



NEWS
from
the

Eno River association

4419 Guess Road, Durham, NC 27712

Summer, 2001



Photograph courtesy of Trish Kohler.



**THE FESTIVAL FOR THE ENO:
JUNE 30, JULY 1 AND JULY 4!!!!
See the insert in this newsletter!**

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TOP: Swimmers on the Eno River.

At Left: Photograph of George and John Dee, performers at the Festival.

Letter to Our Members

Greetings Members,

Well, my first couple of months with the Eno River Association have been wonderful. It is a real joy to work with all of the extraordinary and dedicated people involved in this organization. From volunteers, to board members, to staff- everyone gives 110% to make sure this organization is at its best, and it shows.

Some big news for the ERA is that we have now joined the national land trust community by becoming members of the Land Trust Alliance (LTA). Headquartered in Washington, D.C., LTA is an "umbrella group" for all land trusts in the United States, and abroad. They are a well-respected organization, and by joining with them, the ERA officially has become part of a broader land trust conservation movement.

Festival for the Eno 2001 is just around the corner and it is sure to be the best ever! We have amazing performers lined up, delicious food, and some of the most talented craft artisans in the state. We will also have great environmental education displays this year thanks to Holly Reid and the Environmental Education Committee, including our "stream watch" display. This interactive display will allow folks to get up close and personal with the critters that live in the river, from dragonflies to crayfish. Kids and adults alike will get a chance to examine these beautiful creatures and learn about how their presence can tell us about the water quality of the stream. This display is tied to our "Eno River Watch" water quality monitoring program, which we hope to launch later this year. So, come on down to the Festival for the Eno 2001! It is going to be awesome.

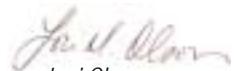
In April, Don Moffitt and I attended the North Carolina Land Trust Assembly at Brown Summit. This three-day conference brought together all of the land trusts from the state of North Carolina. It was a wonderful opportunity for all of us to learn from each other, and begin building a network for the protection of wildlife habitat and open space in our state. As land trusts,

we each have our own "home base" or region to protect, but we also work together to build broad support for open space preservation. With all of the pressure for development and growth, the land trust community works to ensure that the natural character of North Carolina is not lost, that rivers and wildlife are protected. It is important work, work that the Association will continue to do with the support of our members.

I have been working with Milo Pyne and the Land Use and Transportation Committee on several transportation projects which are proposed for the Eno basin. These include "Eno Drive", the replacement of the bridge over Nancy Rhodes Creek on Rivermont Road, and the proposed Elizabeth Brady Road extension in Hillsborough. Milo, Brian Morton and the committee continue to work on getting the community alternative to "Eno Drive" accepted and supported by NCDOT; that work will go on for a long time. Regarding the proposed bridges, we have been in contact with several NCDOT officials, voicing our support for alternatives that are less threatening to the ecology and water quality of the Eno River. We have also commented on the replacement of the bridge on 15-501 over New Hope Creek, to support a design that will allow for better wildlife and water movement underneath the bridge. These projects are "up and coming" and there is much work left to do to ensure that environmentally sound alternatives are implemented. If you would like to voice your concern to NCDOT on any of these projects, please call me at the Eno office (620-9099) and I will get you the proper contact information.

Summer is finally here. The sun is shining, the weather is warm, and the river is beautiful. Come on out and enjoy the Eno.

Naturally yours,



Lori Olson
ERA Executive Director

Volunteer @ 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 grass roots community-based events throughout the country, and continues to grow, as does the Park.

Last year over 40,000 people attended the Festival, and we need help (before, during, and after!!) to insure another successful event, and to show all those people a good time!!!

Ever want to be in a circus? Big Top day is big time fun. On Saturday June 23rd, we put the BigTop up in the Meadow and we need at least thirty folks.

We need a lot of folks to staff the drink booths. Our Festival-goers can build up a powerful thirst and proceeds from every drink sold go to preserve Eno lands. Booths are near the stages so you can hear the music while working your shifts.

Trash-Free for me! A vital job at the Festival is that of recycling volunteer. Help with our award winning waste reduction program at the Festival or at the really cool organic compost site. Call Leila at 471-5008 or email trashfree@enoriver.org to sign up as a recycling volunteer. 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. Hazel Cash needs folks to help supply the victuals to feed all our hungry entertainers. Call her at 477-8936 or send an email to: leila@enoriver.org.

This Way Please. We need parking lot attendants every day at the Home and Visitor lots, Durham County Stadium.

Each volunteer receives a free Festival pass for each day worked. To volunteer, or for info about other volunteer opportunities, please call Volunteer Coordinator Leila Keen at 471-5008 or email volunteer@enoriver.org.

ERSP Activities

A lot of construction is going on at the Few's Ford Access of Eno River State Park. Since January, visitors have been greeted with excessive mud, dust, and dirt piles. Through the spring, this mess is gradually forming into new facilities.

