
Habitat Herald

A Publication of the Loudoun Wildlife Conservancy

Volume VIII, Issue 4

Fall 2003

In This Issue:

- 2 A Word from the President**
- 5 ANS Water Quality Programs**
- 7 LWC Program Calendar**
- 9 Building Bat Houses**
- 10 Stream Monitoring Update**
- 11 Winter Wildlife Tips**
- 11 LWC Needs YOU!**
- 12 LWC Membership — Who Are You?**
- 12 Thank You**
- 12 Are You Interested in Contributing to the Habitat Herald?**
- 13 ANS Environmental Education Programs**
- 15 Logo Contest**

www.loudounwildlife.org

Articles in the Habitat Herald are published for the information of Loudoun Wildlife Conservancy members.

Newsletter *Karen Coleman*
Staff: *Leslie McCasker*

Printed by: *MR. Print, Purcellville, VA*

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Adapting to Winter's Challenge

By Cliff Fairweather

Winters in Loudoun County are pretty mild compared to more northerly regions, last winter notwithstanding. Nonetheless, winter here still poses a challenge to the survival of wildlife. For most animals, energy is harder to obtain and easier to lose in winter than in any other season. Energy conservation to maintain a balance between energy gains and losses during winter becomes the key to survival.

Solar radiation, the ultimate source of energy for most life on earth, is much less abundant during winter. This is because the northern half of the earth is tilted away from the sun in winter, causing solar radiation to diffuse over a larger area. To see how this works, shine a flashlight straight at a wall from a few feet away and notice how much of the wall the beam covers. If your flashlight beam were a sunbeam, its radiation would be concentrated on this relatively small area. Now, tilt the flashlight up a bit to give the effect of the earth tilting away from the sun. Note how much more of the wall is being hit by the same beam of light. If this were radiation from sunlight, it would be spread over a wider area. With a lower concentration of solar radiation, photosynthesis stops or slows and most plant growth ceases. Since plants form the base of the food web, this means less energy available for animals — from insects to birds and mammals.

Not only is less energy available for wildlife in winter, but conserving energy becomes more difficult. Cold, wind, snow, rain, ice, and longer nights can all tax an animal's energy reserves at a

Continued on page 3

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

Contact Information:

Name	Phone	E-Mail
President		
Tom Bjorkman	(540) 882-3960	TNBj@megapipe.net
Vice President		
Vacant		
Secretary		
Mary Ann Good	(540) 338-1901	ClintGood@mediasoft.net
Treasurer		
Leslie McCasker	(540) 338-2133	lamccasker@earthlink.net
Children's Programs Committee Chair		
Vacant		
Loudoun Watershed Watch Liaison		
Darrell Schwalm	(703) 430-4180	schwalmie@aol.com
Membership Committee Chair		
Vacant		
Publications Committee Chair		
Leslie McCasker	(540) 338-2133	lamccasker@earthlink.net
Programs Committee Chair		
Joe Coleman	(540) 554-2542	jandkcoleman@erols.com
Public Relations / Publicity Committee Chair		
Nana Chroninger	(703) 406-7749	ngchroninger@aol.com
Public Policy Committee Chair		
Otto Gutenson	(540) 882-3205	gutenson.otto@epamail.epa.gov
Stream Monitoring Program Committee Chair		
Gem Bingol	(703) 771-1645	gembingol@email.msn.com
Volunteer Coordinator		
Nicole Hamilton	(540) 882-4839	nicole@gilandnicole.com
Webmaster		
Denise Kirwan	(703) 327-4205	kirwantech@mediasoft.net

A Word from the President

by Tom Bjorkman

Making It Easy For You to Volunteer

Volunteers are the heart of the Loudoun Wildlife Conservancy. We are a dynamic organization that sponsors programs and field trips, lobbies county government, organizes stream monitors, works to save critical habitats, and publishes a respected quarterly newsletter. Yet we have no paid staff.

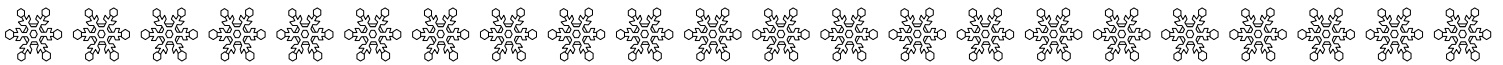
We have accomplished so much since our founding eight years ago thanks to a small band of volunteers who combine great energy with deep expertise about the natural world. I was treated to a snapshot of our volunteers at work on two recent weekends. First there was Darrel Schwalm, getting up before dawn to dip water from Sugarland Run for his stream monitoring exhibit at Sterlingfest. Darrel spent the day identifying stream critters to an admiring swarm of kids while pitching LWC membership to their parents. Then there was Gem Bingol the following weekend, arriving at Ashburn Regional Library before sunrise to oversee setup for Family Stream Day at Ashburn Farms. Gem was joined by Phil Daley leading meadow walks and Otto Gutenson and Ellie Daley pitching in wherever they were needed. And there was Darrell again polishing his act.

