

# THE RIVER RUNS

News from the Cowpasture River Preservation Association

## CRPA Annual Meeting Focuses on New Forest Service Program

*By Keith Carson, Editor (Photos by Lou Robinson)*



*Chip Snead, Juanita Savage, Peggy and Fred Paxton and Julia Bradley (left to right) catch up on the latest river news while waiting for the business meeting to begin.*

*Kent and Ellen Ford visit with friends including Lee Elliott, Cynthia Baroody and Roger Baroody.*

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*People:*

Thank YOU and Farewell Board Elections

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August 17th - Riverside Picnic

**REGISTER NOW!**

See page 15



*Sixty CRPA members and guests filled the Fairview Community Center for the Annual Meeting on May 4.*



*Finance Director Lizzie Biggs, Water Quality Program Director Polly Newlon, Executive Director Keith Carson and President Joe Wood take care of business at the meeting.*

*(Annual Meeting Story On Page 4)*

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2013-2014

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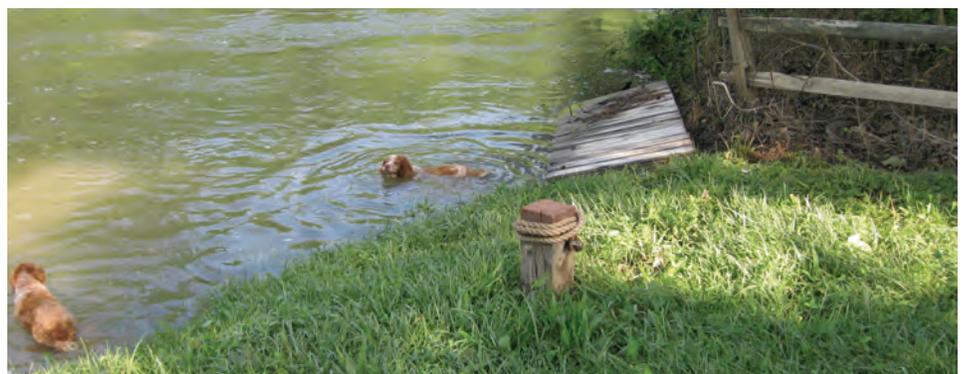
Lizzie Biggs  
Director of Finance

## From the President

Good day to all of our faithful members. This "spring" showed us every extreme, but promises to have added to our well-water reserves. This year has much promise for the Association. We have 5 very smart and hard-working new board members adding youth and vitality to an already dedicated group and our fine Executive Director, Keith Carson. Our focus will continue to be on our monitoring activities as well as carefully watching the National Forest administrators as they consider some management strategies uses of the areas contiguous to the landowners, which may not be in the River's best interest. The declining population of fish in the river and the continuing discovery of pan fish with sores and injury are additional serious concerns which we shall address. See you on the River!

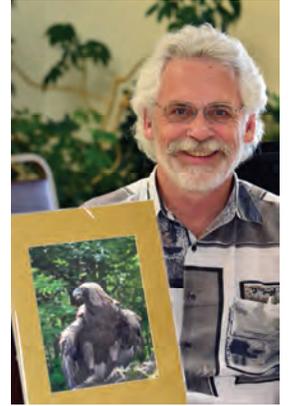


*John Fowler and Mary Sanders' Maranon Farm is the site of this year's Summer Picnic and River Day on Saturday, August 17. Join us for some good eatin', good fellowship and good fun! See page 15 for registration details. See you there!*



## Executive Director Update

Spring and summer have been busy so far this year with the spring cleanup at the Walton Tract in April, the Annual Meeting in May, a rain barrel workshop at Dabney Lancaster in May, river monitoring and the US Forest Service public meetings on the Lower Cowpasture Restoration Project. Fortunately, I still found some time to continue my exploration of the sources of the Cowpasture River and its tributaries. Recently, I have been hiking into the George Washington National Forest in eastern Highland County to see the upper reaches of Shaws Fork. The Bullpasture River and Shaws Fork are the two main tributaries of the Cowpasture River. In June I had the opportunity to hike over Shaws Ridge and come down the eastern slope into Grassy Field Hollow, where a beautiful stream courses through a fern-filled bottom before joining the upper part of Shaws Fork.



*This cool, rocky stream coursed through a narrow hollow and was shaded by tall hemlock, white pine and tulip poplar trees, as well as black gum and a variety of understory trees. Christmas fern, ostrich fern, hog peanut and a variety of woodland wildflowers carpeted the ground adjacent to the stream.*

## Upcoming Events

**CRPA Summer Picnic**, Saturday, August 17, 2-8 PM, John Fowler and Mary Sanders' Maranon Farm  
(see page 15 for Picnic Registration information)

**US Forest Service Public Meeting on the Lower Cowpasture Restoration Project**  
Monday, September 16, 6 PM, Millboro Elementary School, Millboro, VA

**9th Annual Freshwater Folk Festival**, White Sulphur Springs National Fish Hatchery,  
Saturday, October 5, 2013, 10 AM—4 PM, White Sulphur Springs, WV

**US Forest Service Public Meeting on the Lower Cowpasture Restoration Project**  
Monday, December 2, 6 PM, Allegheny County Government Complex, Low Moor, VA



