

# GEORGIA

## Adopt-A-Stream

Volume 14, Number 3, May / June 2007  
Allison Hughes, Editor



### Count Those Pebbles!

We all want a nice place to live – a good habitat. For benthic macroinvertebrates, that means a diversity of materials on stream bottoms that provide a stable refuge from flowing water. One way to characterize stream bottoms is by using the AAS Wentworth Pebble Count protocol. Counting and measuring particles on stream beds may not seem as exciting as catching bugs, but at least it gets you out in the creek. More importantly, data from the pebble count may be used to gauge the quality of instream habitat and serve as a yardstick to measure changes in substrate over time.

In rocky bottom streams, a variety of substrate is favored (including all particle sizes; silt/clay, sand, gravel, cobble, boulder, and bedrock) with an emphasis on greater numbers of the larger, more stable particles. In the low gradient muddy bottom streams of South Georgia, much of the available stable habitat comes from large woody debris that falls into the stream. In fact, the stream bottom may consist entirely of smaller sized particles.

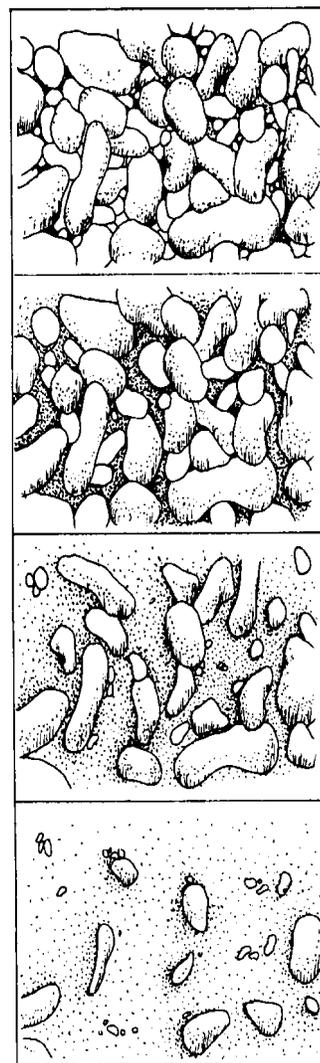
A number of studies indicate strong relationships between the diversity and size of substrate materials and biological health of streams. Even if water quality parameters (e.g. pH, dissolved oxygen, temperature, etc...) are within normal ranges, biological health suffers from deficiencies in the physical habitat available for colonization.

One recent study in the Soque River watershed in Habersham County indicated that streams with larger sized substrates (particularly cobble) had greater diversity and abundance of stream dwellers that are sensitive to pollution. In addition, the amount of silt/clay in these streams was very strongly correlated with increasing urbanization. As land cover changes from forest and agriculture to development, it becomes increasingly important to document subsequent alterations to stream habitat and water quality.

Please take advantage of the AAS pebble count protocol and start counting those pebbles during your next monitoring session. The method is quick and simple, yet it provides valuable information about changes in habitat quality over time that directly influences the numbers and kinds of critters that live in our streams.

More information about the AAS Wentworth Pebble Count protocol can be found in the Adopt-A-Stream Visual Stream Manual or by attending an introduction workshop.

*Article written by Duncan Hughes, Watershed Coordinator,  
Soque River Watershed Partnership*



Stream bottoms with an increased amount of silt and clay can be seen as you move down the diagram.

## Adopt-A-Stream Lends Support at the Watershed Level

Watershed-wide monitoring events allow volunteer monitoring groups to take a 'snap-shot' of the health of an entire watershed. During such events, volunteers set out to sample many locations within a single watershed in order to gain information about the watershed as a whole. The Adopt-A-Stream program has assisted the Broad River Watershed Association (BRWA), the Upper Oconee Watershed Network (UOWN) and the Cobb County Sierra Club (CCSC) with watershed-wide monitoring events.

During the Broad River event, 17 local certified AAS volunteers set out to collect conductivity readings at over 100 sites within the South Fork of the Broad River. These readings allow BRWA to evaluate the condition of the water within the sub-watersheds. Each quarter they plan to sample a different sub-watershed until they have completely assessed the entire Broad River Basin.

In April, we joined UOWN for their annual River Rendezvous, which celebrated its 10th year of continuous monitoring. The theme of this event was "The Day in the Life of a Watershed", and hundreds of volunteers set out to collect samples that were tested for turbidity, conductivity, nutrients, and bacteria. UOWN also holds quarterly monitoring

activities on 12 sites based partly on the results of the River Rendezvous.

This year the Cobb County Sierra Club wanted to expand their monthly data collection, so they designed their first annual watershed-wide monitoring event. CCSC has partnered with Cobb



Broad River Watershed Association Volunteers are geared up and ready to head to the river

County Water System to perform advanced water quality testing in the Cobb County Water Quality Lab. Cobb County Water System and CCSG are using this event to gather extensive water quality data within the Rottenwood Creek watershed. On-site monitoring consisted of the core parameters recommended by Adopt-A-Stream (pH, DO, and temperature). Lab testing included a metal scan, chemical oxygen demand, nutrients,

conductivity, e.coli, fecal coliform, and many others. Overall, volunteers visited 30 sites in order to gain a better understanding of the health of Rottenwood Creek.

These monitoring events provided the groups with much needed data about the health of their watershed. Adopt-A-Stream is willing to lend support in planning an event for your monitoring group. If you would like more information about watershed-wide monitoring, please contact the State Office.

