wild Turkeys and their relatives, peacocks, puff up their feathers and strut to show off their plumages.

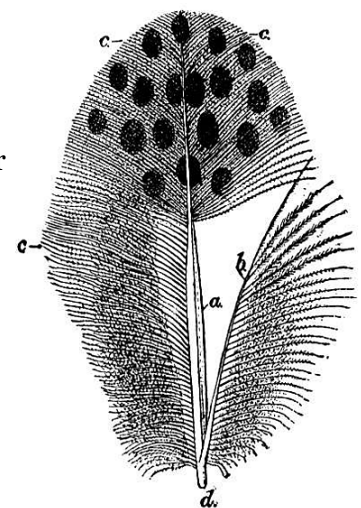
Special feathers are important for reasons beyond mating, too. Hummingbirds use their iridescent throat feathers—called a gorget—in territorial displays. Juncos flash the white beneath their tails when they are agitated, similar to the way a startled deer in the woods flashes its tail as it bounds away from us. Mockingbirds, gnatcatchers, and red-starts also flash colored or white markings on their wings or tails when they feel threatened or challenged.

Birds that rely on brightly colored feathers for mating usually molt twice a year—in the spring before breeding (producing “breeding” or “alternate” plumage) and again in the late summer to early fall (resulting in “basic” plumage.) All birds molt at least once a year, usually in late summer when there are not as many major demands on their energy – the breeding season is over yet it is not quite time to migrate. Food is typically plentiful during this time of year, and that is vital because molting can be exhausting for birds. In the case of some male ducks, which lose all of their flight feathers at once, it can be incredibly dangerous as well. Most birds lose their feathers section by section on their body, though some individuals lose a large clump of feather at once. Blue Jays and cardinals are especially prone to losing all of their head-feathers at the same time, allowing birdwatchers a rare, though slightly creepy, look at the birds’ ears and skin. New feathers are called “pin feathers” because when they break through the skin they are encased in a sheath that looks like a pin. The bird removes the sheath by preening. Mated birds often help each other to preen hard-to-reach places, like the back of the neck, through mutual preening (called *allopreening*.)

Molting allows birds to replenish their feathers before the winter migration. Fresh feathers allow migrating birds to fly efficiently. While camping in Alaska last summer, I was delighted to find myself surrounded by Dark-eyed Juncos on a daily basis. It was a genuine treat to see and hear these “winter” birds in the middle of July. One of the first things I noticed about these birds was their dirty appearance. The bright white chests and tails I was used to seeing were dull brown. The Alaska juncos still had their worn plumage; they resembled children who had spent a long, summer day playing hard outside in the dust. The juncos that visit my Virginia backyard in their winter plumage look neatly dressed and “ready for church” by comparison.

Some birds seem to make their greatest transformation with the fall molt instead of the spring molt. Ptarmigans and Snow Buntings molt from a summer brown to a bright white plumage, perfect for the snow-covered tundra habitat. European Starlings acquire their star-speckled appearance for winter. These white specks are gone by spring, but not because they are lost in molt. The tips are actually worn down through flying and general “wear and tear” over the winter, giving us a pretty good example of what the average feather goes through over the course of a season.

To us, feathers symbolize beauty and freedom—the promise of flight. For birds, however, feathers are a practical matter. A bird that captures our attention and admiration with its bright, smooth plumage is probably a bird that succeeds at its job: mating, migrating, and surviving.



Feather.

a, d, main stem; *d*, calamus or quill; *a*, rachis; *c, c, c*, barbs, cut away on right side in order not to interfere with view of *b*, the aftershaft, the whole of the left web of which is likewise cut away.

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 coordinated by Cliff Fairweather of the Audubon Naturalist Society (ANS). The LWC, in partnership with ANS, the Loudoun Watershed Watch (LWW), and the Catoctin Watershed Project, monitor most of Loudoun County's streams. 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

Saturday, June 17 (9:00 a.m.—12:00 noon) — Classroom
Saturday, July 1 (9:00 a.m.—12:00 noon) — 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.

LOUDOUN WILDLIFE CONSERVANCY BOARD MEETING — LWC's Board meets the first Tuesday of every month at ANS's Rust Nature Sanctuary. All LWC members are welcome. Pre-meeting discussion begins at 7:00 p.m., with the meeting itself beginning at 7:30 p.m. *Contact Nicole Hamilton at 540-882-882-4839 or nhamilton@loudounwildlife.org for additional information.*

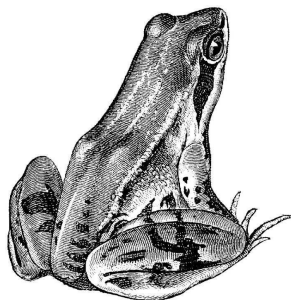
BIRDING BANSHEE — **Saturday, April 8, 8:00 a.m.** Join the Loudoun Wildlife Conservancy and the Friends of Banshee Reeks at the Banshee Reeks Nature Preserve for the monthly bird walk. Because of its rich and varied habitat, this part of the county is a birding hot spot. Please bring binoculars. *Questions: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

