

# THE RIVER RUNS

News from the Cowpasture River Preservation Association

## Watchful Eyes Await Signs of Fish Kills

*As of the writing of this article, two reports of dead fish have already been made this spring, one on the James River and one on the South Fork Shenandoah. However, as water and air temperatures increase, we are quickly approaching the conditions in which previous widespread fish kills have occurred.*

While spring is usually a time of great anticipation about upcoming activities on the Cowpasture, this year anticipation has been replaced by apprehension about another fish kill in our waters. The Fish Kill Task Force has developed a comprehensive plan to continue to investigate this issue and sampling and surveillance programs on the Shenandoah and James are already underway in hopes of getting some good “pre kill” data.

According to the Task Force, studies in 2008 emphasize additional reference (or non-fish kill) sites, expanded water quality chemical lists with a focus on

storm flows, and multiple fish health metrics. Scheduled projects and lead investigators include:

- Expanded fish health study to evaluate organs, blood chemistry, parasites, and tissue contaminants - Virginia Tech and US Geological Service (USGS).
- Watershed and fish kill contaminant profile - Virginia Institute of Marine Science.
- Measuring pesticides, organic compounds, and heavy metals in storm runoff – James Madison University.
- Measuring organic compounds in river water during spring time period using passive samplers, devices which allow measurement of chemicals that are normally not detectable using conventional methods – Department of Environmental Quality (DEQ) and USGS.

*Please See Page 3*

## In This Issue

- Executive Director Update
- 2007 Fish Kill Summary
- CRPA Annual Meeting
- Field Ecology Summer Regional Governor's School
- Didymo
- Landscaping Resources
- AHEC
- Upcoming Events & Meetings
- Citizen Monitoring Funding

### Special Inserts:

- Annual Dinner Reservation / Proxy Form
- Fish Kill Task Force Field Report Form



Department of Game and Inland Fisheries Biologists  
Conducting Fish Sampling on the Cowpasture, Spring 2007

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## Executive Director's Update

While Joe is off enjoying a much deserved vacation, in a far off tropical destination, I will attempt to speak for the both of us in this issue.

Throughout this winter, the CRPA board and I have remained busy. We are half way through our first ever Watershed Workshop Series at Dabney S. Lancaster Community College (DSLCC). Both the Land Conservation and the Landscaping for a Healthy Watershed Workshops were well attended. On April 2 we will be hosting the Rain Barrel Making Workshop and the final workshop on May 7 will be on Citizen Water Quality Monitoring. In addition to the support from DSLCC, we were very fortunate to have received grant funding from both the Rockbridge Area Community Foundation and the Virginia Hot Springs Preservation Trust to help support these workshops.

Our education committee is getting ready to award our annual scholarships and we hope to announce several new education initiatives at the annual meeting on May 3. Our volunteer water quality monitors have continued bacteriological monitoring throughout the winter and we will be hosting a training session for new volunteers on May 17.

Of course we could not provide scholarships, host workshops, or conduct water quality monitoring and training without the financial support of our members. A tremendous **THANK YOU** goes out to everyone who participated in our annual fund raising campaign. We raised over \$15,000 in support of our programs. A list of all of our 2007 donors will be published in our summer newsletter.

As always, please feel free to contact me with any questions or suggestions you have, I look forward to seeing you at the annual meeting in May!

## Kayak for a Cause Raffle



Tickets are still available for the CRPA raffle to support our environmental education and water quality monitoring programs. The drawing will be held at the CRPA annual meeting. Winner need not be present.