## Annual Meeting (continued)



George Washington and Jefferson National Forest (GWJNF) District Ranger Patrick Sheridan was the featured speaker at the meeting. He talked about the history of the GWJNF, which was established in 1918. By this time most of the timber had been removed from the accessible parts of this land. The forest has been recovering since that time. With the exception of some remote areas that were not logged, the trees in the GWJNF are less than 100 years old. There is a new project in the planning stages called the Lower Cowpasture Restoration Project. The emphasis for the Lower Cowpasture Restoration Project is watershed restoration including water quality improvement, vegetation restoration, recreation management, and native species protection and habitat improvement. During the 2013 calendar year, the Forest Service will work collaboratively with the public and several partners to identify projects to incorporate into the Lower Cowpasture Project. A series of public workshops, fieldtrips, and discussions will

be held to identify projects that best meet the objectives of the Lower Cowpasture Restoration Project, and the revised George Washington Forest Plan. The project location is a diverse area with a wide range of natural resource opportunities. The Forest Service is currently generating a list of projects to implement in the near future to help move toward the desired conditions identified in the Revised Forest Plan. Public participation is strongly encouraged to discuss current projects, and to help identify additional projects for implementation. The Project Area is approximately 117,552 acres of which about 77,680 acres are National Forest System lands. The project area is located within the Cowpasture River, Jackson River, and the Calfpasture River watersheds in Bath and Alleghany Counties. The Forest Service began this year with a series of public workshops and field trips. Public Workshop dates are March 18, 2013 – Millboro Elementary School; Millboro, VA; May 20, 2013 – Alleghany County Governmental Complex, Clifton Forge, VA; July 15, 2013 – Millboro Elementary School, Millboro, VA; September 16, 2013 – Millboro Elementary School, Millboro, VA; December 2, 2013 – Alleghany County Governmental Complex, Clifton Forge, VA. Public field trips will be scheduled as well. One field trip was held on Friday, June 21. Projects currently being implemented in the project area include Warm Springs Mountain Restoration (prescribed fire), Mares Run Vegetation Management (timber management and wildlife improvements), and Wildfire Rehabilitation in the Rich Hole area. Potential projects include increasing prescribed fire as part of the Appalachian Fire Learning Network. There is an opportunity to expand the restoration area across this landscape in partnership with The Nature Conservancy (TNC) and Douthat State Park. Another project is the Wilson creek dam removal and culvert replacements to allow fish passage. Watershed improvement projects include repairing slope failures in the Simpson Creek drainage along the I-64 corridor. Proposed wildlife habitat improvement projects include wildlife clearing and waterhole development. Potential timber management projects include timber harvesting and timber stand improvements. Invasive Species management projects include invasive plant management activities along forest system roads, in forested stands, and the Walton Tract. Potential transportation management projects include maintenance of existing roads, decommissioning roads, blocking unauthorized roads, changing maintenance levels, and placing seasonal use restrictions on some roads. Under recreation, projects include invasive plant management activities, developing better public access to Rough Mountain Wilderness, and construct/improve connector trail segments with Douthat State Park trails. Several CRPA Board members and other interested individuals have attended these meetings and will continue to do so through the year.

## Bay Foundation and EPA Agree To Farm Pact

The Chesapeake Bay Foundation and the Environmental Protection Agency announced an agreement in June to ensure that dairy farms, poultry growers and other farm animal operations are on track to reduce pollution flowing into the bay. The foundation said the agreement is intended to ensure that the multistate, EPA mandated restoration of the Chesapeake Bay is achieved by 2025. The multipart plan is designed to achieve compliance with measures that reduce entry of manure and other pollutants into streams that ultimately feed into the bay. The plan includes strategies such as fencing to keep cattle from fouling stream waters and management plans for livestock feeding operations where manure accumulates. Well-managed farms are a key to protecting water quality. Agriculture is currently the largest source of nutrient pollution in streams that feed the bay according to the Chesapeake Bay Foundation. The Bay Restoration Plan involves 6 states and the District of Columbia, including Virginia, West Virginia, Maryland, Pennsylvania, Delaware and New York. The EPA's plan is also intended to limit pollution from urban landscapes, sewage plants and other sources. Nutrient and sediment pollution lead to oxygen-depleting algae blooms and increased turbidity that can cloud water and bury underwater grasses, oysters, and other species. Pollution of the bay has created vast dead zones in the bay and decimated blue crab and oyster stocks. This agreement stems from the settlement of the Chesapeake Bay Foundation's 2010 lawsuit to compel states to reduce pollution in their streams and rivers.

On the following two pages is an excerpt from the Chesapeake Bay Foundation's smallmouth bass study. The complete report can be read on their website, [www.cbf.org](http://www.cbf.org).

The thousands of rivers and streams in six states and the District of Columbia that drain into the Chesapeake Bay are like the complex network of arteries and capillaries that nourish a living body. When the Chesapeake's tributaries are troubled, the Bay suffers too. A ripple effect spreads throughout the ecology and economy of the entire 64,000-square mile Chesapeake Bay watershed. Over the last decade, one of the most prized freshwater sport-fish species—smallmouth bass—has suffered fish kills and perplexing illnesses in several Bay tributaries. These tributary rivers include the South Branch of the Potomac River in West Virginia, the Shenandoah and Cowpasture Rivers in Virginia, the Monocacy River in Maryland, and the Susquehanna River in Pennsylvania. Problems with the fish have included lesions, blotchy skin, wart-like growths, excessive mucus covering their bodies, lethargic behavior, and abnormal sexual development in which males grow eggs in their testes.

In the Susquehanna River, smallmouth bass populations have plummeted, with catch rates of adults falling 80 percent between 2001 and 2005 in some areas. According to the Pennsylvania Fish and Boat Commission, the population has not recovered. In 2012, this dramatic decline prompted the state agency to impose emergency regulations that prohibit fishing for the species in much of the river from May 1 to June 15. This ban in the Susquehanna River—the largest source of fresh water to the Chesapeake Bay—will continue in 2013. Smallmouth bass do not tolerate pollution well. Thus, they are an indicator of water quality. While the specific causes of the deaths and illnesses among smallmouth bass remain unclear, leading fisheries biologists studying the problem believe that a “perfect storm” of contributing factors has overwhelmed a sensitive species. In fact, some suggest that smallmouth bass may be like a “canary in the coal mine,” indicating possible future health problems with other species of fish. High levels of nitrogen and phosphorus pollution, rising water temperatures, and chemical contaminants may have combined to weaken the immune systems of smallmouth bass and make them more susceptible to naturally occurring bacteria, viruses, and parasites. Nitrogen and phosphorus pollution contribute to a “perfect storm” of problems that are killing smallmouth bass.

