Spotlight on Photinus pyralis, 2005 Festival for the Eno Logo Species

“Little, flitting, white-fire insect, Little, dancing, white-fire creature, Light me with your little candle, Ere upon my bed I lay me, Ere in sleep I close my eyelids!”

—from The Song of Hiawatha by Henry Wadsworth Longfellow

It is hard to consider the lightning bug (firefly, glow-worm) without some measure of childhood wonder. Perhaps no other creature is more redolent of the summer evenings of childhood’s luxury than the lightning bug. A favorite of poets and children alike, the wonder of these creatures is commemorated in verse by poets from Shelley to Nash, and memorialized with thousands of hole-punched Mason lids slowly rusting on back porches, awaiting their next collection. Anyone growing up in warm climates has likely spent many an evening catching, chasing and contemplating the lightning bug.

While “firefly” is the preferred formal and written name for these insects, “lightning bug” prevails in conversational usage throughout the U.S., except in pockets in New England and the Northwest. Their larvae are often referred to in the U.S. as “glowworms.” Regardless of your lexicon, all these terms are incorrect. These insects are neither flies nor “true” bugs nor worms, but beetles.

Ogden Nash, the American poet, wrote: “the firefly’s flame is something for which science has no name.” Entomologists (scientists who study bugs) often turn to the language of mythology and poetry when naming creatures and their components, and they have proven Nash wrong! Science’s name for the firefly’s flame is bioluminescence. Their bioluminescence (or light) is caused primarily by the interaction of oxygen and ATP with two chemicals: luciferin (the substrate—or fuel) and luciferase (the enzyme—or catalyst). Discovered by the French scientist Raphael Dubois, both chemicals are named after Lucifer, the Roman “bringer of the dawn” who is also known by some Christians as a “fallen angel.”

What the scientists have not been able to figure out is the firefly’s “cold light.” The firefly’s light is remarkable in its efficiency. Almost all of the energy produced by the luciferin/luciferase...
Focused on the Eno: 
Ranger Adrienne Wallace

She has dark blonde shoulder-length hair, smiles readily, and speaks with the friendly drawl reminiscent of her Alabama childhood. Twenty-nine-year-old Adrienne Wallace could do well in many people-oriented settings. Fortunately for the Eno, she has chosen to work as a ranger for the Eno River State Park.

Adrienne recalls that her choice of career evolved naturally from her childhood experiences in a family that enjoyed the outdoors. “We did a lot of hiking and camping on summer vacations,” she says. “I became fascinated with weather.”

The career path that Adrienne chose led to a four-year degree in parks, recreation and tourism management from N.C. State University and summer jobs at two North Carolina state parks and Land Between the Lakes National Recreation Area in Kentucky. The last of these summer jobs was at Eno River State Park, where she accepted a permanent position in September 1998. Since then, she has been one of a staff of 5 full-time rangers—3 men and 2 women—who monitor the park’s accommodations and trails, guide and protect visitors, do battle with invasive species, offer naturalist programs, and perform the myriad other tasks involved in running a 3,991-acre public facility.

Few park visitors today are surprised to see Adrienne in her olive green uniform with her Glock .45-caliber firearm holstered at her side. The situation was different in 1975 when Jan Truitt, the state parks’ first female ranger, started working at the Eno. Ms. Truitt was a pioneer in a field previously reserved for men, but she apparently did well in persuading her male colleagues and the public to accept this new role for women. By the time she left the Eno in 1980, she was lead park ranger and had set a precedent that many outdoor-oriented women were to follow.

Today the state park system employs 35 women as rangers and 7 as park superintendents. They comprise about 18% of the parks’ workforce. The top administrator is Superintendent Susan Tillotson, who was once one of the female rangers at the Eno River State Park.

What draws women to a field that can be physically challenging, occasionally dangerous and often underpaid? Adrienne says that she likes being outdoors and enjoys the variety of her work assignments: “I like diversity. The job is well designed for someone like me who enjoys doing a bit of everything.”