NIGHT SOUNDS — **Saturday, April 8, 7:00 p.m.** Join us for an entertaining and educational introduction to the different hoots, howls, growls, and peeps heard in the woods, fields, and wetlands at night and to the birds, mammals, and frogs that make them. Kevin Dodge, Director of the Natural Resources and Wildlife Technology program at Garrett (MD) College, weaves pictures, facts, and stories together with the variety of sounds he produces to recreate a night in the mountains. Audience participation is encouraged, and this fun presentation is suitable for everyone. After the indoor portion of the program, we will go outside to hear the local wildlife. This free program is sponsored by the Loudoun Wildlife Conservancy and the Audubon Naturalist Society at the Rust Nature Sanctuary in Leesburg (802 Children's Center Road, SW). *Advance registration is requested: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

EXPLORING SPRING — **Saturday, April 15, 10:00 a.m. Registration Required.** Join Phil Daley as he explores the Blue Ridge Center for Environmental Stewardship at the beginning of spring. During this free family hike, we will watch for the many birds, amphibians, and mammals that increase their activity as temperatures rise. We should also find some of the early spring wildflowers that carpet the forest floor. The Blue Ridge Center comprises 900 acres of field, forest and mountainside on the west side of Harpers Ferry Road in northwestern Loudoun County. Meet at the Neersville Volunteer Fire Station on Rt. 671 at 10:00 a.m. *To register contact Phil Daley at 540-338-6528 or pdaley@loudounwildlife.org.*

BIRDING THE BLUE RIDGE CENTER — **Saturday, April 22, 8:00 a.m.** On the fourth Saturday of each month (except December) the Loudoun Wildlife Conservancy leads a free 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.*

AMPHIBIANS AFOOT — **Thursday, April 27, 7:00 - 9:00 p.m. and Saturday, April 29, 3:00 - 9:00 p.m. Registration required.** Under rocks, in the grasses, on the trees, in the water — the wild is alive with amphibians! While April showers may bring May flowers, they also bring a host of frogs, toads, and salamanders. Returning from the forests to their primordial breeding pools, these amphibians are continuing a cycle of life that has gone on for thousands of years. Join us for a two-part, two-day training event to learn about these creatures and to kick off our amphibian-monitoring program. On Thursday, April 27, we will begin with an introduction to the frogs, toads and salamanders of Loudoun. We will review the various species known to live here, listen to their calls, and discuss their habitats and lifecycles. Also, their biology and role in the forest and wetland ecosystems will be discussed. On Saturday, April 29, we will spend the afternoon and early evening visiting some local breeding ponds. We will search for



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Calendar...*continued from page 7*

frogs, toads and salamanders and practice using our amphibian-monitoring protocol. Following the training, anyone interested in being a part of the amphibian-monitoring program will be invited to stay for a short discussion of next steps and our plan to begin monitoring. Although donations are appreciated to help defray the costs of launching this program, the two-day training is free. *To register, contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

ORIOLES – Monday, May 1, 7:00 p.m. at the Rust Library in Leesburg. Every spring both Baltimore and Orchard Orioles return to our area where they entertain us with their beautifully rich songs and build artful nests that hang from trees. Spring Ewald Ligi, who grew up in the Leesburg area and has been a long-time member of the Loudoun Wildlife Conservancy, studied the breeding behavior of Baltimore and Orchard Orioles for her thesis. She will describe these beautiful birds and share her findings with us. The free program, sponsored by the Loudoun Wildlife Conservancy, will start at 7:30 p.m. Come at 7:00 p.m. to meet the speaker and have refreshments. *Questions: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*



TRILLIUMS AND WARBLERS – Saturday, May 6, 9:00 a.m. Spring bursts forth with incredible energy and show at the Thompson Wildlife Management Area (WMA) in northwestern Fauquier County. Acres of large-flowered trilliums along with a number of other wildflowers bloom in early May along the mountain trails here. At the same time, migrating warblers move through the area. Join Bill Cour and Mary Ann Good for a wildflower and warbler walk at this beautiful location on the eastern slopes of the Blue Ridge Mountain, near both Linden and Sky Meadows State Park. While we will meet in one of the parking lots at the Thompson WMA, car pooling from some locations in Loudoun County will also be possible. *Sign-up required: contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org.*

CELEBRATING SPECIAL PLACES: BIRDING LOUDOUN COUNTY – Saturday, May 13, 8:00 a.m. During spring, thousands of migratory birds move through North America to their nesting territories. Some will stay and nest in our area, while others will spend only a few days here replenishing their energy before continuing a journey that may be thousands of miles long. To celebrate and highlight this natural phenomenon, International Migratory Bird Day is scheduled on May 13. In recognition of the importance of healthy wildlife habitat, the Loudoun Wildlife Conservancy is sponsoring several bird walks at 8:00 a.m. and an all-day bird survey throughout Loudoun County. Some of the sites the different groups will visit are Horsepen Preserve in eastern Loudoun, Morven Park and the ANS Rust Nature Sanctuary in Leesburg, Banshee Reeks Nature Preserve in central Loudoun, and the Blue Ridge Center for Environmental Stewardship in northwestern Loudoun. *Contact Joe Coleman at 540-554-2542 or jcoleman@loudounwildlife.org before May 11 to participate in one of the walks or the survey and to choose a site. Please bring binoculars.*

Additionally, Claude Moore Park is sponsoring the “Wings Over Loudoun Bird Festival” that day – for more information on their activities contact them at 703-444-1275 or www.loudoun.gov/prcs/parks/claude.htm.