The Chesapeake Bay Foundation (CBF) compiled this report by interviewing five leading smallmouth bass experts and examining peer-reviewed journal articles, as well as reports from federal and state agencies. Some conclusions from the report include the following. Fishing for the species is responsible for \$630 million annually in sales in Pennsylvania, Maryland, Virginia, and West Virginia, the four Bay states where fish kills and diseases have occurred. Sales of boats, fishing rods, and more contribute to that figure. Additionally, smallmouth bass are responsible for \$193 million annually in salaries and wages for about 5,700 people employed in fishing-related jobs and \$41 million in state and local tax revenues. Phosphorus and nitrogen pollution levels are high in many of the river segments where fish have died or become sick. In the Susquehanna River and tributaries, average phosphorus pollution levels in 12 of 24 sites monitored by the U.S. Geological Survey between 2007 and 2011 were among the worst in the Chesapeake Bay watershed. Eleven of these 24 sites had total nitrogen pollution levels that were among the worst in the region. (“Worst” is defined as ranking in the top third for levels of these pollutants among 65 sites studied in the Bay watershed). Some monitoring sites along the Monocacy River and the Potomac River and its tributaries also registered high levels of these pollutants.

Scientists believe that nitrogen and phosphorus pollution may be contributing to fish deaths and diseases in two ways. The first is by spurring the growth of parasites (myxozoans and trematodes) and their hosts (worms and snails). The second is by feeding algal blooms that raise pH levels and lower oxygen concentrations, stressing young smallmouth bass. Dr. Vicki Blazer, Research Fisheries Biologist with the U.S. Geological Survey, and colleagues recently identified a type of parasite (*Myxobolus inornatus*) in juvenile smallmouth bass that have been dying in the Susquehanna River. This parasite is similar to one that causes a deadly disease in trout. The parasite's possible host (a bottom-dwelling worm) may be encouraged by nitrogen and phosphorus pollution. While more study into the causes of the fish kills and illnesses is required, one fact is clear. To restore populations of smallmouth bass, as well as the health of the Chesapeake Bay and its rivers and streams, we must reduce nitrogen and phosphorus pollution. Of the myriad of contributing factors, this is one factor that people can easily control. And addressing the problem will help sustain the economic benefits of smallmouth bass. Cutting back nitrogen and phosphorus pollution will help reduce stress on smallmouth bass and other fish. Reducing pollution will also further efforts the Bay states—New York, Pennsylvania, Maryland, Delaware, Virginia, and West Virginia—and the District of Columbia are making to meet mandatory limits on pollution entering the Chesapeake Bay. In 2010, EPA established science-based limits for nitrogen, phosphorus, and sediment pollution and allocated reduction targets to each state. The states then developed and now are beginning to put into effect plans that should significantly improve water quality in streams and rivers that flow into the bay. The plans must be in place by 2025. Together the limits and the states' plans are the Clean Water Blueprint for the Chesapeake and its rivers and streams. The Bay states are making good progress already. But the story of the smallmouth bass reminds us that the job is far from done.

## Smallmouth Bass Report (continued)

The good news is that as we accelerate implementation of the Blueprint, we can expect healthier fishing and swimming, the creation of thousands of jobs, and a proud legacy of restoration for our children and grandchildren. Truly, we find ourselves at the moment in time for the Bay. Scientists first observed the string of health problems with smallmouth bass in 2002 in the South Branch of the Potomac River in West Virginia. Numerous smallmouth bass and fish of other species were reported dead, many with lesions. The exact cause remains unknown. “There were fish dead for almost 80 miles—more than we could count, many thousands,” said Jim Hedrick, District Fisheries Biologist for the West Virginia Department of Natural Resources. “Remember, this water eventually flows into the Chesapeake Bay. And so if something is toxic here, then ultimately it goes to the Bay.” Chronic, low-level mortality of smallmouth bass continued in the South Branch of the Potomac River for the next several years, with another major fish kill in the spring of 2005. In 2004, deaths and lesions spread to smallmouth bass in another Potomac River tributary, the North Fork of the Shenandoah River in Virginia, hitting the entire length of the river. The next year, fish died along 100 miles of the South Fork of the Shenandoah, and sporadically on the river’s main stem. Anglers and professional fishing guides estimated that up to 90 percent of the adult smallmouth were eliminated from parts of these rivers during those two years. In 2007, 2008, and 2009, deaths of fish were also reported in the Cowpasture River, a tributary to the James River.