## Remember To Keep Safety First When Monitoring

As you visit your site during your next monitoring event, remember to keep safety at the top of your priority list. Your safety and health is very important to us. There are several key things to keep in mind when you are monitoring your adopted stream, river, lake or wetland. During the rain events, stream levels can rise rapidly and bacteria levels tend to increase. During the summer season poison ivy is rapidly growing, and snakes and bees are out enjoying the warm temperatures, so be conscious of your surroundings. We urge volunteers to avoid monitoring during high flows, thoroughly wash your hands after monitoring and always work in pairs. We also recommend that you develop an emergency plan for your monitoring site. If you follow these guidelines and the Health and Safety Checklist on page 9 of your Biological and Chemical Monitoring Manual, you will have a fun, enjoyable and safe experience.

# ADOPT-A-STREAM CALENDAR OF EVENTS

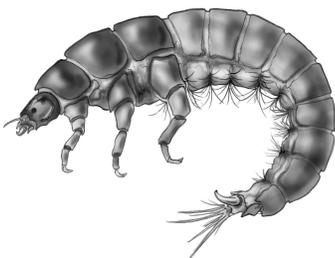
Workshops are taught by certified AAS instructors and provide stream monitoring training. Teachers may receive 1 PLU credit for participating. Please visit the AAS website under the Teacher Corner heading for more details. Please call to register.

What	Who	When	Where	To Register
<b>May</b>				
Biological	Savannah Riverkeeper	May 26	Augusta	706.364.5253
Intro/Visual	Upper Etowah River Alliance	May 26	Cherokee County	678.493.7804
<b>June</b>				
Chemical	Upper Etowah River Alliance	June 2	Cherokee County	678.493.7804
Intro	Columbia County AAS	June 2	Columbia County	706.868.0296
Chemical	UGA Marine Extension Service	June 7	Savannah	912.598.2348
Chemical	UGA Marine Extension Service	June 9	Richmond Hill	912.598.2348
Intro/Chem/Bio	Elachee Nature Center – Hall Co.	June 15-16	Gainesville	770.535.1976
Intro/Chem	Paulding County	June 15	Paulding County	404.675.1635
Chemical	Cherokee County AAS	June 16	Cherokee County	770.548.1799
Chemical	Clayton County AAS	June 23	Clayton County	678.422.2838
Chemical	UGA Marine Extension Service	June 23	Brunswick	912.598.2348
Intro/Visual	Cherokee County AAS	June 30	Cherokee County	770.355.6477
<b>July</b>				
Chem/Bio	UGA Marine Extension Service	July 7	Savannah	912.598.2348
Chemical	Columbia County AAS	July 7	Columbia County	706.868.0296
Biological	Clayton County AAS	July 14	Clayton County	678.422.2838
Chemical	Cherokee County AAS	July 14	Cherokee County	770.355.6477
Biological	Cherokee County AAS	July 28	Cherokee County	770.355.6477
<b>August</b>				
Chemical	UGA Marine Extension Service	August 9	Savannah	912.598.2348
Chemical	UGA Marine Extension Service	August 18	Brunswick	912.598.2348
Biological	UGA Marine Extension Service	August 23	Savannah	912.598.2348

**NOTE: Workshop times vary. Please call to get exact times and locations. Additional workshops are added weekly on our website at [www.GeorgiaAdoptAStream.org](http://www.GeorgiaAdoptAStream.org). If you would like to host a workshop in your area, please contact your local coordinator or the State Office.**

**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.

Name that Bug...



Answer on back page



Registration opens June 1<sup>st</sup>

Last year 25,000 volunteers collected over 700,000 pounds of garbage from over 2,400 miles of waterways. Please consider organizing a Rivers Alive cleanup event in 2007. To register your event, check out the Rivers Alive website at [www.riversalive.com](http://www.riversalive.com)

Registration deadline is July 30th.

# Programs for Educators

## Cool Waters (For Educators) June 4<sup>th</sup> – 6<sup>th</sup>, Cobb County

Earn PLU credits while learning about drinking water, wastewater, and surface water through field trips and hands-on activities. Please visit [www.gawp.org](http://www.gawp.org) or email Sharon Smith at [sharon.smith@fultoncountyga.gov](mailto:sharon.smith@fultoncountyga.gov) for more information.

## Paddle Georgia 2007 – 10 Teacher Scholarships Available, June 23 - 29

This summer, join fellow paddling enthusiasts for the Third Annual Paddle Georgia Adventure, a weeklong, 115-mile canoe/kayak adventure on the Ocmulgee River from Monticello to Hawkinsville and experience Georgia as you never have before.

Adopt-A-Stream and Project WET are partnering with GRN to provide teacher workshops during the trip. Through this workshop, teachers will receive training in Chemical Monitoring and Project WET. Please visit [www.garivers.com](http://www.garivers.com) for more information regarding the Teacher Scholarships.

## Healthy Water, Healthy People, September 28 - 29

Please join Adopt-A-Stream & Project WET at Red Top Mountain State Park as we host a joint workshop that will allow participants to become Healthy Water, Healthy People Facilitators as well as Adopt-A-Stream Trainers. For more information, call Allison Hughes @ 404.675.1635 or Petey Giroux @ 404.675.1638

“Name that Bug” answer – Net-Spinning Caddisfly

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:

**Georgia Adopt-A-Stream**  
**Environmental Protection Division**  
**4220 International Parkway, Suite 101**  
**Atlanta, GA 30354**  
**(404) 675-1635**  
**[www.GeorgiaAdoptAStream.org](http://www.GeorgiaAdoptAStream.org)**

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