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, May 20, 10:30 a.m. Join the Loudoun Wildlife Conservancy and the Friends of Banshee Reeks for one of our free, family 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.*

SUNDAY IN THE PRESERVE – Sunday, May 21, 2:00 p.m. Join Phil Daley of the Friends of Banshee Reeks and the Loudoun Wildlife Conservancy for a free informal, family walk around the preserve. Search for the many natural wonders that make this such a special place in spring. *For information call the Banshee Reeks Nature Preserve at 703-669-0316.*

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Calendar...*continued from page 8*

ANNUAL MEETING: CELEBRATING LOUDOUN'S WILDLIFE WITH THE LOUDOUN WILDLIFE CONSERVANCY – Sunday, May 21, 5:00 – 7:00 p.m. Join us for the Loudoun Wildlife Conservancy's annual meeting at the Rust Nature Sanctuary in Leesburg (802 Children's Center Road, SW). The event will include a raffle, wildlife habitat exhibits showcasing the flora and fauna of our area, and a Book Swap. David Whitehurst, Director of the Wildlife Diversity Division of the Virginia Department of Game and Inland Fisheries, will describe the state's Wildlife Action Plan for conserving all its fish and wildlife. All LWC members are invited to attend.

BIRDING THE BLUE RIDGE CENTER – Saturday, May 27, 8:00 a.m. See the April 22 listing for details.

BIRDING BANSHEE – Saturday, June 10, 8:00 a.m. See the April 8 listing for details.

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, June 17, 10:30 a.m. See the May 20 listing for details.

BIRDING THE BLUE RIDGE CENTER – Saturday, June 24, 8:00 a.m. See the April 22 listing for details.

GARDENING FOR BUTTERFLIES – Saturday, June 24, 11:30 a.m. *Location to be announced on our website.* Master Gardener, Kim Labash, will describe our area's common butterflies and how you can attract them to your garden and ensure that they thrive. After a short program the group will visit the Master Gardener's Butterfly Garden at Ida Lee. *Questions: contact Nicole Hamilton at 540-882-4839 or nhamilton@loudounwildlife.org.*

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

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, July 15, 10:30 a.m. See the May 20 listing for details.

BIRDING THE BLUE RIDGE CENTER – Saturday, July 22, 8:00 a.m. See the April 22 listing for details.

ANNUAL LOUDOUN COUNTY BUTTERFLY COUNT – Saturday, August 5, 9:00 a.m. Join the Loudoun Wildlife Conservancy on its tenth 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, 540-882-4839 or nhamilton@loudounwildlife.org.*

BIRDING BANSHEE – Saturday, August 12, 8:00 a.m. See the April 8 listing for details.

BUTTERFLIES AND DRAGONFLIES AT BANSHEE – Saturday, August 19, 10:30 a.m. See the May 20 listing for details.

BIRDING THE BLUE RIDGE CENTER – Saturday, August 26, 8:00 a.m. See the April 22 listing for details.

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

Protecting Wetlands

by Jeff Wolinski

What are wetlands, why are they important, and how do we protect them in an ever-changing world? These are questions of particular relevance in Loudoun County today. This is a very complex issue, from both a scientific and legal/land use perspective, and I will provide several excellent references at the end of this article for those who wish to learn more.

Wetlands are in the simplest sense transitional areas between water and land. As with nearly everything in the natural world, there are not always clear boundaries between clearly different entities, rather there are broad transitional zones known as ecotones. The term wetlands also includes a wide variety of often very different types of habitats known generally as wetlands.

To begin with, we should define the term. The most universally utilized definition is that used by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (ACE) at the federal level, that defines wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Wetlands are regulated at the federal level by the Corps, with oversight of the program provided by EPA. The primary regulatory authority for federal wetland protection is provided for in Section 404 of the Clean Water Act (CWA). Other federal agencies have ancillary roles in administering federal wetland programs. Virginia also has a separate state wetlands program in the Department of Environmental Quality (DEQ) that also administers portions of the federal program under delegation from the Corps.

More detailed information can be found on the respective agency websites listed at the end of this article.

