

THE RIVER RUNS

News from the Cowpasture River Preservation Association

CRPA Summer Picnic at Lunsford's Landing

By Keith Carson, Editor



Kent Ford, Jo Ann Carter Gideons, Kathy Wood and Joanne's grandson (left to right) enjoy Read and Bruce Lunsford's beautiful riverfront site.



CRPA members and guests crowd the chow line eager to fill up on the hamburgers and hot dogs grilled to perfection by Joe Wood and Chip Snead.

Also In This Issue

- Picnic Highlights
- From the President
- Executive Director's Update
- Nature Note
- Events
- Fall River Cleanup
- What Matters!

People:

- Thank YOU
- Welcome
- Farewells

Health:

- Water Quality Report

- New Merchandise!



It was a food free-for-all in the serving line as Peggy and Fred Paxton, Pam Bracey, along with Mike and Marla Whiteside dug into the side dishes to fill their plates. Story and more picnic photos on page 4.

CRPA

P.O. Box 215
Millboro, VA 24460
www.cowpastureriver.org

Board of Directors:
2012-2013

Officers:

Joe Wood, President
540-862-9408

Lou Robinson, Vice-President
703-356-9030

Michael Whiteside, Secretary

Elizabeth Biggs, Treasurer

Directors:

Ann Batley

John Fowler

William Hardbarger

William Jones

Read Lunsford

Richard Lynn

David Peters

George Snead, Jr.

Robin Wood

Staff:

Keith Carson

Executive Director and Editor

directorcrpa@gmail.com

540-474-2858

Polly Newlon

Project Director, Water Quality

keepherclean@gmail.com

From the President

As the 40th anniversary of the founding of the CRPA draws to a close, we once again reflect on the importance of this organization. We acknowledge the many folks who have made the objectives and goals of the CRPA a reality. We managed to make it a year-long festival. We have celebrated our 40 successful years at our annual meeting, at our picnic at Lunsford Landing, at the river clean up at the Walton Tract, and at informal gatherings at our favorite river spots. At these events we have been able to reconnect with "old" river friends and make new ones too. But sadly we have had to say farewell to members, Jimmie Houff, Howard Newlon, and Dewey Holdaway. Many of us have already put our river "toys" away for the winter. We will have to make our fond memories of the Summer of 2012 carry us through the long winter months. Even though many of our thoughts and attentions will be consumed by non-river activities until warmer spring days return, we must continue to work to promote the health and welfare of our precious river. We hope to involve many of our members in our projects this winter and spring. There are plans in the works to sponsor a boater safety class, and rain barrel workshops in 2013. The expanded monitoring program will continue to develop and add volunteer monitors. In addition, our annual membership drive and fundraising campaign is now underway, so encourage your neighbors and friends to join our cause. Please let us know if you are interested in taking part in any of these activities. Its been another busy year for the CRPA. Lets make our next 40 years just as rewarding!



A hay meadow along the Cowpasture River in Highland County . Restoration of a riparian buffer along this stretch of the river would help keep the water temperature down, stabilize the river bank and filter nutrients and sediment out of the water before it enters the river.

Executive Director Update

The CRPA's 40th anniversary year will be recorded in the organization's annals as one of the more memorable years. The excellent historical program at the Annual Meeting reminded members of the exceptional efforts of those who started the CRPA as well as the hard work logged by many members on behalf of the CRPA over the years since 1972. Milestone events during those 40 years include documenting fish kills on the river to help gather data that the Virginia Department of Game and Inland Fisheries and fish biologists have used to understand the causes of these changes in the river's health. Another milestone is the water monitoring program pioneered by Rita Walters, Carolyn Beach, Dave Peters, Kent Ford and others. Yet another is the organized efforts of CRPA members that prevented construction of a dam near Griffith that would have changed the face of the Cowpasture River watershed forever. Just this year, another milestone was marked with the awarding of a grant to expand our river monitoring program. The additional data and the sampling of more river sites will significantly increase the CRPA's status among state waterway conservation organizations. Last, but by no means least, one of the remarkable characteristics of the CRPA has been the establishment and growth of a large community of river stewards covering over 70 miles of the Cowpasture and Bullpasture Rivers. This community is not only the eyes and ears of the CRPA, but is also a group of neighbors who step up to help each other when natural disasters or personal tragedies strike.