The Few's Ford Picnic Area is undergoing complete renovation. A new twelve table picnic shelter with a large stone fireplace is under construction on the south side of the picnic area. When finished, it will be available for informal use or reservation by the day. A larger restroom facility, complete with running water and flush toilets is being built on the north side. All new picnic tables and grills will be installed between the two buildings with paved paths and pads for wheelchair accessibility.

The Piper-Cox House is being restored. A lot of effort is going into making it look like it did in the 1880's. When finished, park staff plan to add exhibits inside and on the grounds.

The parking lots at the Piper-Cox House and the picnic area will be doubled in size. Few's Ford has been plagued with inadequate parking for years. It is anticipated that the new facilities will draw more visitors, boosting parking needs even more.

The Few's Ford water system has been inadequate for the current demands. The new facilities will increase water demand. A new, deeper well with much greater capacity has been dug and a new well house is being built around it. The new well does not have the iron problem of the current well. This should make it easier to filter and easier on the plumbing.

The new facilities are funded by the Parks and Recreation Trust Fund. Questions about them may be directed to the State Park Office at 383-1686.

- Dave Cook, Supervisor, Eno River State Park

Festival for the Eno

At West Point on the Eno, the stages are still stacked and stored, the temperature is a comfortable 65 degrees and there are no lines on toilet row. But soon this scene will be remarkably different. We anticipate that forty thousand folks will join us as the Eno River Association presents the twenty second annual Festival for the Eno, North Carolina's pre-eminent Independence Day celebration.

During the three days (Saturday, Sunday and Wednesday, June 30, July 1st, and 4th) of the Festival for the Eno one hundred of the best craft artisans North Carolina has to offer 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, clowns 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 Vertical Edge Climbing Wall, or mold and sculpt the 800 lbs. of clay at the Hands-On Clay Booth. John Blackfeather Jeffries will give demonstrations of Native American life. The West Point Mill, sand sculpture by Sandy Feat, juggling workshops, giant chess and River Activities will give Festival-goers plenty to do when not enjoying our wonderful performers. See the middle of this newsletter for a special pull-out 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 efforts, and the work of volunteers like you, the West Point on the Eno City Park will be litter-free by Thursday, July 5th. If you'd like to learn more about Trash-Free events and help with our award-winning recycling, composting and trash program, please email to: trashfree@enoriver.org or call Judy at 383-7172.

Advance tickets will be available starting mid-June at outlets throughout the Piedmont. See our special pull-out schedule in this newsletter for a complete list of advance ticket outlets, and be sure to thank them when you visit!!

The complete Festival program will be carried in the Raleigh News and Observer on Wednesday June 27. Schedule changes and other updates are posted regularly at <http://www.enoriver.org/festival>.

The Fabulous Eno Raffle

This year our fun filled Eno Raffle will again help raise funds to preserve and protect parkland in the Eno River valley. Winners will be chosen throughout each day of the Festival so buy your tickets early and often!!! You do not need to be present to win.

Prizes will include: a six day schooner cruise for two off the coast of Maine, a sea kayak from Great Outdoor Provision Company, a grand and magnificent wood carving by Bill Phillips, and items created by many of our award winning craft artists. Raffle tickets—at three dollars each—can be purchased at the Durham location of the Great Outdoor Provision Company or, during the Festival, at the Raffle Booth under the Big Top.

Wellspring 5% Day Tuesday, July 10

We are very grateful for all the contributions that Wellspring Grocery (Whole Foods Market) has made as a major sponsor of the Festival for the Eno. For many years they have given labor, goods, and money to aid our efforts. This year is no exception.

Please shop at the Wellspring Groceries in Durham and Chapel Hill on Tuesday, July 10th as they will donate five percent of the total sales that day to the Eno River Association to further our mission of protecting lands along the Eno River. While you are there, be sure to thank the nice folks for all their help!

In addition to the 5% Day contributions, Wellspring annually donates their time and products to the Festival by organizing and running the Watermelon and Apple Juice booth, and donating all proceeds to the Festival.

Notes of Appreciation

Many thanks to iA Digital Works (located in RTP) and their employee and ERA member, Reyna Upchurch, for the large discounts on photographic services provided to the Association.

We would like to convey our thanks for the high quality prints furnished to us, gratis, by Mr. John Rottet. These prints are mainly of subjects along the Little River in Durham County. They should prove useful in many of our activities!

Townsend, Bertram & Company 10% Day - July 7th

On Saturday, July 7th 2001 Townsend, Bertram and Company has generously agreed to donate 10% of their sales receipts to the Eno River Association. This donation will be used for open space protection within the Eno River basin. Please be sure to thank them the next time you're in the store, and be sure to shop there on Saturday, July 7th. Around the block or around the world Townsend, Bertram & Company can help outfit your next adventure.