While there is a regulatory definition of wetlands, actually making the determination of what is and is not wetland in the field can be very difficult at times, and this has been the subject of much controversy. The currently accepted methodology is the *1987 Corps of Engineers Manual for Identifying and Delineating Jurisdictional Wetlands, in conjunction with periodically published federal guidance*. This manual requires the positive existence of three parameters to consider an area wetland – wetland hydrology, hydric soils, and hydrophytic vegetation, except in certain atypical and disturbed circumstances. This manual can be accessed through the Corps' website.

Why are wetlands important and worth protecting? Wetlands are widely recognized as some of the most productive habitats that serve many unique functions in our landscape. Wetlands are vitally important to protecting water quality in our streams and other surface waters due to their ability to filter tremendous

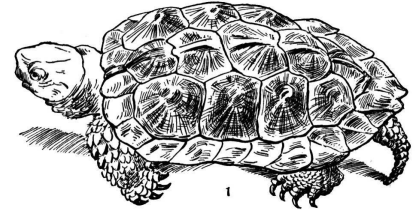


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Protecting Wetlands...*continued from page 10*

levels of sediment and attached pollutants from storm water and out-of-bank floods. They also provide significant floodwater storage capacity. They are often referred to as nature's sponges and filters, and this is certainly a suitable comparison. The loss of wetlands inevitably leads to reduced water quality, increased flooding, and impaired biological communities.

Wetlands are also unique in that they provide critical habitat to a large number of wetland-specific plant and animal species, many of which are imperiled, and also provide habitat variety to non-wetland dependent species. The state-threatened wood turtle (*Glyptemys insculpta*, formerly *Clemmys insculpta*) is a prime example of a species that utilizes wetlands and streams for important phases in its life cycle. The loss of wetlands contributes significantly to the loss of natural biodiversity.



The protection of these important wetland functions provided the basis for the implementation of the federal and state wetland programs. The federal wetlands program is limited to the discharge of fill into waters of the U.S., including wetlands. The reach of federal jurisdiction was expanded over time from the inception of the CWA to include wetlands of all types, but it has recently been limited by federal court cases. The Virginia state program regulates other types of wetland disturbance, such as draining and disturbance of vegetation, and is not as limited in jurisdiction as the Corps is by recent federal court decisions.

A permit process exists at the federal and state levels to allow for wetland disturbance in accordance with various laws and regulations; the governmental agency websites should be consulted for additional information. Any proposed wetland disturbance is mandated to follow a three-step process known as mitigation that seeks to limit impacts to those that are clearly unavoidable. The three steps are avoidance, minimization, and finally, compensatory mitigation, where wetlands are restored or created to replace lost wetlands.

Unfortunately the wetland protection programs operate in an increasingly politicized atmosphere where property rights advocates believe such programs to be confiscatory and somehow "un-American". In the absence of changes in the laws and regulations themselves, I have seen too many instances where unscrupulous developers and consultants, in concert with inadequately trained or apathetic government regulators, circumvent these reasonable restrictions that protect our environment and the general welfare of all citizens. These pressures are clearly at play in Loudoun County.



One of the greatest shell games in history is being foisted upon the public in the guise of "wetland mitigation". Although many wetland consultants and regulators will insist that created wetlands are adequate compensation for lost natural wetland systems, the vast bulk of the wetland science on the subject proves otherwise. Too often these projects are functionally isolated from their watersheds and become dominated by invasive species, with minimal monitoring and maintenance. Man-made wetlands are seldom if ever a preferred alternative to what nature has provided and developed over long periods of time.

Unfortunately, wetland mitigation has become a big business, and one that encourages the further loss of natural wetlands. It is ironic that many of the wetland consultants advising developers also engage in extremely profitable mitigation work, setting up an interesting dynamic whereby increased wetland

Continued on page 12

Protecting Wetlands...continued from page 11

impacts on a project result in increased profits. The mitigation craze also seems to be preferable to many regulators in that it reduces conflict with developers over enforcing adequate avoidance and minimization and helps to keep the paper stream moving along. Unfortunately, the expansion of this approach, commonly referred to as the mitigation buy-down approach, results in an ever-increasing workload and encourages more impact applications. This further reduces the level of project review by chronically under-staffed regulatory agencies.

How can the average citizen assist in this effort? Get informed and get involved in the process. Jurisdictional determinations and permit applications for wetland impacts are available on the Corps' website. Conservation groups such as LWC and the Piedmont Environmental Council (PEC) often monitor upcoming development proposals and provide citizen alerts. Best of all, become further educated in the technical aspects of the process and get involved through writing letters and attending public hearings. The best defense for our diminishing wetland resources is a well-educated and determined public that insists on the vigorous enforcement of our wetland protection laws and regulations.

For further information:

Mitsch, WJ, and JG Gosselink. 2000. *Wetlands*, 3rd ed. New York: John Wiley and Sons.

Connolly, KD, SM Johnson, and DR Williams. *Wetlands Law and Policy: Understanding Section 404*. Chicago: American Bar Association.