Like the other rangers at the Eno, Adrienne is assigned a section of the park where she is responsible for checking many facilities for cleanliness and maintenance. She patrols a trail or two daily and helps with projects to control vegetation or prevent erosion. She has not found much use yet for her firearm, but she has used her first responder training to treat visitors with insect stings, sprains, and occasional broken bones.

Among the multiple duties that she undertakes each day, Adrienne says that she finds the role of environmental educator most rewarding. With the groups she teaches, she shares both the knowledge that she has acquired in her job and the enthusiasm for the outdoors that has come with her favorite hobbies of fishing, canoeing, and hiking. Her impact is discernible.

“When you work with the public or with school groups, you see them make a connection to the environment that creates a stronger interest in stewardship,” Adrienne says. “That’s very satisfying.”

Thank you, Adrienne, for helping to introduce the public to that fast diminishing natural world that we are trying so hard to preserve.

Annette Jurgelski, Eno River Association Board Member
"Take the Path to a Healthier You" is the theme for 2005 National Trails Day. I think that the theme could have been simplified to "Take a Healthy Path". A path can be defined as the route or course along which something moves. There are many different paths inside Eno River State Park.

The Eno River itself is a path. The river can move you in a canoe, with the simplicity of historical dam sites and homesteads, or with the complexities of the living creatures within it. Thanks to the buffer zone that is Eno River State Park, the river remains healthy in terms of wildlife and water quality.

The educational programs offered at the park are paths that take you along the route of discovery. These programs keep your mind active and involved in the natural world around you. Whether it is a wild flower hike, bird program, geology exploration, or an investigation into water bugs you are guaranteed an exciting journey.

The hiking trails inside the park move you toward both physical and mental health. Exercise at the Eno can be a simple stroll down to the swinging bridge, or it can be a strenuous 3.75-mile jog around the Cox Mountain Trail. Getting outdoors is also a great way to shake off stress and to relax near a gentle rapid or native songbird.

But what about the actual physical trails, are our trails healthy? YES, thanks to the hard work of park staff and volunteers, the trails at Eno River State Park are "Healthy Paths". Sick trails cause erosion, sedimentation, and pose a safety risk for hikers. Our trails are kept healthy through intensive management like rerouting problem areas, installing steps, cleaning out water bars, and grading slopes. This is where we need your help.

National Trails Day is an event where nearly one million people will volunteer time in over 2,000 different locations across the country to celebrate, maintain, and love their trails. Luckily, Eno River State Park is joining in on the celebration. On June 4 we will be doing trail work in celebration of National Trails Day. If you are interested in volunteering contact the park office, at 919-383-1686, to register. We will meet at 9:00 AM and work until 1:00 PM. I hope to see you then!

2005 Festival for the Eno Logo Species, continued from page 1

reaction is released as light with little energy wasted as heat. For comparison, a normal light bulb gives off only only 10% of its energy as light, with the other 90% being wasted as heat. It would take over 80,000 bugs to generate the heat of one candle flame. By comparison it would take only 40 fireflies to create an equivalent light.

Lighting bugs belong to the family Lampyridae, which translates as "torch bearer." There are more than 23 genera and about 200 species of Lampyridae in North America, most occurring east of Kansas. Our particular species, Photinus pyralis is the most common firefly species in the U.S. and is harvested commercially for applications in the biochemical industry.

Fireflies are unique among insects in that they alone can flash their light at will. Other luminescent insects can only glow continuously. But why do they flash? Generally they flash to find a mate. Photinus pyralis females perch on the ground, in bushes, on fences and in trees and watch as males flap furiously and fly through the air, flashing their light in pattern. When the females see a male whose frequency and duration of light they find appealing, they flash a response and the courtship commences. Different species exhibit different behaviors. The females of some species, once fertilized, will mimic the patterns of another species in order to attract an erstwhile suitor, and then eat him.

No wonder everyone is fond of this interesting little wonder! Look for the beloved firefly on this year's Festival posters and t-shirts, and in your backyard at twilight.