Townsend, Bertram and Company is located in Carrboro at Carr Mill Mall (next to Weaver St. Market)

Pond Explorations at Occoneechee Mountain State Natural Area

On Saturday June 23, 9:30 – 11:30 AM, there will be a pond exploration outing at this Natural Area near Hillsborough. It will be for children aged 8 through 11 years old. This is an opportunity you should not miss! Come and explore a pond ecosystem and learn about some amazing creatures and their special adaptations to life in the water. Call Sue Monahan at 644-2819 to register. Limit is 10 children. Cancelled if rain.

Help Wanted-Illustrator(s) needed.

We would love to enliven our newsletter with good drawings of things natural and man-made (historical structures). We have one person who can do a bit of this, but it sure would be helpful to find others. So here's your chance!

Call Denny O'Neal (489-1150) or the ERA office (620-9099). Thanks!

Nitrogen Pollution and Small Streams

Excessive input of nitrogen to wetlands, estuaries, rivers, and lakes is increasing worldwide due to such human-related activities as fertilization, human and animal waste disposal, and even fossil fuel combustion. Such excess nitrogen often leads to eutrophication* of these water bodies, to the detriment of many of our most important aquatic species. Research just published in *Science* magazine (vol. 292, pp. 86-90) provides the most comprehensive evidence to date that small "headwaters streams" play an even more important role than previously thought in reducing the export of inorganic nitrogen to downstream aquatic systems. Based on the 10 streams (across the US) in the study, this export can be reduced by 50% or more!

Small headwater streams, such as the Eno, constitute a large part (up to 85%) of the total stream length within a drainage basin, and their high surface/volume ratio facilitates rapid uptake of nitrogen, mostly by assimilation in photosynthetic organisms. The authors of this study conclude that, while these streams are of such great importance in nitrogen removal, they are also the ones most susceptible to human disturbance, such as channelization, diversion, blockage, etc., and that the restoration and protection of small stream ecosystems should be of primary importance in management strategies aimed at reducing eutrophication downstream.

* eutrophication refers to an increase in mineral and organic nutrients leading to the reduction of dissolved oxygen in a body of water.

- Denny O'Neal

The Yellow-Billed Cuckoo

"Ah, there's a rain crow," said my father as we paddled along the Eno. It was 1990, my first year of wafting, and I was taking out as many mentors as possible to learn the ways of the river. My father, a native of Florida, had not spent much time along the Eno. But he does recognize the call of birds common to the wetlands of Florida where he had passed many hours outdoors as a fisherman. I had also heard that particular call before but had not pinned down its identity.

All my father knew about the bird was that it often called just before a summer rainstorm. Later at home we found the name rain crow listed as a local appellation for what is generally known as the yellow-billed cuckoo. While growing up in Durham I had never heard any one speak of cuckoos as being local. Being insectivorous, they never made their appearance at our family bird feeder, the place that, as a child, offered me the closest view of the avian world. The only familiarity I had with a cuckoo was the little bird that popped out of a Swiss cuckoo clock. To now discover a real cuckoo in my hometown of Durham was quite a revelation.

There are about 140 species of cuckoos found all over the world inhabiting every continent except Antarctica. Seventeen are found in the New World, more commonly in tropical climates. The yellow-billed cuckoo winters throughout much of western South America, then migrates north to the West Indies, Mexico, the United States and Canada to breed during the warm seasons.

Once something new is brought into my sphere of awareness, I often come to realize that it was there unnoticed all along. That day on the river with my father ushered in a special relationship with a new friend for me. I began to find the cuckoo everywhere. In fact, the yellow billed cuckoo is just about as "Eno" as you can get. The reason that most of us are not familiar with it is because we are so visually oriented. But this skulking bird would much rather be heard than seen.

Preferring not to reveal itself visually to a passerby, this furtive example of river fauna rests on the branches of trees, watching and listening for its favorite diet of hairy caterpillars, an item often passed over by other birds. It is very aggressive with them, for as many as 325 caterpillars were once found in the belly of just one bird! The cuckoo also dines on butterflies, cicadas, grasshoppers, dragonflies, crickets and an occasional frog or lizard.

But without warning the cuckoo will burst forth with its "cu cu cu cu koo koo koo," riveting the still, heavy air of a sultry summer day. This call is significantly different from the call of its European cousin, whose more melodic voice was invoked in Beethoven's Pastoral Symphony. It is also not uncommon to hear the yellow-billed cuckoo's guttural elocution nocturnally. And while not calling exclusively before a rain storm, in my experience, this does happen in such a large percentage of cases that the bird has rightfully earned the title of rain crow.