- 1st Prize — All-inclusive Kayak Package (est. value over \$700)
- 2nd Prize — Enviro-Friendly Rain Barrel
- 3rd Prize — Framed America's Aquatic Insects Poster

Tickets are \$5 and can be purchased at Heirlooms of Clifton Forge or Riders Up! Outfitters in Clifton Forge or by contacting Caroline Bott at (540) 460-0268 or directorcrpa@gmail.com

# Cowpasture River Fish Kill – 2007 Summary

By Paul Bugas, Fisheries Biologist  
Virginia Department of Game and  
Inland Fisheries (DGIF)

The Cowpasture River suffered its first expansive fish kills during spring and early summer 2007. Reports of sick or dying fish were documented from the Williamsville area to 60 miles downriver at its confluence with the Jackson River at Iron Gate. At a routine electrofishing sample on April 19, 2007 at the Walton Tract, adult smallmouth bass with lesions, fin rot, fungus, and discolored skin were collected. Some of the bass were dead and others were in a state of severe stress. Most of the smallmouth bass collected that day exhibited similar symptoms to those found in the Shenandoah River fish kills. Over the course of the survey year, black jumprocks, fallfish, bull chubs, rock bass, redbreast sunfish, and white suckers were all affected

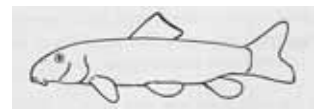
by anomalies. DGIF fisheries biologists attempted chart the course of the fish kill from a perspective of time and distance.

Twelve fish samples were spread from Fort Lewis to Iron Gate, from April through October. Diseased fish were found from April – July, with no signs of infection by October. An interesting observation was that rock bass were greatly affected by lesions, particularly around the mouth. These anomalies persisted through mid-summer with this popular species. It is difficult to assess whether the 2007 smallmouth bass spawn was successful, because catch rates were low in the fall. Because the Cowpasture River was selected as a reference stream by the Fish Kill Task Force, fish and water quality data has been taken over time. Passive sampling devices were deployed at the Walton Tract to see if herbicides, hormones, pes-

ticides, and other types of organic contaminants are present in the Cowpasture. Results are being analyzed by Department of Environmental Quality at this time.

The Cowpasture River will be included in a comprehensive fish health study being conducted by the Task Force. Blood, histopathology, and parasitology on major species, particularly smallmouth bass, will be a major focus in 2008. Additionally, tank studies with the bacteria *Aeromonas salmonicida* will be conducted by the United States Geological Survey.

The Fish Kill Task Force wants to employ citizen volunteers to float sections of the river after significant precipitation events (> 1 inch) this spring and look for distressed or dead fish. Please contact Caroline Bott if you are interested (540) 460-0268 or [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com)



## Fish Kill Task Force

*Continued From Page 1*

- Biweekly analysis of heavy metal concentrations in the rivers during the spring time period – DEQ
- Fish kill and fish behavior surveillance by volunteer citizen monitors – Fish Kill Task Force, state agencies, citizens.
- DEQ and Department of Game and Inland Fisheries investigators also are participating in a coordinated study with USGS, US Environmental Protection Agency, and the West Virginia Department of Environmental Protection on additional fish health studies at several sites within the Potomac River Watershed.

### *What You Can do to Help the Task Force*

*If you see any dead or dying fish, use the enclosed Fish Kill Task Volunteer Field Report Form to report your findings to DEQ. Distressed fish are found mainly in eddies and shallow areas away from the main current. Additional forms are available on the Cowpasture River website [www.cowpastureriver.org](http://www.cowpastureriver.org)*

# Mark Your Calendars...Fish Kill Task Force Co-Chair will be Guest Speaker at CRPA Annual Meeting – May 3

The CRPA annual meeting and dinner will be held on Saturday, May 3 at the Lone Star Advent Christian Church Family Life Center on Nicelytown Rd. in Clifton Forge (see website for directions: [www.lonestarac.org](http://www.lonestarac.org) ).

Registration will begin at 5:00 pm with the business meeting beginning at 5:30 pm. During the business portion of the meeting Caroline Bott will present a *State of the Cowpasture River Report*, and there will be an election for a new board director. Please remember that your dues must be paid in order to vote at the meeting. If you cannot be present at the meeting, please return the enclosed proxy insert and any unpaid dues prior to April 21.

We will also be holding the Kayak for a Cause Raffle drawing during

the meeting. Tickets are still available (see page 2 for more information). And as always, we will have CRPA gear for sale, including new polo style shirts with the CRPA logo and newly designed tee shirts.