### THE REBOUND OF SMALLMOUTH BASS IN THE SHENANDOAH RIVER

Early in his career, Jeff Kelble worked for a software training company. But he often found himself playing hooky, forwarding calls to his cell phone—in what he jokes was his real “office,” out on the river. “The rivers in the Mid-Atlantic are, in my opinion, the best rivers in the world for smallmouth bass fishing,” Kelble said, as he rowed down the Shenandoah River on a recent afternoon, about an hour-and-a-half west of Washington, D.C. Kelble picked up his rod and cast into the stunningly beautiful river, which flows through Virginia and West Virginia into the Potomac River. The water was green and smooth. The banks were lined with the white trunks of sycamores. And the sun was like a silvery quarter burning a halo in the overcast sky. As he fished, he explained that he left the computer business to become a full-time fishing guide in 1998. He’s 41 years old now. But fishing has been the center of his identity since he was a child. “I think I’ve made everybody in my life fish with me, including my wife and all my friends,” said Kelble, as he reeled in his line. In 2003, he and his wife moved from suburban Washington to the tiny town of Boyce, Virginia, in the Shenandoah Valley to open up a bed and breakfast. The plan was to rent rooms to clients in his fishing-guide business. But after back-breaking work renovating a century-old house to create the B & B, at just the time his wife, Erica, was pregnant—most of the smallmouth bass in the river suddenly died. “In some parts of the river, I estimate we lost 90 percent of the fish,” Kelble said. “That was the end of fishing in the Shenandoah Valley for years.” Kelble said he thought about selling their new home and moving away. But instead, he switched careers again, becoming a crusader for the river. He established a nonprofit organization called Shenandoah Riverkeeper. In this capacity, he now patrols the water, educates the community, and advocates for stronger government controls on pollution. “I don’t use the word activist here...or environmentalist,” Kelble said, laughing. “But I started my career in conservation. And I really am a conservationist at heart, always have been.” For years, two chicken slaughter houses in the Shenandoah Valley released tons of waste into the river. Kelble filed a notice of intent to sue the owner of the plant that handled the waste. Kelble’s legal action prompted Virginia to force the plant to cut its nitrogen and phosphorus pollution by 95 percent, according to the Virginia Department of Environmental Quality. The result has been an almost 100,000-pound annual reduction of these pollutants contaminating an important Chesapeake Bay tributary, according to state figures. The smallmouth bass populations in the river rebounded, although the reasons are not clear. The increase may have been caused in part by favorable rain conditions in the spring that helped the survival of young fish, according to the Virginia Department of Game and Inland Fisheries. “The population of adult smallmouth bass in the Shenandoah River right now, coming through 2012, is as good as it’s been in the last 15 years,” said Stephen J. Reeser, District Fisheries Biologist with the state agency. Despite the reduction in pollution and the comeback of the fish, the river is still in trouble, in many ways. Large algal blooms, fed by nitrogen and phosphorus pollution from many sources, smother the river at times in the hot months. And many male smallmouth bass have unexplained sexual abnormalities. “The things that are causing our male fish to grow eggs in their testes?” Kelble asked. “Think about it. This is the same water we are drinking.”

## What A Great Summer For Floating!



*This wide and placid section of the Cowpasture River made for ideal floating conditions in early June when several CRPA members floated from the Evans tract on McKinney Hollow Road down to the Rt. 220 bridge over the James River near Iron Gate. From left to right are Ellen Ford, Lucius Bracey, Bill Hardbarger and Joe Wood.*

*Later in June a group of 18 CRPA members floated from McGuire Landing to Bracey Point. The water level was lower and several kayaks scraped bottom in some places, but a great time was had by all including Joe Wood, Kent Ford, Pam Bracey, Lucius Bracey and three folks in the background that I could not identify.*



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## Spring River Cleanup Volunteers Enjoy Day At Walton Tract



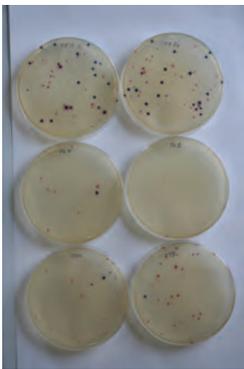
*Nice weather and comfortable temperatures made for a lovely day on the river for the 8 volunteers who turned out on April 14 for the Spring Cleanup at the Walton Tract. Left to right are Keith Carson, Puggy Farmer, Kathy Wood, Lee Taplinger, Polly Newlon (seated in front), Roger Baroody, Chip Snead and Cynthia Baroody. After gathering 10 bags of trash the group took time to chat and enjoy refreshments.*

# Health Matters: Expanded Monitoring Program Marks One Year

By Polly Newlon, Project Director

Thanks to the diligence and dedication of 28 volunteers, including 7 of those taking responsibility as station managers, the CRPA now has a full year of data on bacterial and benthic macroinvertebrate health for seven monitoring stations within the watershed. In three cases, multiple sites within a station have been sampled for bacteria in areas where a confluence with tributaries allows for more detailed analysis of a location. This is true in McDowell, for example, where Crab Run enters the Bullpasture River and 3 samples are taken giving a picture above and below the confluence. Also in Highland County, the Liberty station allows sampling from the Cowpasture River and Shaw's Fork above and below where they meet. So, in total, samples from 12 sites are gathered monthly and tested for E. Coli by station managers using the Coliscan Easygel method. For quality control purposes, we've taken duplicate samples at each site to examine consistency in culture methods and counting. Here, we provide a summary of data and some examples of representative findings.

**Bacteria: No bugs are good bugs.** Bacterial levels from the Coliscan Easygel method are usually expressed as numbers of E. Coli colonies per 100 milliliters (ml) of water. A finding of zero is ideal, although with this method, on the low end of the scale, we are only able to say that concentrations are less than 20 colonies/100 ml. since we take a 5 ml sample and multiple the count by 20 to get to the standard reporting metric. For purposes of safety, the VA Department of Environmental Quality has set a concentration of 265 colonies/100 ml as an upper limit of safety for recreational purposes such as swimming. Bacterial levels in rural streams such as the CpR vary throughout the year based on many factors including rainfall and water level (e.g. overwash of fields), water temperature, local wildlife and domesticated animal concentrations, inputs from springs that provide dilution, ultraviolet light exposure of the



stream, and biological processes in the banks and stream that take up and use the bacteria, among other variables. Since the CRPA began bacterial monitoring several years ago, the river has shown to have low levels of bacteria with transient increases on occasion. The new data generally support previous findings including the newly added sites. With the duplicate measures, a total of 284 samples were taken and analyzed by volunteers from July, 2012 through June of 2013. Of these, the safety limit was exceeded on a total of nine occasions. Six of these were from samples taken on the Bullpasture River, a major tributary of the CpR. On the northern end of the Bullpasture, near McDowell, there were many instances in the spring and summer months in which levels either exceeded or approached the safety limit. The majority of the Cowpasture samples had low bacterial concentrations although there were some transient but substantial increases seen, as shown on page 9.