While it is delightful to watch our volunteers at work, this hardy band is not nearly large enough to keep up with the work that stands before us in light of Loudoun's booming population and the growing threat to its wildlife. We are looking for ways to expand our programs, activities, and impact. This necessarily means enlarging the circle of members

Continued on page 3

A Word...*continued from page 2*

who are involved in our work. To begin the process, we have created a new position on the Board – the Coordinator for Volunteers – and named the talented and energetic local conservationist Nicole Hamilton to fill this position. It will be Nicole's job to help us find ways to put new energy and organization into our volunteer effort. One of her first priorities will be to create a roster of volunteer opportunities and to survey our membership to find out where each member's passion fits into that roster. Nicole's vision is to develop volunteer opportunities that are so appealing in content, yet so manageable in terms of time commitment, that it will be easy for you to say "YES!" I hope you will.

**Adapting to Winter...***continued from page 1*

time when replenishing that energy becomes more difficult. Animals have three basic strategies for coping with the rigors of winter: migration, dormancy, or resistance. Of course, things are never so cut and dry in nature, and many animals use some combination of these strategies.

Migratory animals move to where they can find a better food supply. Flight is a much more efficient means of long-distance travel than walking. Not surprisingly, then, our local migratory animals all fly, including many birds, some bats, and a few insects. While a lot of migratory species leave Loudoun and head south for the winter, this area is the "south" for others. The season brings with it such winter resident birds as winter wrens, white-throated sparrows, and kinglets.

Hibernators reduce energy demands by lowering their metabolism. For example, woodchucks reduce their heart rate to a few beats a minute and let their body temperature drop to only several degrees above freezing. Black bears, on the other hand, maintain a relatively high metabolism during hibernation. Other winter-dormant animals allow their body temperature to match the surrounding air. Many reptiles and amphibians choose an overwintering site protected from sub-freezing temperatures, such as an old mammal burrow or the mud at the bottom of a pond.

Stored fat fuels hibernating animals during their dormancy. Smaller hibernating mammals, such as chipmunks, cannot store enough fat to get them through an entire winter. They must regularly replenish their fat reserves from food cached in their burrows. Some animals, however, can actually tolerate sub-freezing temperatures. Ice crystal formation in cells is the killer at such temperatures, but a few frogs, reptiles, and insects produce their own antifreeze. Wood frogs can allow up to 40% of their body to freeze. Glucose released from their livers prevents the formation of ice inside their cells. Within hours of thawing, a wood frog is back to normal and even ready to mate!

Many insects and some other animals can avoid freezing by super cooling. Super cooling involves eliminating as much water from their bodies as possible, breaking what water remains into tiny droplets, and removing impurities around which ice crystals might form. A super cooled animal must also remain absolutely still. Any disturbance while in a super cooled state will cause flash freezing and immediate death, making this a sometimes risky strategy.

Animals that remain active throughout the winter have evolved a variety of adaptations to resist winter's impact on their energy balance. Adaptations to conserve energy become particularly critical to their survival. Storing fat gives many animals greater ability to resist winter by providing them with an energy reserve when food is scarce. Fat storage begins in summer when food is more abundant, and most animals can find enough to meet both their daily needs and to store some as fat. Larger animals, such as white-tail deer, have an advantage over smaller ones because they can store fat faster than they use it. As a result, they can go longer without eating. Smaller animals need to eat more frequently and many cache a surplus for winter. Red squirrels, for example, cache nuts and pine cones. Finding their mid-dens of nutshells or

Continued on page 4

Adapting to Winter ...continued from page 3

chewed pine cones in winter is a good sign that red squirrels are nearby. Some mammals, especially rodents, have a kind of fat called brown fat that they can use to produce heat quickly. Normal fat cells need to fuel some activity, such as shivering, to produce heat. Brown fat can be turned directly into heat energy without any physical activity.

Nothing beats a good coat for getting through the winter and mammal fur is about the best natural coat around. Fur consists of two layers: long, stiff, coarse outer guard-hairs and finer, shorter, often wavy under fur. Under fur traps a layer of air within it which warms up from the animal's body heat. The trapped, warmed air reduces conductive heat loss, that heat loss to the surrounding cold air. Mammals grow additional under fur from secondary follicles in preparation for winter, giving them a denser coat. Sebaceous glands next to the follicles produce oil for waterproofing.