But an infamous reputation casts a shadow over the cuckoo family of birds because of the behavior of some species of Old World cuckoos. They are known as brood parasites. Instead of building their own nests, they maintain the habit of dropping their eggs in the nests of other birds of smaller size. When the cuckoo chick hatches, its overbearing energy eliminates the chances for the survival of the other chicks and the distressed but dedicated host parents exhaust themselves feeding and rearing the precocious cuckoo.

Fortunately, the American cuckoos have much better manners and come as standard, hard working birds. Courting may commence when a calling male mounts the female's shoulders and places food in her mouth. The pair will be monogamous, building their own nest consisting of a shallow bowl of sticks. Covered with a layer of dry leaves and catkins and rimmed with pine needles, the nest is placed 4 to 20 feet above the ground in low trees. Two to four greenish blue eggs hatch ten days later. Then, after ten more days or even less, the young are fledged in what is one of the quickest developments of any species of birds.

Another peculiar feature of this bird is that, unlike most birds with three toes on each foot facing forward and one towards the rear, the cuckoo possesses two forward projecting toes and two facing backwards. Such an

arrangement is known as zygodactyl and is found in parrots and woodpeckers as well. I have yet to reason why this is a useful adaptive arrangement for the cuckoo.

What makes the yellow-billed cuckoo even more special to the Eno River is the fact that it migrates to our neck of the woods from its wintering grounds in the



distant Amazon River Basin, arriving here around the beginning of May to breed. This bird knows how to navigate tropical forests filled with jaguars, boa constrictors, monkeys and a whole host of other arboreal predators. With all those animals maneuvering about with stealth through the canopy, no wonder the cuckoo feels a need to travel to safer nesting grounds! It must be a heck of a lot easier to set up house on the Eno where, at worst, only pesky gray squirrels and marauding blue jays can interfere. But imagine how far the cuckoo must fly to get here.

So, be listening for this bird who sojourns with us from May through September. If you are a hiker or a paddler, the voice of the cuckoo is both common and unmistakable. If you happen to be one of the lucky ones to zoom in visually after the call, you will find a slim, medium-sized bird, plainly clad in shades of brown with cinnamon wing tips; white below and brandishing a prominently spotted tail on the under side. Noticing the yellow of the bill may require binoculars. There is little difference between male and female. But convenient stagings for us are few. I'm accustomed to being charmed simply by hearing its recondite call that seems to beckon me at auspicious moments, reminding me of the infinite magic that nature holds for us all.

One such moment with a yellow-billed cuckoo came only recently on the day of my marriage to my longtime wafting friend, Josie McNeil, on November 21, 2000. We were on the island of Abaco in the Bahamas and were scheduled to walk out to the end of a five hundred foot dock where we would exchange vows. We were both dressed and ready for the ceremony when I heard a loud squawking coming from the rear of our cottage. I looked out the back door and saw a cat mauling over a bird on the grass in a neighbor's yard. I raced out the back door, leaped over the fence in my wedding clothes into the neighbor's yard and chased the cat away.

Before me was a most desperate looking bird, feathers dislodged and covered with sand spurs. I gently reached down to pick it up and to my surprise, found myself holding a yellow-billed cuckoo for the first time in my life! I brought the trembling bird into the house, asking myself why this stressful event had to happen just moments before our wedding. Josie held the bird firmly in her hands while I began to pick off the deeply buried sand spurs under its wings. The bird writhed with the tug of each sand spur. I winced as well, as the pain from the bird's wing seemed to float up into my arm.

With the removal of the sand spurs came a huge quantity of down and feathers. The poor, half-naked bird stood before us in a small cardboard box. There were no puncture wounds from the cat's claws or even broken wings. But the bird was obviously traumatized and would not be able to fly anytime soon with its loss of feathers. So we hurried off to our wedding ceremony, wondering what this bizarre event might mean for all of us on such an auspicious day.

As I was unable to locate a wildlife rehabilitator on the island to seek help from, our cuckoo died the following afternoon. We respectfully buried it in the sand under the shade of a mango tree. "I probably should have let the cat just finish it off," I mumbled to my new wife. But at least I had run to the rescue of a wild creature that I had come to revere as very special. That event became but another chapter in my collection of unusual encounters that I had experienced with this bird in the past dozen years. And I have the uncanny feeling that the

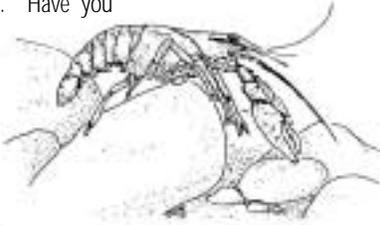
book isn't over - more tales of the cuckoo are yet to come. With the cuckoo as our Eno festival logo this year, I am certain that this will be a year of special and portentous happenings along our river. Are we ready for what the call of the cuckoo may bring?