Following the business meeting, a buffet style dinner will be served at 6:15 pm. The cost will be \$15 per person, \$10 for children 12 and under. Reservations are required for dinner. Please return the enclosed reservation insert with checks payable to CRPA by April 21.

The guest speaker this year will be Don Kain from the Virginia Department of Environmental Quality (DEQ). Kain is the Water Compliance and Assessment Manager for DEQ's Valley Regional Office, in Harrisonburg, VA. He is responsible for supervising and managing

regional Water Quality Monitoring, Biological Monitoring, water quality assessments, and TMDL programs. Along with Steve Reeser of VA Dept. of Game & Inland Fisheries, Kain is co-chair of the expanded Shenandoah River Fish Kill Task Force, a multidisciplinary team investigating the possible causes of mysterious fish kills in the Shenandoah, Cowpasture, and James Rivers. Kain will be talking about the fish kill investigation and will answer questions from the audience. The dinner and presentation will be open to the general public.

***Please make sure to return the enclosed Reservation/Proxy Form by April 21!***

## Field Ecology Summer Regional Governor's School June 13 - July 3, 2008



Now in its 24th year, the Field Ecology Summer Regional Governor's School is held at Dabney S. Lancaster Community College in Clifton Forge. The program is designed to inspire in students a respect for the bountiful natural environment that is their heritage and to awaken an awareness and interest in native

plant and animal life as a rich and varied natural resource. Emphasis is placed on the interrelationships between organisms and their natural environments and on the role and impact of humans on these ecosystems. Participants "learn" science by actually "doing" science. Activities during the three-week school include a camping trip, a backpacking trip, canoeing, amphibian study, learning outdoor skills such as compass and map reading, and stream and wetlands ecology.

Area eighth and ninth grade students who are interested in learning about the natural world in an outdoor setting should consider participating in the program. Applications are accepted from students in participating school divisions, which include Alleghany County, Bath County, Botetourt County, Buena Vista, Covington, Lexington, and Rockbridge County.

For more information or to request an application contact Jane DeGroot at [degroot\\_j@yahoo.com](mailto:degroot_j@yahoo.com) or visit the program website at <http://jrjgs.dslcc.edu/srgs-fe/>

# What You Need to Know about DIDYMO (*Didymosphenia geminate*)

The following article was adapted from an informational poster entitled "DIDYMO...spread the word, not the algae" developed by the USDA Forest Service, Trout Unlimited, and the Virginia Departments of Game and Inland Fisheries and Conservation and Recreation. The US Environmental Protection Agency website was also a resource for this article.

While didymo has not been confirmed in the Cowpasture River, it is present in the Jackson River. Anyone who comes into contact with didymo is at risk for spreading the algae to new waterways and should follow the recommended precautions to prevent its spread.

## WHAT IS DIDYMO?

As if fish kills were not a big enough concern, next time you are on the waters in the Upper James Watershed (specifically the Jackson River below Lake Moomaw) you need to be on the look out for didymo, an invasive freshwater alga that can form massive blooms. Didymo, sometime called 'rock snot,' can smother streambeds and adversely affect freshwater



Photo Credit: US EPA International Fact Sheet  
"Didymo: A Nuisance and Invasive Freshwater Alga."

fish, plants and invertebrate populations by depriving them of habitat. It can also impact recreational opportunities but is not considered a human health risk at this time.

Didymo develops stalks to attach itself to the streambed. These stalks can form a thick brown mat, effectively covering the entire river channel. Didymo can entangle itself in streamside vegetation resembling wet tissue paper. Although they appear slimy, didymo mats feel like wet wool.

## How Can You Prevent the Spread of didymo? There are four steps you can take:

- ⊙ **CHECK:** Before leaving the river, look for strands of algae on your equipment. Remove them and leave them on site.
- ⊙ **CLEAN:** Soak and scrub all gear for at least one minute in a 2% solution of household bleach. Make sure that all surfaces of your equipment are thoroughly treated.
- ⊙ **DRY:** If cleaning is not practical, dry your equipment in the sun for at least 48 hours before using it in another stream.
- ⊙ **LEAVE:** Fish, plants, rocks, and vegetation should not be moved between waterways.