The avian equivalent of fur is feathers. Soft down feathers concealed beneath a bird's sleek outer feathers trap a layer of insulating air. To increase their insulation, birds puff out their feathers in the cold. They also grow additional feathers in winter. However, birds have very high metabolisms, and feathers alone are not enough to maintain their body temperatures. Most birds shiver continuously in cold weather to keep warm when not in flight. Also, chickadees and other small birds can allow their body temperature to drop several degrees below normal during the night. By lowering their body temperature they use less energy. Short bursts of shivering keep their temperature from dropping too far.

Animals lose heat through their body surface, and small animals are particularly vulnerable to heat loss due to their greater surface-area to body-volume ratio — the greater the surface area relative to body volume, the greater the rate of heat loss. Some small mammals and birds overcome this problem by huddling. Huddling effectively makes several small animals into a single, larger animal with a more favorable ratio of surface area to body volume. Bluebirds, brown creepers, and nuthatches huddle in tree cavities or nest boxes on cold nights. Even normally non-social animals, such as least shrews and white-footed mice, tolerate close contact and huddle in the winter.

Animals also lose significant heat through their extremities. Blood circulating through legs and tails cools off, and an animal must expend additional energy to warm it back up when it returns to the body. Cold-weather adapted animals often have counter-current heat exchangers in their legs or tails to reduce cooling. A counter-current heat exchanger has arteries with warm blood from within the body next to veins carrying cooler blood from the extremities. This arrangement allows arterial blood to warm venous blood before it re-enters the body. The animal saves considerable energy that would otherwise be required to re-warm the returning blood.

Birds have well developed heat exchangers in their thin, poorly insulated legs. They further reduce heat loss by tucking one leg up into their feathers while standing on the other. A beaver's tail contains an especially, well-developed network of heat exchanges that reduces heat loss to a small fraction of the heat that the animal produces. In summer, this system also helps a beaver cool down. Even insects take advantage of counter-current heat exchangers. A few species of the adult tiger moth are active during the winter and use heat exchangers to warm cooled blood returning from the abdomen to the thorax. Although not "warm-blooded" in the sense of mammals or birds, these insects produce heat with their flight muscles. A counter-current heat exchanger is critical to maintaining the high muscle temperature they need to fly.

I've barely scratched the surface on adaptations for winter survival. To learn more, join me for the Audubon Naturalist Society's *Winter in Nature* adult foray at the Blue Ridge Center for Environmental Stewardship on January 24th (see page 14 for details). Visit www.AudubonNaturalist.org or call 301-652-9188 ext. 16 for details.

Cliff Fairweather is a naturalist for the Audubon Naturalist Society at the Rust Nature Sanctuary in Leesburg. He can be reached at Cliff@AudubonNaturalist.org or 703-737-0021.

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 program 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 — *Sign up is required.*

To register for any of the classes, contact Cliff Fairweather at (703) 803-8400 or cliff@audubonnaturalist.org.

MACRO-INVERTEBRATE IDENTIFICATION I: ORDER LEVEL

Saturday, February 14 (10:00 a.m. - 1:00 p.m.) - classroom

Saturday, March 6 (10:00 a.m. - 12:30 p.m.) - field

Benthic macro-invertebrates, boneless creatures that live under flowing water are important indicators of aquatic ecosystem 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).

MACRO-INVERTEBRATE IDENTIFICATION II: FAMILY LEVEL

Stoneflies & Megaloptera Sunday, January 10 (1:00 - 3:30 p.m.)

Mayflies Sunday, January 25 (1:00 - 3:30 p.m.)

Caddisflies Sunday, February 15 (1:00 - 3:30 p.m.)

True Flies & Beetles Sunday, February 29 (1:00 - 3:30 p.m.)

Identification to the family level gives our monitoring data much more power to assess stream health. These classes are recommended for monitors with at least one year of monitoring experience and a good grasp of order-level identification.

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, December 13, 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 jandkcoleman@erols.com.*

SEVENTH ANNUAL CENTRAL LOUDOUN CHRISTMAS BIRD COUNT – Sunday,

December 28. Join us as we participate in the National Audubon Society's Annual Christmas Bird Count. Started in 1899, these surveys are held all over the country, and the results are used to better understand bird populations and dynamics. Our count-circle has a 15-mile diameter and covers 177 square miles of Loudoun's countryside: north to Waterford, south to Aldie, east to Ashburn, and west to Purcellville. *If you are interested in participating for the whole day or just part of the day, contact Joe Coleman (540-554-2542 or jandkcoleman@erols.com) to register and receive additional information.*



INTRODUCTION TO WINTER BIRDING – Saturday, January 17, 9:00 a.m. to 11:30 a.m.