Virginia DEQ website: www.deq.virginia.gov/wetlands

Norfolk District Corps of Engineers website: www.nao.usace.army.mil/Regulatory

US EPA website: www.epa.gov/owow/wetlands

Natural History Day Camp

June 26-30 and July 10-14

Plan now for some summer fun at Banshee Reeks Nature Preserve. Campers in grades 3 - 6 will have the opportunity to learn about and enjoy nature as they explore the woods, fields and waters of this special place. This is a fee-based program (\$120) and spaces will be filled on a first come basis. The camp is jointly sponsored by PEC, PRCS, LWC and FOBR. For more information and registration forms contact Phil Daley at 540-338-6528, or e-mail: pdaley@loudounwildlife.org.

2005 Central Loudoun Christmas Bird Count

by Joe Coleman

The 57 people who participated in the Ninth Central Loudoun Christmas Bird Count (CBC) on December 28, 2005 deserve a big thank-you. Without their willingness to give up a day during the busy Christmas season and head outside to count every wild bird they see, we would not have had such a successful year. In spite of fewer people participating than previous years, we were able to cover every part of the circle.

Special thanks also need to go to all those landowners who grant us permission to search their properties. Much of Loudoun's best natural habitat is still found on private property or rarely accessible public land. These land-access permissions and the many people who do the actual counting combine to make the Christmas Bird Counts the most successful national example of citizen science.

The highlights of the 91 species and the 32,493 individual birds we saw this year included: our first Loggerhead Shrike, a threatened species in Virginia since 1997, and two Palm Warblers, the first ever seen on our count. Kurt Gaskill and Rich Rieger saw the Loggerhead Shrike. Kurt heard one of the Palm Warblers, while Bob Abrams and Yusef Gantt found the other Palm Warbler.

While we counted fewer owls and waterfowl than normal, we did find a Long-eared Owl. We had high counts for a number of species, including 175 Common Mergansers, 524 Fish Crows, seven Catbirds, an extraordinary 8,802 American Robins (most of them seen by Phil Merritt along the C&O Canal in Maryland), and 68 Swamp Sparrows. Like many other local counts this year, we had high numbers of Red-breasted Nuthatches (26), Golden-crowned Kinglets (81), and Purple Finches (81). While we saw fewer Red-tailed Hawks (91), we saw a lot more Red-shouldered Hawks (80) than usual.

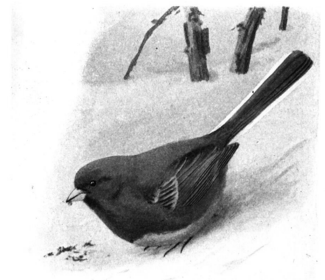
One of the more interesting aspects of the count is that now, with nine years of data, we can start to monitor trends in our local bird populations. For example, there was a large decrease (over 50 percent in some cases) of Carolina Chickadees, Tufted Titmice and Eastern Bluebirds in both 2003 and 2004. Much of this decline was probably a result of a very cold and wet spring in 2003, but other factors such as West Nile Fever may have also played a role. It appears that all of those species have rebounded to their pre-2003 numbers. Unfortunately, other species, such as Northern Bobwhite, have virtually disappeared from the area and do not seem to be making a comeback.

The full report is posted on the web at both www.audubon.org/bird/cbc/ and www.loudounwildlife.org/CBC.htm. You can also find the results of our previous eight counts on the Loudoun Wildlife Conservancy website. For this year's count, David Ward created a new map of the circle (also available on our website), something that was sorely needed due to the County's explosive growth.

Over 30 of us finished the day with a Tally Rally, underwritten by the Loudoun Wildlife Conservancy and the Bird Feeder (stores located in Leesburg and Reston.) Darrell and Jane Schwalm coordinated the dinner with the assistance of Sandy and Warren Ruefer. Without them the Tally Rally would never have occurred let alone been such a fine way to end a great day of birding!

The Loudoun Wildlife Conservancy's next big count will occur on May 13 when we celebrate International Migratory Bird Day – "Birding Loudoun County's Special Places." Please join us if you can and mark your calendars now. It is always great fun, and I can guarantee you that you will see some birds you didn't see on the 28th of December.

Many Thanks & Good Birding!

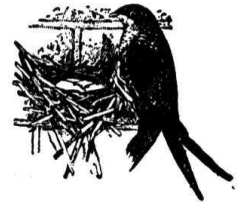


Watching Chimney Swifts

by Nicole Hamilton

Up until the early 1900s, the primary nesting and roosting location for Chimney Swifts was large dead trees that had been hollowed out by other animals. Over the years, these old trees have been removed through forest “clean-up”, logging, and development. As a result, Chimney Swifts adapted to using chimneys, church towers, and other old buildings as a replacement for the trees.

Today, however, those manmade structures are rapidly disappearing or changing. Old structures are being torn down, chimney caps are being placed on new chimneys, and slick steel liners are being used inside chimneys. As a result, Chimney Swift populations have been on a serious decline in recent decades. According to the Cornell Laboratory of Ornithology’s website, Chimney Swift populations have been decreasing at a rate of almost six percent per year. Education about these birds and their nesting needs is critical to their survival.