- Dave Owen, resident field naturalist, West Point on the Eno Park
- Illustration by Jennifer Armstrong

The Eno's Invertebrates

What kinds of animals live in the Eno River? Fish, of course. Turtles, beavers, frogs, snakes - yes, all these too. But what about animals without backbones - the invertebrates?

Crayfish are one kind of invertebrate that live in the Eno. Have you ever found a crayfish in a stream? Maybe you call them crawdads. Instead of having a skeleton on the inside, they have a hard outer covering, called an exoskeleton. Crayfish hang out under rocks and use their pincers to grab plants and capture bugs to eat.



Speaking of bugs, the Eno is full of insects, which are also invertebrates. Water striders, also called pond skaters, are familiar to almost everyone. They move about on the surface of the water on their long legs. Many insects live the first part of their lives in the water. Dragonflies, damselflies, mayflies and stoneflies all spend several years as water-dwelling "nymphs" before leaving the water to metamorphose into adults. These nymphs are important food for fish. Look at the illustrations to compare the nymph and the adult stages of mayflies.



If you've ever been hiking along the Eno, you may have seen shells in the river or along the banks. Shelled animals, or mollusks, are another group of invertebrates that live in the river. This group includes clams, mussels, and snails.

And then there are worm-like invertebrates, such as leeches and freshwater worms. Black fly larvae also look "wormy," but they will one day turn into large, biting flies.



So far, we've only mentioned invertebrates that you can see. There are also microscopic invertebrates in the Eno, but we'll leave their discussion for another day.

Invertebrates can tell us something about the health of a river. In fact, invertebrates can be used as an indicator of the pollution level of a particular river. That's because some kinds of invertebrates can live in polluted waters and others can't.

Invertebrates that cannot live in polluted waters include mayfly nymphs, stonefly nymphs, water pennies, hellgrammites, riffle beetles, caddisfly larvae, freshwater mussels and right-handed pouch snails. If you find these, you can assume the water quality is good.

Invertebrates that can live in polluted waters include leeches, black fly larvae and freshwater worms. If you find lots of these and not much else, the water may be polluted.

Another group of invertebrates falls in the middle - they are tolerant of some pollution, but not too much. This group includes crayfish, dragonfly nymphs, damselfly nymphs, freshwater clams, scuds, whirligig beetles, and water striders.

How do you find invertebrates? Swish a small net through water weeds

or along the river bottom in a shallow area. Look on and under rocks for crayfish, stonefly nymphs and black fly larvae. After you've examined any invertebrates you find, return them to the river.

Another way you can check out some of the Eno's invertebrates is to come to the Festival for the Eno in July. In the children's area, there will be a stream habitat filled with water from the Eno. Volunteers will be helping children find and identify invertebrates such as the ones discussed in this article.

For more information on using invertebrates to gauge water quality, see "Living Water," the Environmental Education Learning Experience for the Eno River State Park. (For a copy, contact Eno River State Park or call the North Carolina State Parks System at 846-9991.)

- Mary-Russell Roberson
- Illustrations by Sue Monihan

Conservation Keys Network - A New Opportunity for Action

Do you every worry that not enough is being done at the state level to protect our rivers and streams? So do we! Volunteers are needed now to help make citizen advocacy efforts for clean water and clean air even more effective in North Carolina.

The Conservation Council of North Carolina (CCNC), a statewide umbrella organization of which the Eno River Association is a member, is undertaking a special project called the "Conservation Keys Network."

The Conservation Keys Network will have volunteers located all across the state, ready to respond to special environmental action alerts. The volunteers will call designated legislators or other state officials to request action on key environmental issues at a critical time.

The network will be organized on a two-tier level. "Advocates" are local volunteers who have agreed to make up to six calls per year in response to alerts. "Keys" are volunteers who have agreed to help coordinate calls from their local area. CCNC is currently recruiting both Keys and Advocates in the Triangle area.

Interested? Please contact Dan Besse at 336-722-1674 or earthvote@ccncpac.org for more information.

- Dan Besse

Clean Sailing For the ENO

Dear Members of the Eno River Association,

The goal of the Durham Academy students who traveled to Few's Ford on March 9, was to reassess the health of the Eno River. Hopefully, through chemical and biological tests, our 9th grade biology class will successfully be able to evaluate the Eno's water quality, while also comparing our data to the previous results from last fall.

Two types of tests, chemical and biological, will provide the data that is necessary to evaluate the health of the Eno River. The nine chemical tests include: dissolved oxygen and saturation; fecal coliform; pH; Biochemical Oxygen Demand (BOD); temperature; total phosphates; total nitrates; turbidity; and total dissolved solids. All of the tests are quantitative and measure the numerical amount of a substance, with the exception of the fecal coliform test, which is qualitative and only indicates the presence of the bacteria.