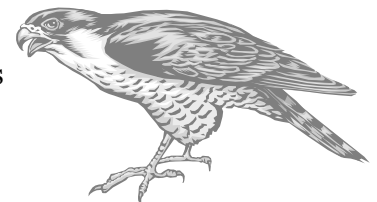
Well-known birding expert John Drummond will give a brief indoor introduction to the world of winter birding at the Banshee Reeks Visitor Center. John's introduction will be followed by a short bird walk to find and identify many birds which winter in our area. *Contact the Friends of Banshee Reeks at 703-779-2077 to register or to get further information.*

SPRING BIRDS AND WILDFLOWERS: THEIR INTERWOVEN WORLD – Tuesday,

January 20, 7:30 p.m., at the Rust Library. Spring wildflowers are at their height as spring bird migration is beginning. Well-known local naturalist Stan Shetler, past president of the Audubon Naturalist Society and Curator of Botany Emeritus at the Museum of Natural History, will describe and show slides of the many different wildflowers and birds found in our area in the spring. The program will include a discussion of the fascinating relationship between wildflowers and birds. This free program is sponsored by the Loudoun Wildlife Conservancy.

BIRDING THE BLUE RIDGE CENTER FOR ENVIRONMENTAL STEWARDSHIP – Saturday, January 24, 8:00 a.m. Beginning in September, the Loudoun Wildlife Conservancy will lead a regular, monthly bird walk on the fourth Saturday of each month 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, this property includes meadows in the valley and heavily forested slopes on the Blue Ridge. We will meet at the Neersville Volunteer Fire Station on Rt. 671 at 8:00 a.m. *Questions – contact Joe Coleman at 540-554-2542 or jandkcoleman@erols.com.*

SEARCHING FOR BIRDS OF PREY – Saturday, January 31, 2:30 p.m. to dusk. Join Liam McGranaghan and Jon Little on this winter raptor search sponsored by the Loudoun Wildlife Conservancy and the Audubon Naturalist Society. After meeting at the Rust Nature Sanctuary in Leesburg, we will drive the back roads of Loudoun County with frequent stops to find and identify the many hawks which winter over here. *Free program; sign-up required - Contact Joe Coleman at 540-554-2542 or jandkcoleman@erols.com.*



BIRDING BANSHEE – Saturday, February 14, 8:00 a.m. See the December 13 listing for details.

Continued on page 8

Calendar...continued from page 7

WINTER WONDERS: BANSHEE'S WOODS AND FIELDS IN THE COLDEST MONTH — Monday, February 16, 10:00 a.m. to 1:00 p.m. Join Phil Daley and Joe Coleman as they explore the Banshee Reeks Nature Preserve during winter. While many people stay indoors during our colder months, others enjoy the beauty of a season when the sky is so clear it seems that you can see forever and the sun casts the longest shadows. During this winter hike we will search for the many birds and mammals that call Banshee Reeks home and discuss the different ways plants and animals cope with temperatures that dip below freezing. Contact the Friends of Banshee Reeks at 703-779-2077 to register or to get further information.

BLUEBIRDS: HOW YOU CAN HELP THESE BEAUTIFUL BIRDS THRIVE — Tuesday, February 17, 7:30 p.m., location to be determined. Have you ever been enthralled by a bluebird's beauty, especially by its vibrant blue right after a gentle spring rain, or enjoyed the warmth of its soft burbling song? Just a few years ago it looked like we might lose this wonderful creature as the number of bluebirds plummeted due to a loss of habitat and to invasive, aggressive bird species. Because of the efforts of many caring people, we are welcoming back the bluebird. However, they still need our help, especially after a bad year like 2003.

Barbara Chambers of the Virginia Bluebird Society will describe bluebirds, their life cycle, why they almost disappeared, and what all of us can do to ensure their future. There will also be a discussion of the other cavity-dwelling birds that use our man-made cavities. Join us at this free program sponsored by the Loudoun Wildlife Conservancy.

AN INTRODUCTION TO BIRDS OF PREY — Thursday, February 26, 7:30 p.m. to 9:00 p.m., and Saturday, February 28, 10:30 a.m. to dusk. Leader: Liam McGranaghan, assisted by Joe Coleman. This two-day class is sponsored by the Audubon Naturalist Society and the Loudoun Wildlife Conservancy. Slides will be used at Thursday night's class at the Audubon Naturalist Society's Rust Nature Sanctuary (Leesburg) to describe the many types of birds of prey that winter over in our area. Saturday will begin with a visit to the Smithsonian Naturalist Center in Leesburg to study the skins of different raptors. The field session in the afternoon will carpool to different locations in western Loudoun where the birds will be studied in the field. Not only is it possible most winters to find many birds of prey in our area, but the variety of species increases also. **Fee: Members: \$33; Nonmembers: \$46.**

BIRDING THE BLUE RIDGE CENTER — Saturday, February 28, 8:00 a.m. See the January 24 listing for details.