Paddling Trips to Benefit the Eno River Association

Frog Hollow Outdoors presents two Eno River Association Trips on June 19 (Three Rivers Area) and August 13 (Eno River). Join Frog Hollow and the Eno River Association as we paddle through some of the priority areas along various rivers in the Triangle Area. Learn about these rivers' significant natural resources and history while experiencing their beauty from a canoe or kayak. A percentage of the profits from these trips will be donated to Eno River Association. The cost is $20 per ERA Member and $30 per non ERA Member (includes a 'free trial' ERA membership).

To register or for more information, contact Frog Hollow Outdoors at 919-949-4315 or email info@froghollowoutdoors.com

Check out their website! www.froghollowoutdoors.com
At West Point on the Eno, the stages are still stacked and stored, the temperature is a comfortable 75 degrees and there are no lines on toilet row. But soon this scene will be remarkably different. We anticipate that thirty-five thousand folks will join us as the Eno River Association present’s the twenty-sixth annual Festival for the Eno, North Carolina’s pre-eminent Independence Day celebration.

During the three days (Friday, Saturday, Sunday, July 2nd, 3rd and 4th) of the Festival for the Eno, 100 of the best crafts people throughout the southeast will line the glens and glades with tents and booths displaying their works. The delicious aromas of funnel cakes, barbecue, stir-fries and curries will fill the air. Jugglers, magicians and giant puppets will roam the park, and the five performance stages will be islands in a sea of blankets, lawn chairs and dancers.

Activities abound as well. Grown-ups and kids alike can try the Top-of the Rock Climbing Wall, or mold and sculpt the 800 lbs. of clay at the Hands-On Clay Booth. John Blackfeather Jeffries will lead
a mini pow-wow featuring Native-American dance, music, lore and weaponry. The West Point Mill, sand sculpture by Sandy Feat, juggling workshops, the giant chess board, and River Activities will give Festival-goers plenty to do when not enjoying our wonderful performers. See the insert in the middle of this newsletter for a special preview schedule of entertainment at the Festival’s stages.

Once again, we will continue to work toward our goal of being a “Trash Free” Festival as we show that recycling is easy and practical at many stations around the site. Because of our model recycling and composting efforts, and the work of volunteers like you, the West Point on the Eno City Park will be litter-free by Tuesday, July 5th, and 90% of the Festival waste will be destined for re-use, rather than the landfill. If you’d like to learn more about Trash-Free events and help with our Award-Winning recycling, composting and trash program, please send email to: TrashFree@enoriver.org or call Judy at 919-383-7172.

Advance tickets will be available starting June 1 at outlets throughout the Piedmont. On-line sales start May 15th. See our special pullout schedule in this newsletter for a complete list of advance ticket outlets, and be sure to thank them when you visit!!

Look for the complete Festival program in the Herald-Sun Newspaper.

VOLUNTEER FOR THE FESTIVAL
@ enoriver.org

The Festival for the Eno would not be possible without those who give their time, talent and effort each year to create a fun, safe, entertaining and educational celebration which enriches the community and serves the greater purpose of preserving precious watershed for posterity. The Festival for the Eno has become a model for other grassroots community based events throughout the country, and continues to grow, as do the protected lands along the Eno.

Last year over 30,000 people attended the Festival, and we need help (before, during and after!!) this year’s Festival to ensure another successful event, and to show all those people a good time!!!

EVER WANTED TO BE IN A CIRCUS? Big Top day is big time fun. On Saturday June 25th we put up the Big Top in the Meadow and we need at least 30 folks to help.

TRASH-FREE FOR ME! Our “Trash-Free” program diverts 90% of the Festival waste away from the landfill. Help with this vital award-winning waste reduction program by volunteering as a steward, at the Festival or at the really cool organic compost site. Call Judy at 919-383-7172 or email trashfree@enoriver.org to sign on to the Trash-Free team!

Pick up trucks and drivers are especially needed!

OUR PERFORMERS ALWAYS MENTION the well-run hospitality area at the Festival and it’s delicious food and drink. We need folks to help supply the victuals to feed all our hungry entertainers. Call Pam at 919 471-5008 or send an email to: volunteer@enoriver.org to see how you can help.