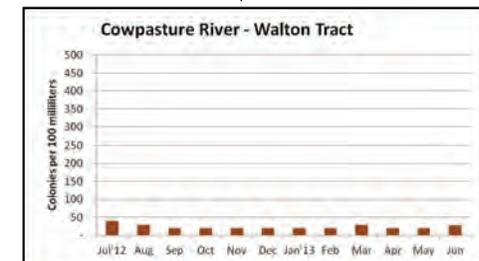
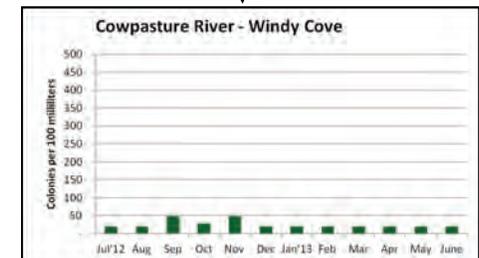
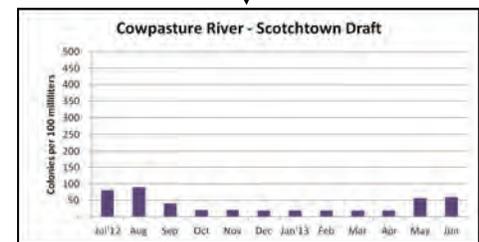
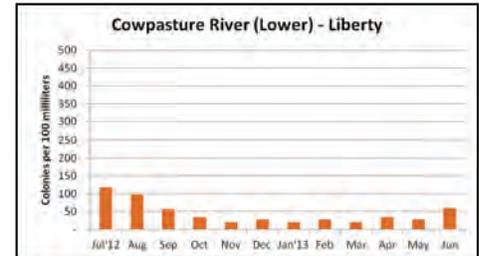
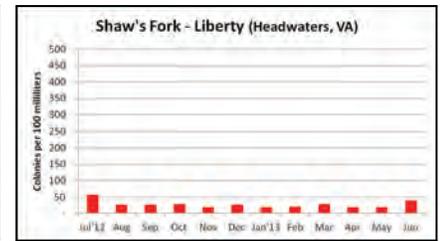
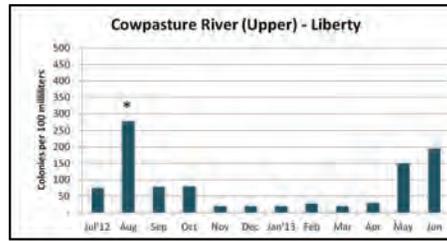
**Macroinvertebrates: The Good bugs.** Benthic macroinvertebrates are assessed quarterly by groups of volunteers, including at least one Save-Our-Streams certified monitor for each session. The data collected over the past year are presented in Table 1, page 10. These biological assessments of the animals living amongst the stream bed cobbles provide a longer term look at the health of the river than a single water sample. In this effort, CRPA members and members of the Alleghany Highlands Chapter of the Virginia Master Naturalists have lent a hand at several sites, along with several nonmember volunteers who simply want to help. The CRPA depends greatly on citizens with an interest in the health of the local waterways and the CRPA program is a model for other groups in the region interested in monitoring our mountain headwaters.



**New Stuff.** Additional monthly measures since June include conductivity, pH, and nutrients such as nitrate and phosphate. Tests on samples are run by the project director, and dissolved oxygen will soon be added. Repeated measures over time are most useful so that normal ranges can be developed and trends analyzed. Chemistry and bacterial sampling only tell what is happening in the river at that instant and so repeated sampling is necessary to enhance the value of the data. Having many types of measures helps to gain the most complete overall picture of stream health. Stay tuned for a report on these data in an upcoming newsletter.

# Health Matters: Data Show Mostly Good News.

**Bacterial Results.** The Cowpasture River (CpR) is monitored for bacteria from Highland County (e.g. Liberty, right) southward to Alleghany County just above Sharon. The graphs show monthly concentrations of E. Coli found at each site sampled. The asterisk above a bar indicates that at least one sample value exceeded the DEQ's safety limit. Streams closer to the headwaters such as these are more vulnerable to bacterial contamination due to their smaller volumes in general. Measurements at a confluence, as are the data shown here at Liberty, provide valuable information. In this case, where Shaw's Fork and the CpR join, it is clear that the CpR is experiencing greater bacterial transients than Shaw's Fork though they are separated only by Shaw's ridge. The narrow hollows and steep slopes that dominate the topography of this mountain watershed lend themselves to small microenvironments with their own characteristics, demonstrating how important an understanding of what's happening in the tributaries can be. We can also see in the lower CpR graph (below the confluence) how the added water from Shaw's Fork acts to dilute the E. Coli concentrations coming from the CpR, showing how dynamic bacterial levels can be in mountain streams as they course along the watershed.



Moving south along the river, it is encouraging to see the results for Scotchtown Draft where the levels are quite low all year although some evidence of increased E. Coli is seen toward spring and summer months. This site is located only a few miles south of the DGIF's Coursey Spring Fish Culture Station where a new waste treatment facility has been in place for the last few years. Before a major renovation that included the new treatment plant, there was concern about Coursey's role in contributing to the bacterial load in this part of the river.

As the CpR runs through the Millboro Springs area and Windy Cove, bacterial levels are quite low and continue to be so when sampled 5 miles south at the Walton Tract. However, several miles south of Walton, into Alleghany County, we again begin to see bacterial elevations beyond a safe limit in the spring and summer months. During the fall and winter season, however, this area shows very clean waters from the standpoint of E. Coli even in the face of seasonal high water events that routinely occur during fall and winter storms or with snow melt. The data gathered from summer 2012, showing high bacterial levels don't seem to be due to high flow conditions and overflow of fields as it was a dry summer and the river levels remained quite low in general. As more data are collected over time, a relationship with flow can be examined.