BIRDING BANSHEE — Saturday, March 13, 8:00 a.m. See the December 13 listing for details.

LIVING WITH OUR WILD NEIGHBORS — Tuesday, March 16, 7:30 p.m. location to be determined. Many of the people who move into Loudoun County enjoy the wildlife that surrounds us. Unfortunately, the proximity of our wild neighbors sometimes leads to conflict. John Hadidian, Director of Urban Wildlife Programs for the Humane Society of the United State (HSUS), will explain how you can avoid the more common problems that occur when we displace our wild neighbors. He will also describe humane solutions to managing wildlife, using approaches and technology that only recently have become available. Join us at this free program sponsored by the Loudoun Wildlife Conservancy and learn how we can continue to live next to and appreciate the animals who share our neighborhoods.



BIRDING THE BLUE RIDGE CENTER — Saturday, March 27, 8:00 a.m. See the January 24 listing for details.

BIRDING BANSHEE — Saturday, April 10, 8:00 a.m. See the December 13 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.

Building A Bat House

by Darrell Schwalm and Hale Chopp

Recently I volunteered to represent the Loudoun Wildlife Conservancy in helping with the *Batztravaganza* program at the Audubon Naturalist Society (ANS) Rust Nature Sanctuary. I offered to make the bat houses because I have a neighbor, Hale, who is an experienced woodworker. Hale recently bought some power tools that were just what was needed to cut out the materials and make the bat houses. Both of us have watched bats flying in our backyards and have wondered at these mysterious creatures. However, neither of us had experience making bat houses, so I went online to Bat Conservation International (BCI) (www.batconservation.org) and found "The Bat House Builders Handbook."

I learned that due to decades of unwarranted human fear and persecution, bats are in alarming decline. BCI encourages conservation-minded citizens to put up a bat house to help bats find a home, with the resulting added benefit that people will have fewer yard and garden pests. BCI advises that bats are the primary predators of night-flying insects, and that "as consumers of vast numbers of pests, they rank among humanity's most valuable allies. A single little brown bat can catch hundreds of mosquitoes-sized insects an hour."

I had seen bat houses for sale which looked like birdhouses — short, stout houses open at the bottom with several slats on the inside. That's what I thought I would be making. However, I learned from BCI that these bird-house-like boxes only have an occupancy rate of about 10%, mostly bachelor bats. On the other hand, taller, longer and wider houses with two or three partitions on the inside attract pregnant females that form nursery colonies. These houses have about an 80% occupancy rate. With this information in hand, choosing the design became a "no-brainer." I also found another excellent reference — a Penn State publication titled, "A Homeowner's Guide to Northeastern Bats and Bat Problems", 1996 (CAT081).

Both publications agreed upon some important guidelines that need to be followed by homeowners if they are to successfully attract a colony of bats:

- The inside surfaces of bat houses need to be rough so bats can cling to them.
- Bat houses need temperatures of 100° F during the day for nursing young. This can be accomplished with the following easy steps:
 - ◊ use caulking to make tight joints on the bat house;
 - ◊ paint the outside surfaces with a dark stain to absorb heat;
 - ◊ use roofing tarpaper to cover the roof and the top one-third of the house; and
 - ◊ use front and side air vents to provide variations in the inside temperature.
- Bat houses need to be installed in a location about 14 feet off the ground for protection from predators. Locate the bat house so it receives eight hours of sunlight a day. Installation on the side of a barn facing the sun or a 4x4 pole at the edge of a field or woods near diverse habitat and water is ideal.

The designs provided in both publications were very good, although Hale and I made an important modification to make construction easier. We put grooves into the side panels rather than use spacers to hold the inside partitions. This made attaching the front panels, the back and the roof much easier. The hardest part was calculating the size of the inside partitions to allow space between the top and the roof and a staggered access design at the bottom. Hale and I made a dozen bat houses, each of which will hold a couple of hundred bats. Making housing for 2,400 bats is a good day's work any way you figure it.



Darrell Schwalm and Hale Chopp with their bat houses.