Each volunteer receives a free pass into the Festival for each day worked. To volunteer, or for info about these or other volunteer opportunities, please call Volunteer Coordinator Pam Watkins at 471-5008 or email volunteer@enoriver.org. For a complete list of volunteer opportunities and a convenient on-line form, go to www.enoriver.org/festival.
New Partnerships to Protect Land Throughout the Eno River Basin

By Wade Shelton, Director of Land Protection

We have been extremely busy throughout the Eno River basin over the past several months, as we continue to work on new partnerships, forge ahead with existing ones, as and work to clean-up some of the properties we already own.

Falls Lake Initiative
First, the Association has begun a new conservation project, the Falls Lake Initiative. This project is a partnership between the Association, the Nature Conservancy (TNC), the Trust for Public Land (TPL), the Conservation Trust for North Carolina (CTNC), the Triangle Land Conservancy (TLC), the Tar River Land Conservancy, (TRLC), the City of Raleigh, the Triangle J Council of Governments (TJCG), the Neuse River Foundation (NRF), the Triangle Greenways Council (TGC) and the Upper Neuse River Basin Association (UNRBA). The partners will work to protect drinking water quality and sensitive natural areas within the 750 square mile Falls Lake watershed.

The project is the result of Raleigh Mayor Charles Meeker suggestion that the City of Raleigh consider creating a land trust to protect land around Falls Lake in order to protect Raleigh's drinking water. When members of the land trust community heard of Mayor Meeker's plan, representatives from CTNC, TRLC, TLC and the Association met with him to discuss our work. TLC, TCL and the Association all work to protect land within the Falls Lake watershed, and suggested that it would be more effective for the City to support our work and help us better coordinate our land protection efforts, rather than to create a separate land trust.

Mayor Meeker agreed with our proposal, and pledged $10,000 to help us plan and coordinate our land protection efforts. CTNC will serve as the umbrella organization to coordinate funding efforts including applying for grant funding from the Ecosystem Enhancement Grant Program (EEG), and researching other funding sources.

The Association's role in this partnership will be to work to protect priority tracts that were identified by the Eno River Riparian Corridor Conservation Plan, as well as any priority tracts identified in the Little River Riparian Corridor Conservation Plan, which is scheduled for completion within the next couple months. All of these tracts fall within the Eno River basin, so this new partnership will enable us to protect even more land along the Eno and its tributaries.

Eno River Diabase Sill Partnership
We are also continuing our partnership with the NC Plant Conservation Program (PCP) and the NC Botanical Garden (NCBG) protecting and rehabilitating endangered species habitat near Penny's Bend Nature Preserve in Durham County. Our work to protect the second phase of priority tracts is well underway and we will to have more news to report on the project in the near future. We have also applied for a grant to help PCP and NCBG manage and rehabilitate the 80 acres we have already protected, which is crucial to the survival of rare and endangered species in the area.

Eno River State Park and Orange County
Our partnerships with the Eno River State Park and Orange County continue to be very successful. Although there have not been any new purchases of land or the completion of any conservation easement projects, we are still actively working on several land purchases with the State Park as well as several easement projects within Orange County.

Finally, with the help of some fantastic volunteers, we were able to clean-up the Dimmock's Mill Tract, a 12-acre river front property we own in Orange County. Thanks to diligent work of three teenage volunteers, Priya Khattri, Alicia Campbell, and Liza Nyakondo, and some assistance from staff members Greg Bell and Wade Shelton, removed over 20 tires, an old washer, thousands of roof shingles, and a great deal of miscellaneous trash from the site. The Town of Hillsborough also generously agreed to transport all of the trash from the site saving time, labor, and landfill fees. We plan to conduct similar clean-ups of some of our other properties in the future.

Lastly, we cannot stress enough that our land protection work is not limited to these projects. We are always interested in assisting landowners throughout the Eno River Basin that would like to protect their property. Whether you would like to protect your property by selling it to the State Park or the Association, or would prefer to protect it without selling it by granting a conservation easement, or are interested in ways that you can manage your property differently, we would love to speak with you. Please contact, Wade Shelton, our Director of Land Protection, at (919) 620-9099 with any questions.