The Loudoun Wildlife Conservancy is launching an effort not only to raise awareness about Chimney Swifts but also to enable monitoring of their populations here in Loudoun County. We are working in partnership with the Blue Ridge Center for Environmental Stewardship and the Audubon Naturalist Society at the Rust Nature Sanctuary to build two Chimney Swift nesting towers in April.

Another Chimney Swift tower has already been built at Dominion High School through the leadership of Mary Young-Lutz. These towers will have information about Chimney Swifts and their habitat needs and will provide an opportunity for us to monitor the birds through the nesting season.



In the fall, we will coordinate an event titled “A Swift Night Out”. This is a nation-wide Chimney Swift count that occurs in mid-September as these birds are congregating in communal roosts prior to their migration to Peru. On the Swift Night Out, we will look for large roosts where we may see the great funnels of birds as they enter and exit roosts. We will count as many as we can.

More information will be provided in the summer *Habitat Herald*. However, if you see Chimney Swifts in your area this spring, you can report the information to LWC and to Driftwood Wildlife Association which is tracking swift migration and populations: www.chimneyswifts.org/.

Monitoring Avian Productivity and Survivorship (MAPS) Resumes at Banshee Reeks

The Monitoring Avian Productivity and Survivorship (MAPS) Station was initiated at Banshee Reeks in 2003. MAPS data provide a way to determine the breeding success and survival rate of bird species that nest in a variety of habitats on Banshee Reeks Nature Preserve.

MAPS staff are gearing up for another season of data collecting, and they need volunteers to help. Data collecting begins approximately the last week in May and goes through the second week in August. During that time, approximately ten dates will be selected for banding birds. It is an early morning adventure beginning just before sunrise and lasting to about midday (12 PM or so). Walking is involved in checking the nets, with sometimes hot and humid conditions, along with insects and ticks. But the experience is immensely rewarding and a wonderful opportunity to study birds up close.

If anyone is interested and would like to sign up, they can contact Mary Alice Koenke at mkoeneke@cox.net or bansheereeks@yahoo.com.

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.*

Nature by Bike on the W&OD Trail

Sat., June 17 (8 a.m. - Noon)

Leader: Bill Cour

Join local naturalist Bill Cour on a leisurely 10-mile ride (round-trip) along the Washington & Old Dominion Trail west from Leesburg through Catoctin Mountain to the rural village of Hamilton and back. Along the way we'll look for birds, butterflies, and early summer wildflowers. We'll also consider the impact of a controversial power line proposal for this longest, narrowest Northern Virginia Regional Park. Our meeting point is near our Rust Sanctuary in Leesburg. Participants, limited to 12, furnish their own bikes.

Members: \$21; Nonmembers: \$29

Claude Moore Park Nature Programs

HIKE AND LUNCH BUNCH

Monday, April 10

(Adults and children up to 8 years) 11:00a.m.-1:00p.m. Discover nature in the springtime! Explore green shoots and flowers that are starting to appear and search for baby animals that have hatched. Bring a picnic lunch to enjoy during the hike. \$3.50/person, ages two and under free. Children must be accompanied by an adult. Call to register.

EGGSTRAVAGANZA

Wednesday, April 12

(Ages 2-10) Enjoy a very special egg hunt! From 10AM-12PM, enjoy hands-on displays about reptiles, insects and other animals that hatch from eggs. Then hunt for "their" eggs! Egg hunt times for specific ages are 10:15A: age 2, 10:45A: ages 3-4, 11:15A: ages 5-6, 11:45A: ages 7-10. \$5.00/child. Space limited. Please register by 4/11/06. Rain date for all sections is 4/13/06.

WINGS OVER LOUDOUN BIRD FESTIVAL

Saturday, May, 13

Early Morning Bird Walk - 8:00a.m.-10:00a.m. (Ages 8 and up) Early May is the peak of migration for warblers and other birds that winter in the tropics. Because of its varied habitats, including cedar forests, old fields and oak-hickory forest, Claude Moore Park is an especially good place to see a wide variety of birds. Join birder John Keith to look for as many as 25 to 30 different bird species, including flycatchers, herons, hawks, woodpeckers, warblers, thrushes, and tanagers. Call 703-444-1275 for information or to register. Children ages 8 to 16 must be accompanied by an adult. Free.

Celebrate International Migratory Bird Day - 9:00a.m.-1:00p.m. (All ages) Discover the lives of our feathered friends at our festival of hands-on activities, live bird demonstrations and crafts. Participate in a guided trail walk, looking and listening for the returning spring birds. Explore the lives of raptors in "View from the Top" featuring live birds presented by the Wildlife Center of Virginia. Visit exhibits by local wildlife groups, including the LWC. Make a bird feeder of your own. Have your face painted or enter our "Bird Banding" raffle to win bird related prizes. Only groups of 10 or more need to pre-register. Call 703-444-1275 for information or to register your group. Free.