Stream Monitoring Update

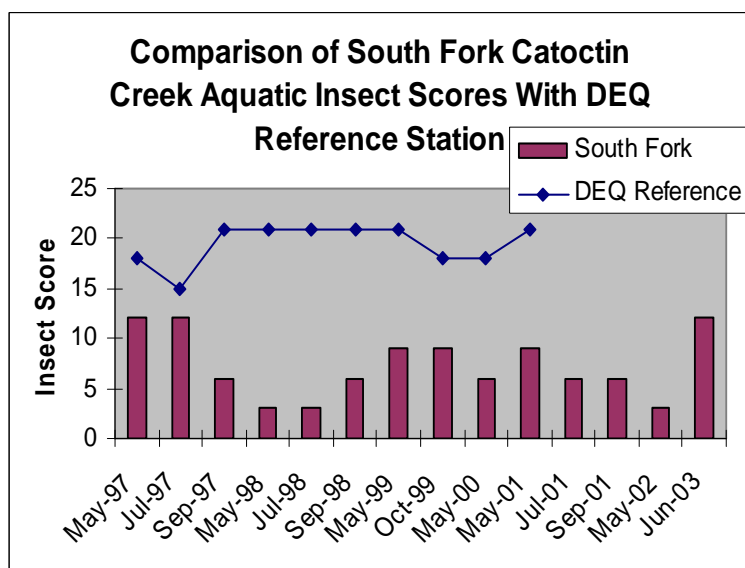
by Darrell Schwalm

Weather Interferes With Stream

Monitoring -- 2003 turned out to be a poor year for stream monitoring in large part because of the rains and high waters in our streams. Such a difference from the drought conditions last year! We hope that monitoring teams will be more successful during the winter monitoring from December 2003 through January 2004. Some teams are reporting that the number of monitors is down to just two or three and that they are looking for new team members. This is a good time to help the project if you have an interest in streams and aquatic life.

DEQ Responds Positively to South Fork

Catoctin Creek Referral -- The Virginia Department of Environmental Quality (DEQ) has responded positively to LWC's referral of degrading conditions in the South Fork Catoctin Creek. A comparison of the aquatic insect community from the South Fork Catoctin with DEQ's reference station at Taylorstown in the mainstem of Catoctin Creek shows a substantial difference. LWC has been monitoring benthic macro-invertebrates at the Purcellville Nature Preserve upstream from Rt. 611 since 1997. This is shown in the following figure.



LWC anticipates that the stream will be classified as impaired for aquatic life. This will oblige the state to help the county and local community address the problem.

Comprehensive Stream Monitoring Plan for Loudoun County

Loudoun Watershed Watch has issued a draft of a comprehensive stream monitoring strategy and plan for Loudoun County. The plan recommends monitoring at randomly selected stations throughout the county over a 5-year period, and monitoring to assess Total Maximum Daily Load (TMDL) implementation. Monitoring at existing trend stations including those monitored by LWC will continue. LWW will be meeting in early November with DEQ and county officials to finalize the plan that calls for state-county-citizen collaboration.

Catoctin Water Quality Implementation

Plan -- The first public meeting regarding the Catoctin Creek TMDL Implementation Plan was held on September 30 in Lucketts. A local project management team led by the Loudoun Soil and Water Conservation District with support from Loudoun County Government is partnering with the Department of Conservation and Recreation on the project. The goal is to develop a plan to reduce non-point fecal pollution into Catoctin Creek so the water quality will meet state water quality standards. Citizens were urged to sign up for one of the four working groups (agriculture, residential, environmental, and government) that are tasked with developing the implementation plan. The working groups began meeting in November.

If you are interested in getting involved with the Stream Monitoring Program, see the list of upcoming Water Quality Programs on page 5. You can also contact one of the following people to receive more information:

Darrell Schwalm (703) 430-4180
Loudoun Watershed Watch Liaison

Cliff Fairweather (703) 803-8400
ANS Stream Monitoring Project

Gem Bingol (703) 771-1645
LWC Stream Monitoring Program

Phil Daley (540) 338-6528
Stream Monitoring, Team Leader/Volunteer

WINTER TIPS FOR WILDLIFE

Create a wildlife wonderland around your house by following these simple steps to provide for wildlife's critical needs:

1. ***Provide food.*** Create a smorgasbord with a variety of native plants including shrubs, trees and other plants that offer food such as acorns, berries, cones, nuts and other seeds.
2. ***Provide water.*** Clean and fill your birdbath on a regular basis. If the temperatures freeze the water, please invest in a birdbath heater.
3. ***Provide shelter.*** Anchor your holiday tree in a secluded area of your yard as a refuge for birds and other small animals. Hang your wreaths from bare tree branches to provide temporary perches and shelter.
4. ***Start a compost pile.*** Collect the needles, pinecones and evergreen roping from your holiday decorations, and place them in a corner of your property. While providing additional cover for wildlife, you are getting a head start on next year's mulch.

LWC Needs YOU!