Nature Note

Witch Hazel (*Hamamelis virginiana*) is one of our few fall and winter blooming plants. Look for the thin yellow petals on small trees in our woodlands starting in late September after leaf fall. Also known as Winterbloom and Snapping Hazel, this tree has a very interesting story to tell. Its name does not come from the broom-riding witches of Halloween, but from the word "wych" an Anglo Saxon word meaning "pliable" or "bendable" and the root for our word "wicker." Twigs from this tree were preferred for "water witching" or dowsing by early European settlers. Those with the touch could find water, copper deposits, tin, coal and even lost household items. During flowering, the seed pods formed the previous spring and summer are ripening in preparation for releasing seeds. On fall days when conditions of temperature and humidity are right, the seed pods will "explode" or snap, ejecting two small black seeds several feet. Grouse and squirrels feed on these small "hazel nuts." Witch hazel liniment is still sold in drug stores today to treat minor skin irritations, cuts or abrasions. The oil for this liniment is distilled from the twigs of this fascinating tree.



Upcoming Events

Look for the following events and activities as they are scheduled in 2013:

Rain Barrel Workshops—Come learn about watershed protection and then finish your own rain barrel to take home and enjoy.

Boating Safety Class—In a few years the state will require all boaters to complete a boating safety class so get a head start and begin your training now.



Summer Picnic (continued)

Over 60 CRPA members and guests gathered under cloudy skies, Saturday, August 25 at Lunsford's Landing for the annual Summer Picnic. The clouds and cooler temperatures were a relief from the oppressive heat of early August, but the light rain that fell on diners dampened a bit of the enthusiasm for spending the evening relaxing by the river after dinner. Besides catching up with old friends and making new acquaintances, other entertainments included horseshoes, croquet and badminton. Some of the more adventurous folks in the group kayaked down to the picnic from the Nimrod Hall area and reported a most enjoyable float. The picnic was also the debut of the 40th Anniversary commemorative mugs. The rest of the new merchandise (see page 11) was also on hand and sales were brisk.



Read Lunsford, Lucius Bracey and Bruce Lunsford catch up on summer travels and activities while Roy Wright, Ann Wright and John Fowler relax and enjoy some tasty fare.



Badminton presented some challenges to those who had not whacked a birdie around in several years. Croquet balls and horseshoes also got a workout.



The towering trees at the river's edge provided a peaceful setting for everyone to sit and enjoy all the food and fellowship.



The old, hollow sycamore tree provided a perfect setting for picnickers to share stories of recent adventures on the river.

Fall River Cleanup: CRPA's Adoption of the Walton Tract Endures



Volunteers at the September 30th Walton Tract Cleanup take a break after trash picking to pile up the spoils from the day's work. Left to right are Keith Carson, Cynthia Baroody, Kathy Wood, Roger Baroody, Dave Peters, Otis Mead and Mike Whiteside. Ellen Ford stopped by when we arrived to let us know she had already cleaned up part of the target area before having to depart for another event. (Not shown, Polly Newlon, photographer)



As usual, the fall cleanup produced a large amount of trash left behind by summer campers. The pickers filled 16 bags and found several large items including 3 tires and some broken lawn chairs. The "most unusual" item was probably the bottle of sparkly green nail polish, while the "least fun to pick" items had to be the dozens of dirty disposable diapers discarded among the briars and brambles by some careless campers. When not stuffing trash bags, the pickers could enjoy views of fish drifting along in the clear water .

People Matter: Thank You and Welcome New Members

As the Annual Campaign gets rolling, we offer THANKS from the board and membership for your continued, generous support! This list includes dues and gifts received between July 20th and November 16th, 2012. We have high hopes for another record year of giving.

Bedrock Patrons

Tuck and Chris Carter
Cleve and Barbara McGehee

Wallawhatoola Society

Lou and Betty Robinson
Michael Wildasin
Ross Waller and Ann Huebner

Watershed Stewards

Cynthia and Roger Baroody
Allan and Becky Howerton
Otis Mead
Carson and Jeff Sullivan
Tom and Patti Watts

Headwaters Circle

Skip Cheseldine
Monroe and Kathy Farmer
Leighton and Pinky Houck
Dee and Tom Lobe
Charles and Linda Lunsford
Clifton Marshall
Todd and Ann Nugent
Martha Rule
The Sutton Families
Bill and Barbara Tavenner
Bob and Lee Tavenner
Camille Baudot Wheeler

River Guardians

Michael Jamison
Jon and Betsy Lasley
Lloyd and Elizabeth Lipscomb
Dr. Edward Metzger
Richard and Jean N. Miller
Fred and Peggy Paxton
Hallie Shires
Ben and Kay Wilkerson

Members

Richard Barnes
Gwendolyn Broce
Matt and Linda Cauley
Ryan and Barrett Saunders Divina
Jim and Bonnie Fitzgerald
Kathleen Gordon
Richard Hanlon
Susan Virginia Mead
Morgan Mead
Mellea Mead
Dan Miles
Michael Stolarz & Mary Curtis Mead Stolarz
Mead Stolarz
Turner Stolarz

In Memory of:

Joan "Jody" Gallagher Higgins
The Spatig Family

Jimmie Houff
Fred and Peggy Paxton
Lou and Betty Robinson

Howard Newlon
Fred and Peggy Paxton

Jack Woodson
Jean Howell

Welcome New Members!