## WHERE IS DIDYMO?

Didymo was first found in Virginia in 2006. To date it has been identified in the Jackson River below Gathright Dam, in the Smith River below Philpott Dam, and in the Pound River below Flannagan Dam. Didymo originated from the cold clear waters of northern Europe and North America.

## HOW IS DIDYMO SPREAD?

Although it is currently unknown how didymo was introduced into the Commonwealth, it is thought to be spread by recreational equipment including boats, kayaks, life jackets and fishing gear (particularly waders). It only takes one cell or a fragment of a stalk to contaminate a new waterway. Once affected, it is impossible to eliminate didymo from a waterway.

For more information on didymo go to:  
[www.epa.gov/region8/water/monitoring/didymosphenia](http://www.epa.gov/region8/water/monitoring/didymosphenia)

# Watershed Workshop: Landscaping Resource Recap

If you didn't attend the March workshop on Landscaping for a Healthy Watershed, you missed four great speakers and a tremendous amount resource materials. However; not to fear, below are some resources you can use this spring to help create a "watershed friendly landscape" at your home.

## [For information on rain gardens check out these resources:](#)

How-to manual developed by Boxerwood Education Association and the City of Lexington:  
[www.boxerwood.com/RAINGARDENS/rgmanual.pdf](http://www.boxerwood.com/RAINGARDENS/rgmanual.pdf)

Virginia Department of Forestry:  
[www.dof.virginia.gov/rfb/rain-gardens.shtml](http://www.dof.virginia.gov/rfb/rain-gardens.shtml)

## [For information on native and invasive plants check out these resources:](#)

*Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed*  
[www.nps.gov/plants/pubs/chesapeake/](http://www.nps.gov/plants/pubs/chesapeake/)

*Plant Invaders of Mid-Atlantic Natural Areas*  
[www.nps.gov/plants/alien/pubs/midatlantic/](http://www.nps.gov/plants/alien/pubs/midatlantic/)

Virginia Department of Conservation and Recreation  
Natural Heritage Program  
[www.dcr.virginia.gov/natural\\_heritage/nativeplants.shtml](http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml)

Virginia Native Plant Society  
[www.vnps.org](http://www.vnps.org)

## [For information on riparian buffers check out these sites:](#)

Natural Resources Conservation Service  
[www.nrcs.usda.gov/feature/buffers/](http://www.nrcs.usda.gov/feature/buffers/)

Virginia Department of Forestry  
[www.dof.virginia.gov/rfb/index.shtml](http://www.dof.virginia.gov/rfb/index.shtml)

Department of Conservation and Recreation  
Chesapeake Bay Local Assistance Program  
[www.dcr.virginia.gov/ake\\_bay\\_local\\_assistance/ripbuff.shtml](http://www.dcr.virginia.gov/ake_bay_local_assistance/ripbuff.shtml)

# Allegheny Highlands Environmental Council Begins Strategic Planning

*By Jessica Stephenson*

The Allegheny Highlands Environmental Council, or AHEC, began in response to a meeting with the Travel Council in 2006, requesting funding to print a birding brochure. Following the discussion, the group agreed that collaboration among travel and environmental organizations is necessary to pool and leverage resources to effectively educate and market environmental resources. The first official meeting of AHEC was on May 19, 2006 where the following goals were outlined for the group:

1. Understand needs, critical issues and priorities related to environmental stewardship in Bath County
2. Establish relationships that enable the sharing of

resources and work so that meaningful projects are accomplished

3. Get environmental education programs underway

Since its beginning in 2006, AHEC has expanded to the Greater Allegheny Highlands, with a service area including Highland, Bath, Covington, Clifton Forge, and Allegheny County.