- Dissolved oxygen is the amount of oxygen present in the water per liter and is measured in ppm (parts per million), while saturation is the percent of dissolved oxygen in the water.
- A fecal coliform test determines whether fecal coliform, a bacteria from mammal feces that signifies the appearance of harmful bacteria, is present.
- pH is the level of acidity in the water and is evaluated on a scale from 1 to 14, 1 being very acidic, 7 being neutral, and so forth.
- BOD is the level of dissolved oxygen that is used by bacterial microorganisms. This level is measured in ppm.
- Taking the temperature at different locations along the river can indicate thermal pollution if one location is significantly hotter than the rest.

- Total phosphates is the level of phosphates, commonly found in fertilizers, in the Eno and is measured in ppm.
- Total nitrates is the degree of nitrates, a nutrient used as protein, in the water and is measured in ppm.
- Turbidity is the clarity and the abundance of sediment in the river and is measured in jtu.
- Total dissolved solids is the amount of substances dissolved in the Eno due to run-off containing waste products.

The tenth test, a biological test, evaluates the diversity and tolerance of invertebrates. The invertebrate test is completed by first determining which invertebrates are living in the Eno, and then applying a point scale. Invertebrates are labeled with a point value from 1 to 4 depending upon their tolerance of pollution, 4 being very intolerant. A high point sum indicates a healthy river. Through a variety of chemical and biological tests, we should be able to discern the health of the Eno.

TEST FALL SPRING (3/9/01) Dissolved Oxygen 11 ppm, 110% saturation 7 ppm, 70% saturation Fecal Coliform Positive Negative pH 5.9 8 1/3 BOD 11 ppm 2.0 ppm Temperature 22.8 degrees Celsius 10 degrees Celsius, 50 F Total Phosphates 4 ppm 0 ppm Total Nitrates 0 ppm 1.0 ppm Turbidity 0 jtu 23 1/2 jtu Dissolved Solids 134 total solids 101 1/2 total solids Invertebrates Good diversity n/a Amazing diversity 27 points

By analyzing our Eno river data and also comparing the fall and spring results, we can understand the health of the river.

- The dissolved oxygen reading of 7.5 ppm is disappointing and moderately poor. We must ask what caused such a dramatic decrease in dissolved oxygen, since the dissolved oxygen was an amazing 11 ppm in the fall. A steady dissolved oxygen level is absolutely necessary for the Eno organisms to survive.
- The negative fecal coliform test is very commendable and bodes well for the Eno, which read positive last fall.
- The pH is 8.67, which is barely above neutral and is unacceptable for many organisms, but it is much better than the 5.9 of last fall.
- The Biochemical Oxygen Demand hovering at 2.0 ppm is admirable. If the BOD was the same as the dissolved oxygen level, it would mean that the needs of microorganisms are exhausting the dissolved oxygen supply.
- The temperature was 10 degrees Celsius at multiple locations, which indicates a lack of thermal pollution and is excellent. Cool temperatures also positively affect dissolved oxygen.
- The total phosphates level is praiseworthy. This level has not only decreased since last fall but its reading of 0 ppm suggests the absence of run-off containing fertilizers.
- The total nitrates test of 1 ppm is also excellent.
- The turbidity has sharply increased from 0 jtu to 23 1/2 jtu, since last fall, and is uncomfortably high, probably due to heavy rains. High turbidity can negatively affect dissolved oxygen levels.
- The condition of the dissolved solids is satisfactory, at 101 1/2 total solids, but does convey the likelihood of pollution in the Eno.
- The testing for the diversity and tolerance of the invertebrates is exemplary. The Eno has a point score of 27 (23 is considered excellent) and boasts a variety of invertebrates, including the water scorpion, the pouch snail, the crayfish, and the unique Eno snail.

Though there may be disappointments in some of the data, especially the turbidity and the pH, there have been several radical improvements since last fall and such successes as the impressive BOD and invertebrate test. Overall, the Eno River appears as a healthful river, an extraordinary habitat for organisms, and a safe water source.

Recommendations may now be made not only to ensure the future health of the Eno, but also to plan for further testing. By continuing to test in fall and spring, we can detect early changes in the Eno that could lead to a decline in water quality. Future testing should include a quantitative test for

fecal coliform bacteria and a turbidity test with a Secchi disk. Perhaps experimenting should be done with a different kit of chemical tests, for one never knows the true accuracy of one round of tests. Through more complete and accurate tests, we can maintain observations on the Eno's water quality and predict future variations in its health.

In conclusion, we have determined the water quality of the Eno River has improved significantly since fall of 2000. By performing comprehensive chemical and biological tests, we hope to continue observing the health of this exceptional waterway.

Sincerely,
Alexandra Dunk
Durham Academy 9th grader

Winter Hikes on the Eno

The Eno River Association's 2001 Winter Hike series started with the traditional New Year's hike. It was a brisk but fair day and over four hundred hikers walked the Cox's Mountain trail or walked around Fowler's field. They all met at the end of the walk for tea, chocolate, marshmallows, and popcorn served by Wayne and Hazel Cash.