Richard Hanlon, Charleston, WV
Jim and Bonnie Fitzgerald, Franklin, MA
Jon and Betsy Lasley, Millersville, MD
Dan Miles, Forest, VA

Another way to give!
Now you can pay dues or make a gift online at 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. It covers those donations received since the last newsletter and through 11/20/12. We are happy to correct errors.

Email directorcrpa@gmail.com
or call 540-474-2858

And Sad Farewells....

This summer, the CRPA lost devoted member, **Dewey E. Holdaway**, to a tragic accident on his farm in Bath County on August 22nd. He was 79 years old. Dewey loved the river and spent as much time as he could on the farm near Millboro that he co-owned with his nephew. Though commuting back and forth to Roanoke for years, he still managed to come to CRPA events, help with litter clean-ups, and attend training classes in river monitoring. An avid lover of nature, in 2010, Dewey received an award for his stewardship of the farm's forest lands. He was preceded in death by his wife, Margaret; parents, Dean and Gracie Holdaway; and brothers, Rex and Guy Holdaway. He was the owner/operator of Water Distributors and also worked at Nelson Roanoke Inc. and Ferguson Enterprises. He loved to hunt, fish, and share those moments with best friend, Alex Rhudy and nephews, Kent Sylvester and Gary Phillips.



Farewell to Dedicated Friends of the River

James Neff (Jimmie) Houff, Mayor of Clifton Forge and long time member of the CRPA, passed away in his home on October 19, 2012, surrounded by his family. Jimmie was born February 19, 1938, in the C&O Hospital in Clifton Forge, Virginia. He was the son of the late Dr. Louis A. Houff and Ethel Bartlett Houff. He attended Moody Elementary School and graduated in the Class of 1956 from Clifton Forge High School. Jimmie was a graduate of the University of Virginia, Class of 1962. While at UVA, he was a member of the Sigma Phi Epsilon fraternity. Jimmie's professional career was spent as a Supervisory Economist with the US Department of Labor, Bureau of Labor Statistics in Washington, DC. He retired in 1999 and returned to Clifton Forge in 2004 along with his wife, Dimmit and loyal schnauzer, Hokie. His community spirit quickly became evident. Jimmie was President of the Clifton Forge High School Alumni Association, member of the C&O Railway Heritage Center, member of the Alleghany Highlands Arts and Crafts Center, Secretary of the Clifton Forge Economic Development Corporation, member of the Elks, and member of the Clifton Forge Coffee Club. Jimmie served for six years on the board of the CRPA, spending several years as the vice president of the organization. He was well loved by the board and membership for his enthusiasm, steadfast resolve in making positive headway despite barriers, and was a model professional and a true gentleman. Jimmie was a member of St. Joseph's Catholic Church his entire life. He had many interests and truly loved his family and friends, baseball, and Clifton Forge. He was buried at Mountain View Cemetery in Clifton Forge.



Howard Hampton Newlon, Jr. died peacefully with family by his side on Thursday, October 25, 2012. He was born on January 16, 1932, in Brandy Station, Virginia, to Howard Hampton Newlon Sr. and Mary Burke Newlon. He received his bachelor's and master's degrees in civil engineering from the University of Virginia. Mr. Newlon's career started in the concrete lab of the Virginia Transportation Research Council in 1956 and ended with his retirement in 1989 as its Director of Research. In addition to his full-time position with the Research Council, he was, for more than 30 years, a Lecturer in the University of Virginia Schools of Engineering and Architecture. Mr. Newlon retired from teaching in 2003, 50 years after he walked the lawn for his own graduation. On the day of his last class, his graduate students painted "thanks for the schoolin' Professor Newlon" on Beta Bridge. His areas of expertise were bridges, concrete, and historic preservation. Professional associations included the American Concrete Institute, American Society of



Civil Engineers, American Society for Testing and Materials and he served two years in the United States Army in chemical weapons training. Howard was a member of the Rotary Club for over 40 years and a long time member of the Cowpasture River Preservation Association. Since arriving at the University of Virginia as an undergraduate, he has been an active member of University Baptist Church, serving as Church Historian and having written the church history "A People Called" in 2000 for the centennial celebration. The church also honored him with Deacon Emeritus and Sanctuary Choir Member Emeritus status. He is survived by his wife, Barbara Westerman Newlon, daughters, Nancy Gaines, her husband, Ray, and their children, Julie, Emily and Katherine, of Charlottesville, and Anne Doll, her husband, Jamie, and their children, Henry and Jack, of Arlington. He was buried at Monticello Memory Gardens.