For more information call 703-444-1275 or see www.loudoun.gov/prcs/parks/claude.htm.

FEATURED FRIEND: Wood Turtle (*Glyptemys insculpta*)

by Nicole Hamilton

The wood turtle got its name because each segment of its shell looks like the cross-section of a tree branch complete with radiating growth rings. Interestingly, just as you can count the rings on a tree to determine its age, you can also count the rings on a segment of the wood turtle's shell to get an idea of its age. The difference with the wood turtle rings, however, is that for the first 15-20 years of its life, the wood turtle adds one growth ring per year. Then as it gets older, the rings become worn down and are harder to distinguish. Additionally, the turtle grows more slowly after age 20, and the rings are usually so small that it is harder to count them. The oldest known wood turtle was approximately 58 years old.



Unlike other turtles that favor either land or water, wood turtles reside in both aquatic and terrestrial habitats. They require streams and rivers for mating, feeding and hibernation, but also require terrestrial habitats for egg-laying and foraging. Their preferred habitat is lowland forests with trees such as oaks, black birch and red maple and open wet meadows that are located near moderate to fast current streams or rivers with sand or gravel substrates. Wood turtles are also found in agricultural fields and pastures. Open thickets of alder, multi-flora rose and greenbrier are favored basking areas and are safe havens used by hatchlings.

Wood turtles are rarely far from moving water, generally staying within 300 yards. Studies have shown that these turtles select their territories rather than use them randomly. They show fidelity to their home ranges, which often overlap with other individuals'. Wood turtles have proven to be quite smart with the intelligence similar to that of rats in solving mazes. They have also shown to be able to find their way home from as far as a mile away. It is thought that they find their way by using their olfactory senses. They are also good climbers, able to climb chain-linked fences and have good depth perception and vision.

From April through November, wood turtles are active during the day, foraging in the woods, wet meadows or along stream banks for food such as insects, small fish, snails, tadpoles, leaves, earthworms, dandelions, berries, sorrel, strawberries, grasses, sedges and mushrooms. One interesting behavior is stomping its feet on the ground in order to presumably mimic the vibrations of rain. Earthworms then come to the surface, and the turtle snaps them up.

Wood turtles become sexually mature between the ages of 10-14. Once mature, they mate in spring or fall. During months of May through June, the females travel sometimes many miles to reach communal stream banks, most often where they themselves were born, to lay their eggs in sand and gravel. This communal nesting occurs more frequently as suitable stream banks become scarcer. When laying their eggs, they generally prefer a south-facing sand bank or openings in flat sandy soil next to streams. During the winter, wood turtles hibernate on bottoms of streams or inhabit stream banks, hibernating in large community burrows.

Wood turtles are currently on the threatened species list, but at one time they were abundant. There have been many causes for their decline, yet none of these are things we cannot correct.

Continued on page 17

Wood Turtle...*continued from page 16*

- **Habitat Loss and Pollution:** Water pollution, irrigation and forest erosion have spoiled many of their habitats. Wood turtles require clear water. As streams endure more erosion and sedimentation, water becomes unusable for the turtles. Damming of streams continues to destroy their habitat, and the use of pesticides degrades habitat, further threatening the future of wood turtles.
- **Collection for biological uses:** Wood-turtle decline began in the 1970s when collection of adults became popular for use in biology classes. One account by a collector shows that in just one stream bank where he took over 100 wood turtles, today there are none. Because they are so scarce today, this collection practice has declined.
- **Collection for Pets:** Collecting wood turtles for pets is another problem that has taken a high toll on populations. As pets, wood turtles are not given the proper amount of space or the substrate needed for breeding. Each adult removed from the wild means a loss in future generations. Because of the long time it takes for individuals to become sexually mature, and the other hazards that they must endure while reaching maturity, removal of even one or two adults from the wild takes a significant toll on their populations.
- **Road Hazards:** Roads cause fragmentation of habitat. This results in turtles having to cross roads in order to get from the foraging forests and fields to the streams. As turtles cross the road, they are often smashed by cars. Here is one tip if you do see a turtle crossing the road and are able to help it: try to figure out which side of the road it is trying to get to and take it there, a safe distance away from the road. Be sure to take the turtle in the direction it was heading, otherwise it will still be intent on crossing the road.

What can we do? As a community, we can pay particular attention to supporting wood-turtle habitat needs. By maintaining water quality, controlling sedimentation, restricting the use of pesticides and establishing buffer zones along streams, we can help wood turtles return from their threatened status to have healthy, stable populations.