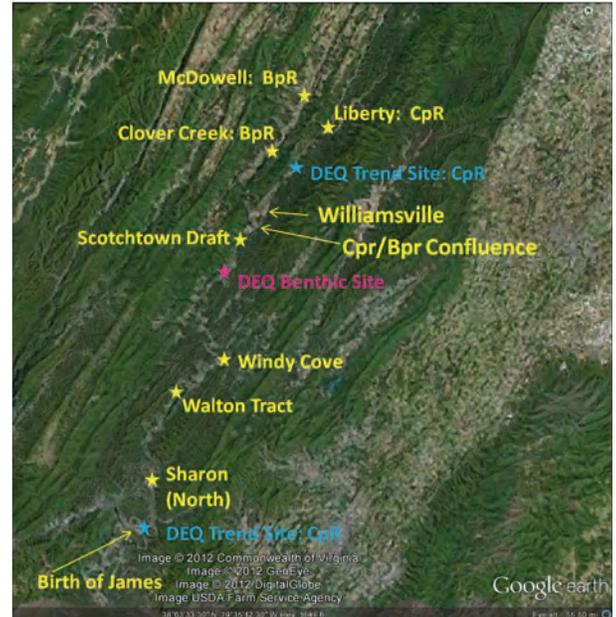
In summary, although we are not bacteria-free, aside from transient spikes, the river generally has low concentrations. The data are not shown here, but the Bullpasture River (BpR) at McDowell appears to be most problematic based on the bacterial data collected so far. The relatively clean pattern seen at Scotchtown Draft just downstream from the confluence of the Bull- and Cowpastures suggests that the BpR's problems may be dissipated by the time it joins the Cowpasture at Williamsville. That does not mean there aren't gains to be made in best management practices in the BpR watershed to benefit those living along its course.

## Health Matters: River Critters Continue to Thrive.

**Benthic Macroinvertebrate Findings.** Biological monitoring continues to show a healthy population of organisms residing in our shallow streambeds. Attempts are made to monitor at least quarterly, once a season. This has not always been possible due to weather, river conditions, and volunteer availability, but we have obtained a wealth of data over the past year. Results are reported in Table 1 below showing the “Multimetric Index” score developed by Dr. J. Reese Voshell, Jr. of Virginia Tech, in collaboration with the staff of Virginia’s Save-Our-Streams program. The index is arrived at by a number of mathematical calculations based on numbers and proportions of certain insect larva and other animals that are netted, identified, and counted under rigorous methods. Though scientific in nature, this method has been adapted to enable performance by volunteer water quality stewards working with nonprofit groups around the state.

With this method, the highest score achievable is a 12 and scores of 9--12 are considered “acceptable conditions” for a stream. Eight is considered indeterminate (borderline) and 7 or less are considered unacceptable biological conditions. The disappearance or abrupt reduction in presence of these animals and/or an overabundance of very pollution-tolerant animals is usually telltale that a major environmental event has negatively impacted the stream over a period of time between assessments. This could be a toxic (i.e. chemical) event, but could also be due to increased sediment, say from development activities upstream. Sediment can fill in the nooks and crannies among the stream cobbles in which the animals live, depriving them of adequate habitat. Also, anything affecting dissolved oxygen levels can impact these populations as many are quite oxygen dependent and, hence, found in abundance in riffle areas of the stream. However, these animals are not particularly susceptible to bacteria and their presence and proportions provide no information about bacterial contamination of the stream.

### Cowpasture Watershed: Monitoring Stations



*This Google Earth Map shows the monitoring stations the CRPA is using in its expansion program, as well as some of the existing DEQ sites monitored over the years. The majority of sampling sites, at least during this initial expansion, have been along the main stem of the Cowpasture and its primary tributary, the Bullpasture River. Going forward, additional sites that emerge as highly vulnerable to problems may be added as funding and/or staffing allow.*

**Table 1. CRPA Benthic Macroinvertebrate Monitoring Program - 2012 - 2013  
VA Save Our Streams Multimetric Indices for Seven Monitoring Stations**

Site	Summer '12	Fall '12	Winter '12-13	Spring '13	Summer '13
McDowell (BpR)	8	9	10	10	To Be Done
Clover Creek (BpR)	9	10	No Data	9	To Be Done
Liberty	No Data	10	11	11	To Be Done
Scotchtown Draft	10	10	9	12	To Be Done
Windy Cove	No Data	10	10	No Data	To Be Done
Walton Tract	8	10	11	11	To Be Done
Upper Sharon	11	11	11	10	11

**Want to help? Contact Polly Newlon at [keeperclean@gmail.com](mailto:keeperclean@gmail.com) or call 540.474.2858.**

# People Matter: Welcome.... Thank You....

*Welcome to our family and THANKS from all of us to all of you for your generous support! Listed below are new memberships and contributions received after March 26, 2013 plus some folks who were left off the list in the Spring newsletter.*

## Bedrock Patrons

Stewart and Lissy Bryan  
Cowpasture Camp Incorporated  
Cleve and Barbara McGehee  
Tim and Lynn Pistell

## Wallawhatoola Society

Roger and Cynthia Baroody  
Bill Jones and Lee Elliott  
Bob and Ann Howe Hilton  
Charles and Fleming Lunsford

## Watershed Stewards

Dick and Glovie Lynn  
Read Lunsford

## Headwaters Circle

W.G. and Maxine Anderson  
Keturah Bracey and Jay Horine  
John DeVenny  
Billy and Susan Frank  
Leighton and Pinky Houck  
Norwood and Susan Morrison

## Headwaters Circle (continued)

Merrill Pasco  
Dave and Sandra Peters  
James and Sarah Redington  
Martha Rule

## River Guardians

Pete and Alice Buck  
Mike and Shirley Cunningham  
Larry and Nora Denius  
Carol Reese Hardbarger  
Michael Jamison  
Rachel Johnson  
Cindy Kane & John Schmerfeld  
Nan Mahone & Bill Wellborn  
Jeff and Kim Mollohan  
Terry King & Family  
Margaret Ruggles  
Bill and Eleanor Washburn  
Robert C. Watts, III