Wish List:
Pick-up truck in good running condition (aesthetics are irrelevent)
late model table top copy machine
Heavy duty 3-hole copy machine
Macintosh laptop computer (G3 or newer)
Field guides to native wildlife
Small P.A. system or bullhorn
RTI International Supports the Eno

Eno River Association member and RTI International employee Patrick Stanforth was instrumental in securing a generous $1,250 donation for the Association through RTI’s 2005 charitable contributions program. RTI International is an independent non-profit research organization located in Research Triangle Park, NC, dedicated to improving the human condition through research, scientific discovery, and technical services. Through their annual corporate contributions process, RTI employees are given the opportunity to nominate 501(c)3 nonprofit organizations, whose work is consistent with RTI’s mission, to receive a contribution of funds, and the Eno River Association was lucky enough to be selected! Patrick Stanforth and John Thielgard of RTI International came to visit the Association on a beautiful February afternoon to present this generous contribution to the Eno River Association and enjoy a sunny moment by the river. Our deepest thanks go to RTI International and Patrick Stanforth for their support of the work of the Association.

TEAM ENO Wins Big in Great Human Race

On a brisk Saturday morning in early April, a group of Eno enthusiasts gathered in downtown Durham to take part in the 10th annual Great Human Race. The Race is organized each year by the Durham Volunteer Center as a fundraiser for Triangle-area nonprofit organizations. Members of TEAM ENO included: Helen Drivas, Dorothy Gerard, Martha Mandel, Dan Assael, Joya Mandel-Assael, Corinna Herbert, Jacob Traverse, Susan Delaney, Annette Jurgelski and Holly the Wonder Dog. For their extraordinary contributions to TEAM ENO’s fundraising efforts, Bercedis Peterson, Erik Daubert, and Andrea Miele were named honorary team captains. Through the team’s fundraising efforts, the generous contributions of Association members, and a generous grant of matching funds, the Eno River Association will receive over $5300 from this year’s Race. Congratulations, TEAM ENO!!
**ENO RIVER ASSOCIATION MEMBERSHIP**

Join Us! We are always in need of members who want to help protect the nature, culture, and history of the Eno River. If you are not a member, why not join today? If you have already paid your dues, share your love of the Eno with a friend or family member and encourage them to join the Eno River Association. Memberships also make great gifts!

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**Eno River Association Membership Application/Renewal Form**

Clip and mail to: 4419 Guess Road, Durham, NC 27712

Name _____________________________________________________
Address ___________________________________________________
City ___________________________ State _________  Zip _________
Phone ______________________  Email ________________________

I would like to make an additional contribution of $ ___________.

All donations are tax-deductible. Thank you for your contribution.

**Method of Payment**

☐ Check (Please make payable to the Eno River Association)
☐ Mastercard  ☐ Visa  Credit Card # ____________________________
Signature __________________ Exp. Date __________________

**MEMBERSHIP LEVEL:**

☐ $10 Student  ☐ $25 Friend  ☐ $35 Patron  ☐ $50 Supporter  
☐ $100 Protector  ☐ $250 Steward  ☐ $500 Conservator  
☐ $1000 Eno Guardian  ☐ $5000 Life Member

**VOLUNTEER INTERESTS:**

☐ Festival for the Eno  ☐ Eno River Watch  ☐ Eno Calendar  
☐ Trail Workdays  ☐ Events & Exhibits  ☐ Hike Leader  
☐ Public Relations  ☐ Office/Clerical  ☐ Hospitality  
☐ Other _____________

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**Eno River Currents Is On-Line!**

The Eno River Association’s newsletter, *Eno River Currents*, is also available online at our website www.enoriver.org.

If you would like to receive the newsletter electronically instead of (or in addition to) the paper edition, please contact Emily Herbert at 919-620-9099 or email emily@enoriver.org.

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The Eno River Association newsletter is printed on 60% recycled paper with a minimum 30% post-consumer content. Please recycle or reuse Eno River Currents by passing it along to a friend.

The Eno River Association is a member of Earth Share of NC. Please look for us in your workplace giving campaign.

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