

GEORGIA

Adopt-A-Stream

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Mussels & More

In Fayette County, Adopt-A-Stream, stormwater management and now freshwater mussel projects have become important and interrelated activities which are absolutely vital to evaluating the health of our streams. In the last two years, it has all come together as cities bring base-line water quality testing for stormwater plans on line and volunteer community involvement to help assure that water quality is more than just something to talk about.

Peachtree City is leading the way, where an extensive stormwater sampling (in area streams) program that began four years ago on thirty sites around the city. Those thirty sites are sampled every other year. Shortly after that program began, McIntosh High School students expressed an interest in starting Adopt-A-Stream teams. These teams have completed two years of chemical and biological sampling data. There are nine teams with four to five members per team, representing each grade level. The teams sample locations selected from among the city's stormwater sample sites to provide a continuing data stream, which augments the city's data.

A number of the Adopt-A-Stream students have now added another project to complement their continuing contributions. Freshwater mussels have been significantly impacted by changes in water quality, perhaps more so than fish or macroinvertebrates. As Adopt-A-Stream coordinator, I helped set up a project to look at the health of our mussel populations. A 100-meter segment of Flat Creek (an important stream for Peachtree City) was selected and all the mussels found were identified, marked, measured and returned to the approximate area where they were collected.



To do our mussel study, a scientifically sound data collection technique is followed by the students. Our plan is to continue this sampling every 6 months for a period of 3 to 5 years. We believe that this and similar projects will provide an even better picture of the quality of our streams.

This is just a beginning for us, as we plan to include similar mussel projects in other streams by other high schools in Fayette County. One of those projects already included translocation of mussels to a stream that dried up during the drought of 2000. Another school project will involve a stream with a large mussel population to investigate why that stream supports higher populations. In addition, individual projects for students will involve aging of mussels, studying the ability of different species to clean water, and an investigation into the variation of population sizes in different streams. The Rotary Club, District 6900 is participating in these projects and will include 70 Rotary Clubs in the Flint River Watershed, from Atlanta all the way to the Florida border. Segments of the Flint River or portions of primary tributaries will be cleaned by those 70 clubs in their area on October 15, 2005.

Exploration and Research on Georgia Rivers

“This here is a stretch of river you could easily fall in love with,” an old man proclaimed as three of us rounded a bend in our canoes near a boat landing on the Satilla River in April of 2003. The man was fishing from a spot on the bank that he said, had been his fishing spot for many years. We slowed to talk with him for a moment, agreeing that the Satilla is an awfully nice stream, and then we were on our way. We had to keep moving if we were ever going to make it to the coast.



That was on the first trip of several that made up the Georgia River Survey in the 2003 and 2004. Our crew (just three people on that trip, sometimes as many as seven) traveled the Satilla for 165 miles, paddling from Atkinson County to Woodbine and performing a generalized ecological survey along the way. Later that summer we repeated the survey on the Flint River, paddling from near Griffin to Bainbridge. In the May and June of 2004 we canoed and surveyed the Ocmulgee and the Altamaha from the Lloyd Shoals Dam to Darien. Along with informal tours of the Etowah and the Ogeechee, these trips combined to cover about 1,000 miles of river in Georgia.

The goal of these surveys was to observe the rivers and their surroundings, and to take a snapshot of each river from as many perspectives as possible within a limited period of time and over the greater part of the stream's length. To measure water quality, we towed a YSI Multiprobe behind a canoe, taking nearly constant readings on water temperature, pH, specific conductivity, and dissolved oxygen. We also took frequent turbidity readings with a HACH nephelometer. We made nearly continuous notes on wildlife (especially birds), riparian vegetation, the “landscape” of each river, and land use on the rivers' banks and in their floodplains. The idea was to gain experiential self-education as naturalists, and at the same time to attempt a broad-based ecological survey of several of Georgia's major rivers.

We hope that one day the information gathered on our surveys can provide baseline data for researchers seeking to learn about the ways in which our rivers are changing. Historical exploratory surveys are often combed for useful information about landscape change; we wanted to foreground that aspect of the survey because so much of Georgia's landscape is changing so fast these days. We're still working on collating the data we've gathered, but we have found that traveling Georgia on its rivers has been a wonderful way to learn the landscape of our home state.



One of the most enjoyable activities on these river trips was talking with local residents about their rivers. The fisherman on the Satilla was only one of many people we met who care deeply about the state's rivers. We were happy to find people all over Georgia who want to see water quality, green space, and wildlife habitat protected from now into the future.

Ben Emanuel will give a presentation about the Georgia River Survey at the Fernbank Museum of Natural History on August 23 at 7pm. The lecture is free to the public, but reservations are required at 404-929-6400. Obtain directions at <http://www.fernbank.edu/museum/direction.html>.

More information and photos can be found at www.georgiariversurvey.org.