Members of the Loudoun Wildlife Conservancy can be proud of all we have accomplished since the organization was founded in 1995. With this solid foundation, the LWC Board is committed to increasing our membership and our impact on preserving and expanding wildlife habitat in the county. Rapidly growing development pressures demand nothing less.

To this end, the Board is seeking volunteers to help us in two critical areas:

1. We are blessed with a membership that is highly talented and committed. We need volunteers who will help us design and implement initiatives to better identify our members' talents and put them to good use in all of our activities. If you would like to discuss this opportunity, please contact LWC President Tom Bjorkman at (540) 882-3960 or TNBj@megapipe.net.
2. Our Stream Monitoring Program has been one of our most rewarding and successful activities. We are looking for volunteers to help re-energize and expand this program. If you would like to discuss this opportunity, please contact Phil Daley at 540-338-6528 or phidaley@aol.com.

The following Board/Committee Chair positions remain unfilled:

Children's Programs
Membership

Programs (Assistant / Co-chair)
Stream Monitoring (Assistant/Co-chair)

LWC Membership — Who Are You?

LWC has a membership that locally covers Virginia, Maryland, Washington DC, and West Virginia. We also have members in California, New Mexico, Missouri, Texas, North Carolina, Maine, Alabama, Illinois, Oregon, Pennsylvania, Rhode Island, Georgia, Florida, and New York. Our database numbers almost 900. Unfortunately, only 317 of those are current paying members.

In the next week or so, you should be receiving our annual membership renewal letter, as well as a membership survey. Please take some time to renew your membership (if you have not already done so). In any case, please fill out the survey and return it to us, so that we can better address your wants and needs in the coming year. Without your support we cannot be effective in our efforts to preserve and create wildlife habitat in Loudoun County.

Regardless of your membership status, LWC would like to thank each of it's members, past and present, for their efforts and support in the last 9 years. *We couldn't have done it without you!*

LWC would like to say
THANK YOU
 TO
Darrell Schwalm and Hale Chopp
 for THEIR bat house building
 for the
ANS *Batstravaganza* program

Are You a Interested in Contributing to the Habitat Herald?

If you have the desire to write an article for publication or if you just would like to make a suggestion for the types of articles you would like to see, please let me know. I am always looking for good material.

I am also interested in getting some good photographs and graphics for publication in the newsletter as well as on the website.

You will receive credit if your work is used.

If you have any interest, please contact me at the following address:

Leslie McCasker
 c/o Loudoun Wildlife Conservancy
 PO Box 2088
 Purcellville, VA 20134-2088

ANS Environmental Education Programs

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

Free Programs for All Ages

Beginner Bird Walks

**January 10th, 24th, February 14th, 28th,
March 13th, 27th (8:00 a.m.)**

These one hour walks are for bird watching beginners and are lead by an experienced birder. Learn about what to look and listen for and tips on identification. Bring your binoculars and field guide if you've got them if not we've got some to loan.

Family Nature Walk and Discovery Center Open House

Saturday, April 3rd (10:00 - 11:00 a.m.)

Kids bring your parents for a morning of nature fun. We will hike the nature trail at Rust and talk about all the wonderful things we see along the way. Spend some time with nature and share it with your family. Afterwards, we will have a naturalist in the discovery center to answer questions and help you explore nature together further. Feel free to bring a picnic lunch to enjoy after!

Family Programs (For beginners of all ages)

Fee \$5.00 for ANS members and \$8.00 for non-members (adults free with child)

Creature Feature: Reptiles and Amphibians

Saturday, February 14th (10:00 - 11:00 a.m.)

Here is your chance to learn about reptiles and amphibians that live in this region and how they are affected by the seasons. We will make a craft and visit with the turtle and toad that make their home in our discovery center.

Be a Wildlife Detective

Saturday, February 28th (10:00 - 11:00 a.m.)

We will learn about animal tracks take a hike around Rust's many habitats and look for the tracks and traces of our familiar and unfamiliar wild neighbors.

Salamander Spring

Saturday, March 20th (10:00 - 11:00 a.m.)

Come out and explore the wild and unusual habitat of the cold weather amphibian. We will visit the protected upland wetland owned by ANS and explore the life that teams inside. Please wear boots for this hands on wetland exploration.

Who's Minding the Nest

Saturday, April 10th (10:00 - 11:00 a.m.)

Lots of different kinds of animals make nests not just birds. Spring is the time when lots of baby animals are born. Learn all about nests; who builds them, what they are made of, and who's minding the babies.

Animal Homes and Habitats

Saturday, April 10th (12:00 - 1:00 p.m.)

We will explore Rust's many habitats while we learn about the things animals need to survive. We will visit the beaver pond and fox meadow and look for animals in their wild homes.