INSECT ID:

The Water Boatman

(Hemiptera: Corixidae)

by Nicole Hamilton

Water boatmen are considered beneficial insects. They are small, semi-aquatic insects that can often be found in seasonally flooded wetlands. They paddle around with oar-like hind legs. Water boatmen are aquatic bugs that lack gills. Therefore, they breathe air when at the surface of the water. Also, they will carry a bubble of air with them on the surface of their bodies or under their wings and breathe from it when under water. Water boatmen are fully capable of flight. They can move from one ephemeral body of water to the next or on to a more permanent body of water (pond, slow stream) in a time of drought or pollution. Males make a chirping sound by rubbing their long forelegs on their heads to attract mates. Water boatmen will eat algae, mosquito larvae, and minute aquatic organisms. They are considered beneficial insects because they help control aquatic pests and serve as food for larger aquatic animals. Very cool critters!



NATIVE PLANT: **Cardinal Flower** (*Lobelia cardinalis*)

by Nicole Hamilton

Cardinal flower is a native, annual wetland plant that favors marshes, stream banks and low woods, although it will grow well in the garden with moist conditions and mulch. The stunning red flowers bloom late July through early October and open gradually on two- to four-foot spikes. They are a real favorite of our Ruby-throated hummingbird, which readily pollinates it while sipping the nectar. If grown in a place it likes, the Cardinal flower will readily reseed itself and spread. Cardinal flowers are a member of the Bluebell family.



Attention, Members—LWC Annual Meeting

The Annual Meeting of the Loudoun Wildlife Conservancy
will be held on **Sunday, May 21st** from **5:00 – 7:00 p.m.**
at the **ANS Rust Nature Sanctuary**
802 Children's Center Road, SW in Leesburg.

Mark your calendars because the event promises to be a stellar occasion.

Come take part in an exciting **RAFFLE** to win a wonderful weekend in the Shenandoah Mountains or a birds-eye view of Loudoun County while flying over the hills and dales.

Listen to well-known guest speaker **DAVID WHITEHURST**, Director of the Division of Wildlife Diversity in the Virginia Department of Game and Inland Fisheries.

Find out who will win the **LWC GREEN AWARDS**.

MEET and **TALK** with local high-school Science Fair winners.

Enjoy **REFRESHMENTS**.

BRING a book on wildlife, **TAKE** a different one home. — A new feature this year will be a **Book Swap**. Plan to bring one of your books on wildlife and exchange it with someone else's. This is an opportunity to circulate good books while cleaning out your own libraries.

As always, the Annual Meeting is free to all members, and this year promises to be as much fun as past meetings. *Please RSVP to Nicole Hamilton at nhamilton@loudounwildlife.org or 540-882-4939.*

WATERFORD LANDMARK 10K RUN-HIKE-WALK

Saturday, April 22

Join us as we help a pair of fellow local non-profits in Loudoun with a fund- raising event at 10:00 a.m. on Saturday, April 22, 2006, in Waterford. Runners and Walkers alike are invited to take part in the 'Landmark 10K Run-Hike-Walk'. The event is being organized to raise funds for the Waterford Foundation to further their mission to preserve and protect the Landmark and to support the efforts of the Briggs Animal Adoption Center (www.baacs.org) located in nearby Charles Town, West Virginia.

The entire event will begin and remain on historic Talbot Farm (a privately owned property within the Historic Landmark District). The route meanders across the creek, up and down hills and along the property boundaries. The run route is approximately 10K, the hike route 6K and the walk about 3K. The "run-hike-walk" offers something for beginners and seasoned race veterans alike. Race day registration begins at 8:30 am, with a 10 am start time.

The walk part of the event is where we will play a role. The 3K (about 2 mile) walk will be a "Bird" walk led by our very own Phil Daley! While the runners run and the hikers hike, the walkers will observe the many birds and other natural wonders that also populate this locale. It should be fun for all. For more information, go to www.waterfordva.org.

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 5-9 and 15 for complete descriptions)

April

- 8 Birding Banshee (L)
- 8 Night Sounds (L)
- 10 Hike & Lunch Bunch (C)
- 12 Eggstravaganza (C)
- 15 Exploring Spring (L)
- 22 Birding the Blue Ridge Center (L)
- 27 Amphibians Afoot (L)

May

- 1 Orioles (L)
- 6 Trilliums and Warblers (L)
- 13 Celebrating Special Places (L)
- 13 Wings Over Loudoun (C)
- 20 Butterflies and Dragonflies (L)
- 21 Sunday in the Preserve (L)
- 21 LWC Annual Meeting (L)
- 27 Birding the Blue Ridge Center (L)

June

- 10 Birding Banshee (L)
- 17 Macro-Invertebrate ID I (W)
- 17 Nature By Bike (A)
- 17 Butterflies and Dragonflies (L)
- 24 Birding the Blue Ridge Center (L)
- 24 Gardening for Butterflies (L)

July

- 1 Macro-Invertebrate ID I (W)
- 8 Birding Banshee (L)
- 15 Butterflies and Dragonflies (L)
- 22 Birding the Blue Ridge Center (L)

August

- 5 Annual Butterfly Count (L)
- 12 Birding Banshee (L)
- 19 Butterflies and Dragonflies (L)
- 26 Birding the Blue Ridge Center (L)

A = ANS

L = LWC

C = Claude Moore Park

W = Water Quality



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