Health Matters: Water Quality Data Flowing In

By Polly Newlon, Project Director

CRPA volunteers have been busy over the summer and into the fall season implementing expansion of the monitoring program. Following training sessions in both bacterial and benthic macroinvertebrate monitoring, held in June, August, and September, the expansion of these two methods to additional sites is up and running. Bacteria are being measured monthly at each of seven monitoring stations and “critter picking” takes place quarterly at those same sites. Also, eight team members have successfully obtained Virginia Save-Our-Streams (VA SOS) certification in biological monitoring using macroinvertebrate sampling. The CRPA is fortunate to have long-time volunteer Kent Ford, a certified SOS trainer, who can provide training and testing for the group. We have also enjoyed the benefits of a generous collaboration with other organizations such as the Upper James Resource Conservation and Development Council, the VA SOS, and the Izaak Walton League who have sponsored and/or participated in these training sessions. Certification is important because if a certified monitor oversees a macroinvertebrate sampling and analysis session, the data can be submitted to VA SOS who then submits them to the VA Dept. of Environmental Quality (DEQ). Certification assures a level of understanding and quality assurance in performance of standardized methods that is recognized by the state agencies. As the agencies continue to experience fiscal challenges, they are increasingly dependent on citizen efforts to assist in knowing the status of Virginia’s waterways. So the CRPA’s data are a critical part of the picture of Virginia’s streams and rivers. There are still many volunteers who have attended the required introductory training and are honing their identification skills for macroinvertebrates, so we anticipate more volunteers attaining certification over the next six months.

Congratulations and Thanks!

Team members who have successfully achieved certification by VA SOS.

Initial Certification:

*Polly Newlon, Project Director
Keith Carson, Executive Director
Liz Devenny, Site Manager, McDowell
Roger Baroody, Site Manager,
Walton Tract*

Recertification:

*Norm Bell, Site Manager,
Scotchtown Draft
Celia Rutt, Site Manager, Clover Creek
Sara Bell, Volunteer, Scotchtown Draft
Dave Peters, Volunteer,
Sharon*

Many Thanks...

go out to Ms. Leah Miller of VA Save-Our-Streams for providing an excellent introductory training session on macroinvertebrates in September.

We also thank George and Frances Phillips, who provided a most exquisite site for that training at Windy Cove.

This program would not be possible without the support of our generous and dedicated CRPA members.

In addition to these areas of expansion, several underwater temperature data loggers have been placed along the watershed that continuously monitor water temperature at hourly intervals. These loggers, some of which have been provided by the Dept. of Game and Inland Fisheries, have substantial memory and can record data for long periods of time. Data are periodically downloaded on-site using a portable, waterproof shuttle device. The data can then be transferred from the shuttle to the project director’s computer for analysis. Water temperature can be a critical indicator of stream health since water that is too warm inhibits or fails to support a variety of animals, including fish. Indeed, DEQ designation of highlands streams as “impaired” is often due to the temperature being too warm. This can happen when streams run through open fields without the advantage of adequate foliage to shade them from the sun. In addition, it is feared that climate change may further impact headwaters stream temperature having a potentially widespread impact on waterlife. So, the temperature data gathered today, including daily, monthly, and seasonal trends, may be important indicators of long term trends in the environment.