## Members

Caroline Bott  
Julia Bradley  
Christina Farmer  
John Fowler and Mary Sanders  
Jim and Bonnie Fitzgerald  
Ell Gordon  
Channing M. Hall III  
J. Lesslie Hall III

## Members (continued)

Dimmitt Houff  
Dee and Tom Lobe  
Everette Mays  
Keven and Cindy Rice  
Dorothy L. Sinsheimer  
Elizabeth Van Lear

## Welcome New Members!

Annette Kirby  
Liz Van Lear  
Patricia Savage

## In Memorium:

*Joan "Jody" Gallagher Higgins*  
William and Betsey Satterfield

*Jimmy Houff*  
Lucius and Pam Bracey

**A new way to give!**  
Now you can pay dues or make a gift online at [www.cowpastureriver.org](http://www.cowpastureriver.org). Just go to "donate" and find the way you'd like to give.

Did we get it wrong? We're sorry for any errors or omissions in this list. We are happy to correct errors.

Email [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com)  
or call 540-474-2858

## A Special Thank You To

*Lizzie Biggs, Dave Peters and Robin Wood*

*On behalf of the Board and the entire membership, I would like to thank our three departing board members. These individuals have brought a huge amount of expertise, knowledge, and energy to the board over their years of service. Each comes from a different walk of life and has brought wisdom to the variety of activities in which the organization engages. Lizzie served as Treasurer and water quality monitor and will continue to serve us as Director of Finance. Dave worked on the scholarship committee and continues to be very active in river monitoring. Robin was one of our legal consultants and helped revise the By-Laws. If an organization is to be judged by the commitment of its board members, the CRPA is truly fortunate in this regard.*

*Keith Carson, Executive Director*

*Members - Haven't yet served on the board? Please consider it!*

# People Matter: New Board Prepares for the Coming Year

*At the Annual Business Meeting on May 4th, the CRPA membership elected, by acclamation, the proposed slate of five new directors to the board: Caryl Cowden, Monroe Farmer, Stewart Hobbs, Anne McVey, and Nelson Hoy. In addition, current Board members John Fowler and Bill Jones were approved for their second three-year term. At their Board meeting June 9th, at the home of Joe and Kathy Wood, the Board of Directors elected John Fowler President, Lou Robinson Vice-President, Mike Whiteside Secretary and Dick Lynn Treasurer. Elizabeth Biggs was appointed Director of Finance.*

## New Members of the CRPA Board of Directors

**Caryl Cowden.** Caryl was born and raised in Dayton, Ohio graduated from Miami University and worked at Winters Bank until she and her husband, John, moved to Fort Lewis Farm in Bath County in 1978. Her early years there were spent helping run the beef cattle and grain operation, restoring the original Lewis Manor house, and raising three children. Since 1988 her time has been dominated by creating and operating Fort Lewis Lodge, a Country Inn, which has treated guests to numerous outdoor activities including fishing and swimming in the pristine waters of the Cowpasture River for many years. Living and working on the Cowpasture has given her a true life time experience in finance, restaurant management, farm management and environmental issues.

**Monroe "Puggy" Farmer.** Puggy was born in Richmond, Virginia. He is a retired Doctor of Optometry and Army officer. He and his wife, Kathy, have been married for 37 years and they have two children, Christy and Bobby. Puggy is a river monitor at the Upper Sharon station and he is currently enrolled in the forestry degree program at Dabney S. Lancaster Community College.



*New members of the Board of Directors include (left to right): Anne McVey, Caryl Cowden, Monroe Farmer, Nelson Hoy, and Stewart Hobbs.*

**Stewart Hobbs.** Stewart is a long-time member of the Lynchburg Camps and a retired airline pilot. He and his wife Brenda live in Lynchburg.

**Nelson Hoy.** Nelson joined the CRPA about seven years ago. He is a rancher with a grass-fed Red Poll cow, calf, and steer operation along the Cowpasture River, and a forester with an award-winning white pine and oak sustained yield program. Berriedale Farms is arguably the first family farm in the United States to operate under a conservation easement for land use, water quality and heritage livestock breeds. Berriedale Farms protects over 12,000 feet of the Cowpasture River and its tributaries with riparian buffers. Nelson serves as a CRPA water quality monitor. Nelson has 10 years of experience as the director of technology exchange programs for local governments nation-wide. Nelson holds a master's degree in business administration, a bachelor's degree in the environmental sciences and forestry, and a reserve officer's commission in topographic engineering, mapping and surveying.

**Congratulations New Officers!**  
**June 9, 2013— June 1, 2014**

**President: John Fowler**

**Vice President: Lou Robinson**

**Secretary: Mike Whiteside**

**Treasurer: Dick Lynn**

**Anne McVey.** Anne was born April 29, 1967 in Virginia Beach to Frances and George Phillips of Old Camp Farm near Millboro Springs. She went to Cape Henry Collegiate school and then graduated from Garrison Forest School in 1985. Anne spent time as a counselor at Camp Mont Shenandoah. In 1989 she graduated from Randolph-Macon Woman's College. She married Jim McVey of Richmond in 1991 and they have three children, Harrison, 18, Lawson, 16, and Sheppard 10. She is very active in her children's school organizations in Richmond serving on the Parents Council at both schools. In Bath County, her pastimes are tennis, fishing, and dangling her toes in the Cowpasture River.