While primarily a networking and information-sharing organization with an interest in environmental education and stewardship, AHEC is undergoing a strategic planning and goals re-assessment in order to form a mission statement and further define its purpose in the Allegheny Highlands.

*Please See Page 7*

## Upcoming Events and Meetings of Interest:

- April 12 & April 19 — Backyard Habitat Steward Training for more information contact Jessica Stephenson (540) 839-2419 or [jstephenson@homesteadpreserve.com](mailto:jstephenson@homesteadpreserve.com)
- May 3 — CRPA Annual Meeting (see article on page 4)
- May 7 — Watershed Workshop on Volunteer Citizen Water Quality Monitoring at Dabney S. Lancaster Community College in Clifton Forge, contact Judy Clark at DSLCC to register (540) 863-2863 or [jclark@dslcc.edu](mailto:jclark@dslcc.edu)
- May 17 — Water Quality Monitoring Training Event, location and time to be announced, contact Caroline Bott at (540) 460-0268 or [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com) for more information or to sign up
- May 31 — CRPA Adopt-A-Stream River Clean Up at Walton Tract, 9:00 am to 11:00 am, contact Caroline Bott at (540) 460-0268 or [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com) to volunteer

## Citizen Monitoring Funding Reinstated!

Thank you to everyone who took the time to contact legislators on behalf of the citizen monitoring grant funding, because of your efforts and others across the state, the Virginia General Assembly reinstated funding for the Citizen Monitoring Grant program at the Department for Environmental Quality for the 2009 and 2010 fiscal years. If you are interested in learning about other water-related legislation that was before the legislature visit the Virginia Water Resources Research Council website at [www.vwrrc.vt.edu/legislation.html](http://www.vwrrc.vt.edu/legislation.html) or [www.vwrrc.vt.edu/pdfs/legislation/GeneralAssemblyWaterBillsMar132008.pdf](http://www.vwrrc.vt.edu/pdfs/legislation/GeneralAssemblyWaterBillsMar132008.pdf)

## AHEC

*Continued From Page 7*

AHEC is a member of the Virginia Naturally Regional Network, and is listed on their partner website at [www.vanaturally.com](http://www.vanaturally.com). Currently there are six regional alliances in the Virginia Naturally network. These community-based education providers include a wide range of public and private organizations that offer education services to youth and adults, in both traditional classroom settings as well as non-formal, “community-based” venues. These local groups provide a critical link between schools and community and play an important role in providing authentic and meaningful connections between people and the environment and in fostering stewardship of natural and historic resources.

Anyone or organization who is involved with environmental education and stewardship in the greater Alleghany Highlands is welcome to join. For more information on AHEC contact Jessica Stephenson at [JStephenson@homesteadpreserve.com](mailto:JStephenson@homesteadpreserve.com) or (540) 839-2419.

### *Virginia Naturally... Virginia's gateway to environmental information and resources*

Virginia Naturally provides citizens with “one-stop” shopping to programs and information to learn about Virginia’s environment. At this gateway site, you’ll find links to more than 800 organizations which provide environmental education programs and services in Virginia including volunteer and funding opportunities, teacher workshops and lesson plans, conferences, and community events to name a few. You can also find out what your ecological footprint is based on your lifestyle and what you can do to help reduce your impact on the environment.

***Check It Out!***

[www.vanaturally.com](http://www.vanaturally.com)

*Jessica Stephenson is a graduate of Bath County High School. She has degrees in Environmental Science and Science Education. Stephenson worked as an environmental consultant and educator before returning to Bath County. Currently she is the Program Director for the Virginia Hot Springs Preservation Trust.*

# I Want to Support the Cowpasture River Preservation Association

- \$20 Member (minimum annual membership donation)
- \$50 River Guardian
- \$100 Headwaters Circle
- \$250 Watershed Steward
- \$500 Wallawhatoola Society
- Other \_\_\_\_\_

Please return form with  
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PO Box 215  
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- I prefer not to have my name published at a contributor
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- I want to help save valuable resources, please send my newsletter by email

  
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