After New Year's, we hiked every Sunday in January and February. We hiked trails at the Pump Station, Cabelands, Cole Mill access, and Few's Ford access. We had two special events during the hiking season. The last Sunday in January, we took over fifty hikers to the newly acquired Little River Park area. Then on February 18th, Tom and Gail Fowler organized a talk on John Lawson's trek through this area three hundred years ago. After the talk, we hiked with the speakers and talked about early trails and trading paths and the Native American culture in this area.

Many thanks to all the leaders and assistants who helped with the winter hikes: Edith Tatum, Vicki Pashion, Margaret Wainwright, Barbara Birkhead, Wayne Poole, Nancy Newell, Kerstin Nygard, Cornell Johnson, Odele Gould, Carmen Lucaveche, Kathy Harris, Tom Braverman, Gary Clark, Gail Ice, Earl Smith, Tom and Gail Fowler, Rebecca Vinson, Annette Jurgelski, Tim and Kate Hayward.

- Marcia Eickmeier

The John Lawson/Enoe Will Tercentennial Celebration

The John Lawson/Enoe Will 300th Anniversary Weekend was a rousing success. Despite a night of heavy rains, about sixty-five hikers began the reenactment hike on Saturday February 17, 2001. The hikers followed roads and old roadbeds and paths through the forest, starting in Hillsborough at the reconstructed Occaneechi Village, and finishing on the western edge of Durham, near a possible site of Enoe Will's Adshusheer Village. This route approximates the one taken by Lawson and Will in February 1701. *

The rain prevented a planned fording of the Eno River at the start, but hikers still had several challenging creeks to ford before they completed their trek. As the last hikers found their way to the finish at the Hollow Rock Racquet & Swim Club on Erwin Road, many admitted that it had indeed been a "sad, stony way" (as Lawson had described it in his journal)—but they said they enjoyed it anyway.

On Sunday, February 18, the celebration continued with several presentations at the Eno River State Park Headquarters at Few's Ford. An overflow crowd of about 70 heard presentations by UNC Archaeology Professor Steve Davis, local historian David Southern, and Tom Magnuson of the Trading Path Preservation Association. The presentations covered the prehistory of the area, possible locations of the trails and villages visited by Lawson in 1701, and historical references to these trails and settlements. At the close of this session, the presenters and most of their audience hiked the Buckquarter Trail loop and continued their discussion of the area's history.

Many thanks to those who made the weekend a success: Holly Reid, Rich Shaw, Milo Pyne and all the other event organizers, volunteers, hike leaders and sponsors!

* For more details on this trek see: John Lawson, "A New Voyage to Carolina" originally published in 1709, Hugh T. Lefler, ed., Chapel Hill: University of North Carolina Press, 1967.

- Tom Fowler

Susanna Rodell: The Land is Open for Saving

ROUGEMONT — If you walked directly across the road from my house, you'd end up in a tobacco field. A little farther down the road, you'd find recently built houses on generous plots. Within a couple of miles you'd see family farms, a few doublewides, and enormous, new, architect-designed piles dominating the pastureland. You'd find horse farms with big barns in mid-construction.

You'd have to drive south for a few miles before you hit the subdivisions, but I'm sure it won't be long before the developers start buying up the farmland in my neighborhood.

It worries me. I love this countryside, the old tobacco barns that still stand, the clapboard farmhouses, the hoary fields on winter mornings, the furry cattle standing close together for warmth, the way the light tilts in the evening and makes the broomstraw glow red. No matter how bad I feel, there are certain fields that lift me, every time, just by the way they lie against the light.

Over and over, in the early mornings, the kids and I count our luck to be driving through this landscape. We know where the great blue heron is likely to be stalking, which stretch of wire the kingfisher favors, and in which field, most recently, a baby calf has appeared. We wait each spring for the ancient apple tree on New Sharon Church Road to blossom. These miles of open land feed us daily.

A lot of other people feel the same way, and that presents some problems. My neighbors are as likely to have jobs in RTP as to be farmers by inheritance. I'm an interloper myself. I'm hardly in a position to begrudge others the chance to live out here in this paradise. (Though I can take issue with the tactfulness of their building plans.)

Clearly, it seems, it's a good time to start taking whatever small steps are possible to preserve open land up here. Fortunately I'm not the only one who's thinking this way. Two North Carolina land trusts — the Eno River Association and the Triangle Land Conservancy — have already raised the funds and set aside the land for the Triangle's first regional park, straddling Orange and Durham counties and flanking the Little River.

This is very cool, but it's only a beginning. The Little River Regional Park is only 391 acres — enough room for a nice hike, but not even enough for a good trail ride on horseback. There are tentative plans to add on some of the land originally set aside for the landfill that never happened, which is adjacent to the park, and that would be great too.