Article by Ben Emanuel, Georgia river enthusiast

Adopt-A-Stream Calendar of Events

The following workshops, taught by certified AAS trainers, provide training in visual, biological and chemical monitoring of streams. Teachers may receive 1 SDU credit for participating – please go to the AAS website under Teacher Corner for more details. Please call to register for a workshop.

What	Who	When	Where	To Register
Biological	Upper Etowah River Alliance	June 18	Forsyth Co.	770-355-6477
Intro, Biological & Chemical	Elachee Nature Center AAS	June 24-25	Gainesville	770-535-1976
Intro, Biological & Chemical	Georgia AAS	July 15-16	Coweta Co.	404-675-1636
Intro, Watershed & Visual	Upper Etowah River Alliance	July 16	Pickens Co.	706-779-5756
Chemical	Upper Etowah River Alliance	July 23	Pickens Co.	706-779-5756
Biological	Upper Etowah River Alliance	Aug 6	Cherokee Co.	770-355-6477
Introduction & Chemical	DeKalb AAS	Aug 13	DeKalb Co.	404-371-2540
Intro, Biological & Chemical	Phinizy Swamp Adopt-A-Stream	Aug 25&27	Augusta	706-796-7707

NOTE: Workshop times vary. Please call to get exact times and locations. Workshop information is updated weekly on our website at www.riversalive.org/aas.htm

QA/QC Recertification: All QA/QC volunteers must renew certification on a yearly basis. This can be accomplished by participating in the second half of our regular chemical or biological workshop. To register, please contact one of our scheduled workshops.

Training Opportunities!

Join **Project WET** and **Adopt-A-Stream** in a combined AAS Train the Trainers and Healthy Water, Healthy People facilitators workshop at Charlie Elliot Wildlife Center **August 5-7**. Participants will receive the Healthy Water, Healthy People Educators Guide and Testing Kit Manual, a facilitator handbook, the Adopt-A-Stream Train-the-Trainer handbook, all AAS publications, plenty of networking opportunities, as well as PLU credit. Registration for this workshop closes on July 20, but there are financial incentives for early birds! Contact Jessica Stelzner at Jessica_stelzner@dnr.state.ga.us or 404-362-6536 for more information or to register.

Register your Rivers Alive cleanup today!

Last year 23,000 volunteers collected over 590,000 pounds of garbage from over 1250 miles of waterways. Please consider organizing a Rivers Alive cleanup event in 2005. To register your event, check out the Rivers Alive website at www.riversalive.org or for more information contact Kim Morris-Zarneke at 404-675-1636 or kimberly_morris-zarneke@dnr.state.ga.us. Registration deadline is July 30th.

Top 10 Indicators You May Be An Adopt-A-Stream-Aholic

1. You have a giant stonefly tattoo somewhere on your body.
2. You have the Hach and LaMotte toll-free phone numbers on speed-dial.
3. You prefer to drink your beer from an Imhoff cone.
4. You have done a Google search for "hellgrammite earrings."
5. You named your firstborn child after Izaak Walton, even though it's a girl.
6. Your waders are overdue for their 50,000 mile checkup.
7. You believe the right to bear arms also covers d-frame nets.
8. You told your boss you couldn't come to work because your stream is sick.
9. You're upset because your local Arthur Murray studio doesn't teach the caddisfly dance.
10. You threw out your spare tire to make room for your 5-gallon bucket.

Ed Griffin, Georgia Wildlife Federation

Does Your Data Hold Up To Professional Standards?

In the past year, two independent comparison studies of biological monitoring methods were conducted in Southwest Georgia. The goal of the studies was to determine how volunteer monitoring data compares to professional monitoring. EPD oversees the process for obtaining water quality data to be used for regulatory decisions, while the AAS index is used by citizens to determine general water quality conditions.

Muenz et al reported that, "The GA AAS index for macroinvertebrates proved to be effective in separating sites with different impacts, showing similar results as most invertebrate indices, and appears to be a valid tool to assess the ecological condition of Coastal Plain streams."

Winn et al reported that, "The rating of ecological condition/water quality of study streams by the GBP (Georgia Bioassessment Protocol) and AAS index differed slightly with a greater percentage of samples rated excellent or poor by the AAS index when compared to GBP results... Study results do not suggest that one assessment method is better at describing streams than the other, but they do suggest that the coarser taxonomic resolution employed by the AAS index is adequate to conduct assessments."

Both studies submitted papers at the Georgia Water Resources conference in April 2005. These can be viewed under the Current Events heading at www.riversalive.com/aas.htm.



Steve Golladay, Tara Muenz and Lora Smith of the Jones Ecological Research Center collect benthic samples.

The Georgia Adopt-A-Stream Newsletter is published six times per year. For more information about the Georgia Adopt-A-Stream program or to contribute to the newsletter, call or write to:

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