## Education Matters: Scholarships go to another great group!

The CRPA recently awarded two scholarships to high school graduates from Allegheny High School and Bath County High Schools. There was no complete application from Highland High School this year. Since there were just two scholarships awarded this year, the CRPA Board voted to split the budgeted \$1500 between the two highly qualified students, so this year's scholarships were for \$750 each. CRPA works in conjunction with the scholarship programs of the three public schools in our area. Applications are forwarded to CRPA by the schools and reviewed by CRPA's Education Committee chaired by Christie Hardbarger. Below, we are proud to present this year's CRPA Scholarship winners.



### Allegheny High School — Emma Marie Rothe



*Emma Marie Rothe moved to Allegheny County from Jacksonville, Florida when she was four years old. She wrote in her application, "I grew to love this beautiful area. My childhood was full of playing outside and adventuring for hours with all the kids in my Clifton Forge neighborhood. As I got older, I grew to enjoy hiking in the mountains, exploring waterfalls, boating at Douthat and Lake Moomaw, kayaking and canoeing on the beautiful rivers, as well as caving. The Cowpasture River has always been my favorite river to kayak because it is the cleanest and most scenic river in this area." Emma had an overall GPA of 3.5. She participated in several extracurricular activities in high school including Key Club, Pep Club, Varsity Basketball, Tennis, Swim Team, Dance at Garlynda's Fancy Feet, and volunteered at a local nursing home. Partly as a result of her love of nature inspired by the Allegheny Highlands, Emma plans to study biology at James Madison University or George Mason University. She adds, "I hope to work in a lab for part of my career and then eventually become a biology professor at a university. I also wish to travel to places of special significance to biologists such as the Galapagos Islands."*



### Bath County High School — Laura Paxton Haney



*Laura Paxton Haney graduated from Bath County High School ranked third in her class of 55 seniors, with a 4.29 GPA. In her essay she talks about her interest in nature. "I want to preserve the beauty of our earth for future generations. I have been passionate about the environment since sixth grade when I began attending Nature Camp during the summer. The Warm Springs Garden Club encouraged me to attend Nature Camp by offering me a scholarship. Bath County, with all its natural wonders, has inspired my interest in the environment." Laura's list of extracurricular activities in high school is extensive including band for 4 years, soccer (team captain) for 4 years, cross country team for 4 years, scholastic bowl (team captain) for 4 years, and Destination Imagination team for 4 years. The DI team advanced to the Global Finals in 2011. Laura volunteered at several local charitable organizations and events including the food pantry, Christmas Mother program, church youth group, Relay for Life, and also sang in her church choir. "I hope that one day I will return to Bath County and it will be just as beautiful as it is today. I want to use my education in environmental science to make the entire world as clean and beautiful as it is here." Laura plans to attend Randolph-Macon College.*

**Note to Members:** Thanks to all members who encouraged friends and family members to participate. Application takes place each spring through the individual schools' scholarship programs. Know a rising senior that loves nature and/or the river? Remember this program next spring! Contact the CRPA or your local high school's guidance department for information.

## 40<sup>th</sup> Anniversary Commemorative Merchandise Will Be Available At the Summer Picnic



**T-Shirts  
100% Cotton  
Available  
in  
Green or Blue**

**\$15 each  
(sm, med, lg, xl, 2xl)**



**Large All-Cotton Tote Bags \$15**



**Large Mugs (\$10 each)**

Merchandise is also available throughout the year from Keith Carson and can be shipped to the address of your choice. Contact Keith by email at [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com) or phone 540-474-2858

# *It's Time for the Annual Riverside Picnic!!*

**When: Saturday, August 17, 2012**

2:00 to 5 pm — Wade, float, swim & socialize

5:00 pm — Dinner Served



**Where: John Fowler and Mary Sanders' Maranon Farm**

From Clifton Forge take Rt. 42 north, 6.7 miles past I-64 and turn left at the large Elk's Youth Camp sign (Indian Hill Road). From Millboro Springs take Rt. 42 south 9.8 miles and turn right at the Elk's Youth Camp sign (Indian Hill Road). Once you are on Indian Hill Road continue one mile to Box 631 with the brick gate posts and wrought iron gates. Go through the gate and follow the signs to the parking area near the river.

**Activities:** Swimming hole/canoes and kayaks will be in the water ready to use/possible 1.5 hr float down from the Lynchburg Camps to Maranon Farm starting 3 PM (contact Keith if you are interested)

**Eats:** Hot dogs, hamburgers (courtesy of grillmeister Joe Wood) and beverages will be provided

**Bring:** A side dish or dessert to share, lawn chairs, family and friends, wading/swimming/floating togs and gear

**Cost:** Adults \$10, Children 12 and under \$5\*\*

**Questions?** Contact Keith Carson, 540-474-2858 or [directorcrpa@gmail.com](mailto:directorcrpa@gmail.com)

**\*\* You can pay on site, but please let us know you're coming asap. We need a head count by Monday, August 12.**

**Register NOW!\*\***

## Riverside Picnic Reservation Form

Send this form with your check to CRPA, P.O. Box 215, Millboro, VA 24460 before August 10

# Adults \_\_\_\_\_ @ \$10      # Children \_\_\_\_\_ @ \$5      Total \$ \_\_\_\_\_

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_      Email \_\_\_\_\_

**Are you a friend of the river? Maybe it's time to JOIN CRPA! Do you know someone who loves the river, but is not a member of CRPA? Invite them to join!**

- \$20 Individual (minimum annual membership donation)
- \$50 River Guardian
- \$100 Headwaters Circle
- \$250 Watershed Steward  Other amount \_\_\_\_\_
- \$500 Wallawhatoola Society
- >\$500 Bedrock Patron
- Junior Membership(s): 15 years and under; Cost—4 hrs./year volunteer service

NAME(S) As You Want Them Published

ADDRESS

CITY — STATE — ZIP

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E-MAIL

- I prefer not to have my name published as a donor  I am interested in becoming a volunteer river monitor
- I want to help save valuable resources, please send my newsletter by email



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Millboro, VA 24460



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