But we need to move fast to make sure more of this landscape doesn't fall to development. South Lowell Road, a North Carolina Scenic Roadway, winds through some of the prettiest farmland you could ever expect to see, and it's also lined with signs advertising lots for sale in new subdivisions.

Much of the land that's so gorgeous to look at out our car windows is owned by beleaguered farmers who have a tougher and tougher time making a living from the land. For a lot of them, tobacco has presented the only really profitable way to stay in business, and that's a dead-end road now.

Conservation easements, which give landowners some tax breaks and other incentives to keep their land out of the hands of developers, are one way of helping, but alone they won't put food on the table of a farmer who can't make a living from the land.

It's going to take a whole bunch of different ideas to keep this area from turning into another Cary or Wake Forest. Regional parks are great and we need to support them. We need to help farmers stay in business. We also need to come up with some new ideas to make the open land work as part of the regional economy.

One idea is to do more to encourage and promote the horse business up here. Horse operations can make money (although they also require prodigious investment) and given some kind of critical mass, could encourage people to come to the area for competitions, recreation, even low-impact tourism. And horse farms sure do look pretty.

You'd have to be an aesthetically challenged dolt to drive through the northern reaches of Durham and Orange counties and not be grateful for what you saw. So saving it should be an easy sell. The point is: how?

I'm not sure. But now is the time, before we lose the character of this

amazing piece of earth, to start scheming hard to protect it.

Susanna Rodell can be reached by e-mail at surodell@aol.com. This article originally appeared in "The News and Observer" (2000).

- Susanna Rodell

Dear Members:

The grass is green along the river again, the current is brisk from the spring rains, and the last of the pink and white spring beauties are modestly waiting to be discovered. The Eno is jaunty with the presence of spring.

Like the river, most of us are decking ourselves out in brighter colors these days. We are enjoying the azaleas and dogwoods and feeling the zest that comes with the beginning of another growing season. As brown becomes green and the days grow longer, we sense the metamorphosis that is occurring through the new season. Nature is moving forward to its most productive period, and with this progress comes change.

Your Association is also responding to the challenge of a new season. A new executive director is coordinating our diverse programs and our office on Guess Road is undergoing some much needed improvements. With the new millennium, we had to acknowledge the need for more staff and better equipment. The organization of a decade ago was no longer adequate to protect and expand the parklands of the Eno, stage a massive July 4th Festival, and keep the public informed on key issues.

To help support the changes that will make the Association more productive, the Board has reluctantly voted our first dues increase in a number of years. Sponsoring members are now asked to contribute \$35.00, families \$25.00, and individuals \$20.00. All other levels of membership, including the special rate of \$10.00 for students, remain the same. Compared to other organizations performing similar services, our dues structure remains very modest. The new rates become effective with the 2001-2002 membership year.

Please continue to encourage friends and newcomers to the community to join us. With your ongoing support, the Association can and will fulfill its mission of protection and preservation in this new and challenging season.

Sincerely,
Annette Jurgelski
Membership Chair

VOLUNTEER RECOGNITION

Mary Ellen Ackerman	Kate Hayward	Kerstin Nygard
Greg Atkinson	Tim Hayward	Dave Owen
Marguerite Atkinson	Betty Higgins	Miriam Palacio
Marv Axelrod	Bill Higgins	Peg Parker
Andy Bingham	Larry Howard	Vicki Pashion
Barbara Birkhead	Thomas Humphrey	Bercedis Peterson
Larry Bohs	Gail Ice	Wayne Poole
Tom Braverman	Cornell Johnson	Sandy Preissler
Mark Bruno	June Johnson	Graham Redman
Brandi Burke	Annette Jurgelski	Ron Rudin
Diane Burke	Kathy Lee	Mary-Russell
Gary Clark	John Lestina	Roberson
Tom Diehl	Carmen Lucaveche	Marion Sands
Helen Drivas	Diane Magnuson	Mark Shultz
Ken Eaton	Tom Magnuson	Earl Smith
Marcia Eickmeier	Terry Mehلمان	Micki Jo Sorrell
Gail Fowler	Carol Minton	Edith Tatum
Tom Fowler	Victor Minton	Bill Tripplett
Dona Giffen	Sue Monahan	Rebecca Vinson
Odele Gould	Margaret Moore	Margaret Wainright
Kathy Harris	Nancy Newell	Micha Wait

Jeremiah 9:10

"For the mountains I will take up a weeping and wailing, and for the habitations of the wilderness a lamentation, because they are burned up, so that none can pass through them; neither can men hear the voice of the cattle: both the fowl of the heavens and the beast are fled; they are gone."

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OUR MISSION:

To conserve and protect the natural, historical, and cultural resources of the Eno River Basin.

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