Continued on page 14

ANS Programs...continued from page 13

Special Program

Fee \$24.00 for ANS members and \$34.00 for non-members

Nature In Winter

Saturday, January 24th (9:00 a.m. - 4:00 p.m.)

Leader: Cliff Fairweather

Discover the often surprising adaptations of plants and animals for surviving the unique stresses posed by winter. Freezable frogs, shivering chickadees, and insect anti-freeze are just some of the adaptations that we'll cover. We'll meet at the Blue Ridge Center for Environmental Stewardship in western Loudoun County for a one-hour lecture followed by a day of field exploration. This program will involve moderately strenuous hiking in potentially very cold temperatures. Call (301) 652-9188 ext. 16 for registration information.

Amateur Naturalist Series

(For adults and interested teens)

Fee \$10.00 for ANS members and \$14.00 for non-members

These programs are geared for teens and adults who have a serious interest in nature. These classes will not only include instruction from the naturalist but, extensive resources for continuing self guided study, and lots of question and answer opportunities.

Nature Interpretation 101

Saturday, February 21st (9:00 a.m. – 3:00 p.m.)

Interested in volunteering as a nature program leader? Teachers and scout leaders, want to incorporate environmental education into your programs but aren't sure where to start. Join us for a chance to develop your skills of interpretation. Learn how to observe nature, use field guides and keys, and how to develop and lead meaningful, educational nature programs for audiences of all ages. Participants will receive a comprehensive resource packet. Class size is limited to 16 people so please register early.

An Introduction to Blue Bird Nest Box Monitoring **Saturday, March 20th (12:00 - 2:00 p.m.)**

Blue birds are a citizen involvement success story. People can make a difference in the survival of a species. This program will introduce you to the principals and practice of blue bird box monitoring. We will learn about the habitat and habitats of this bird species as well as how we can best help them. We will walk an actual blue bird trail and work with some active boxes.

Amphibians 101

Saturday, March 27th (10:00 a.m. - 12:00 p.m.)

Come out to learn some basic amphibian facts. Meet some live specimens and learn about life cycles, habits, and habitats of our local amphibians. In keeping with our Amateur Naturalist series format, we will also discuss and practice techniques of how to find and study them.

* Logo Contest *

It's time to show off your creative side by entering LWC's
Logo and Tagline Contest.

We know our membership is talented —
here is your chance to show just how talented you are! We are looking
for an attention-grabbing, memorable and distinctive logo and an
appropriate tagline.

We have received several entries, but would like to have more.
Please take this opportunity and submit your entries to:

Leslie McCasker
c/o Loudoun Wildlife Conservancy
PO Box 2088
Purcellville, VA 20134-2088

The winner(s) will receive a gift basket and
a 1 year LWC membership.

Thank you to all that have already sent in entries — they're wonderful!

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 13-14 for descriptions)

December

- 13 Birding Banshee (L)
- 28 Christmas Bird Count (L)

January

- 10 Macro-Invertebrate ID II (W)
- 10 Beginner Bird Walk (A)
- 17 Intro to Winter Birding (L)
- 20 Spring Birds & Wildflowers (L)
- 24 Beginner Bird Walk (A)
- 24 Birding the Blue Ridge Center (L)
- 24 Nature in Winter (A)
- 25 Macro-Invertebrate ID II (W)
- 31 Searching for Birds of Prey (L)

February

- 14 Birding Banshee (L)
- 14 Beginner Bird Walk (A)
- 14 Creature Feature (A)
- 14 Macro-Invertebrate ID I (W)
- 15 Macro-Invertebrate ID II (W)
- 16 Winter Wonders (L)
- 17 Bluebirds (L)
- 21 Nature Interpretation (A)
- 26 Intro to Birds of Prey (L)

February (cont)

- 28 Birding the Blue Ridge Center (L)
- 28 Be a Wildlife Detective (A)
- 28 Beginner Bird Walk (A)
- 29 Macro-Invertebrate ID II (W)

March

- 6 Macro-Invertebrate ID I (W)
- 13 Birding Banshee (L)
- 13 Beginner Bird Walk (A)
- 16 Living with Wild Neighbors (L)
- 20 Salamander Spring (A)
- 20 Intro to Bluebird Nest Monitoring (A)
- 27 Beginner Bird Walk (A)
- 27 Amphibians (A)

April

- 3 Family Nature Walk (A)
- 10 Who's Minding the Nest (A)
- 10 Animal Homes & Habitat (A)
- 10 Birding Banshee (L)

A = ANS L = LWC W = Water Quality

Loudoun Wildlife Conservancy

P.O. Box 2088

Purcellville, VA 20134-2088

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lamccasker@earthlink.net

Happy Holidays !