Preliminary Results

Bacterial Data. As reported previously, the CRPA program utilizes the Coliscan Easygel method of evaluating the concentrations of E. coli bacteria in the main stems of the Bull- and Cowpasture Rivers. This method is cost effective and easy to use. Care must be taken in sample collection and processing to assure high quality of the data,

Health Matters: Data Show the Good News and the Bad

but the methods are straight forward and relatively simple. CRPA site managers have been trained in how to take samples, incubate specimens, and count E. coli colonies. Samples are taken in the first week of each month. The counts are determined by taking two, five milliliter (ml) samples from the same spot in the stream and incubating each for at least 24 hours at a controlled temperature. After incubation, E. coli colonies appear in the petri dish as small, round dots that are either purple or very dark blue. Other bacterial colonies (not of interest at present) show up as different colors, pink or blue-green. The E. coli colonies are then counted for each petri dish. It is important to note that data obtained from the Easygel method are reported and graphed as colonies per 100 ml. Yet, the samples collected and placed in each petri dish cannot be more than 5 ml for the culture solution to work as it should. Therefore, the numbers of colonies counted in the dish are multiplied by 20 to get to a concentration in 100 ml, the standard for reporting. This method has some drawbacks. One issue is that for small numbers of colonies (a common finding in a clean river), the numbers can appear higher than they are. For example, a single colony found in a single petri dish with a 5 ml sample will be counted as 20 colonies/100 ml, even though 100 ml's were not actually collected. It is assumed that if a larger sample were taken, that the bacteria would be evenly distributed, a reasonable assumption for bacteria in water. Also, each bar on the graph represents a "geometric mean" or average of two samples. This is a routine math procedure used for bacterial cultures, but is calculated using square roots. Since one cannot have a square root of zero, another value must be substituted when zero E. coli colonies are found. This is usually a number just below the smallest number countable. In this case, the smallest number is one (you can't have 1/2 colony). So, there are no zero values shown on the graphs below. A bar at the 20 mark on the graph may only mean that 1 colony was found in one dish or that no colonies were found in either dish. Therefore, any bar in the graph at the 20 mark that represents 1 or 2 dishes with zero colonies, has been marked with an asterisk to provide that detail. This is simply the nature of the procedure, but has little effect on our ability to understand how contaminated the water is.

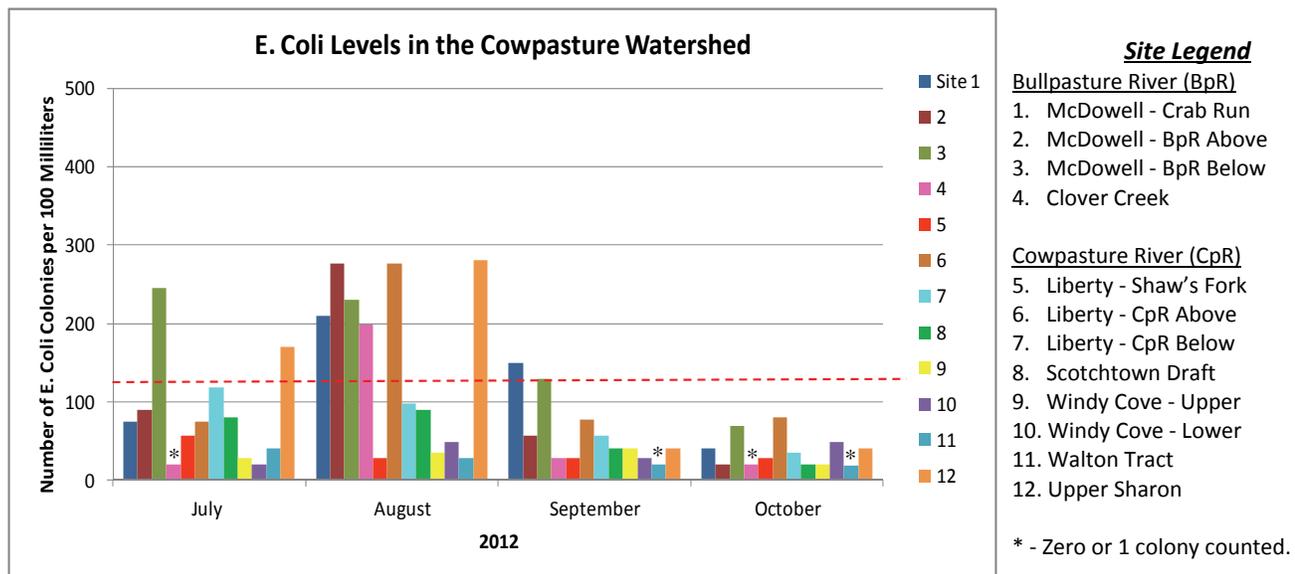


Figure 1. E. coli values over four months in 2012. Bars are geometric means of two samples. See site legend for locations. The red dotted line is DEQ's upper limit for safe swimming. At sites where streams join, samples are taken above and below the joining. For example, at McDowell, where Crab Run joins the BpR, samples are taken from Crab Run, the BpR before they join, and the BpR below the confluence. The same is true at Liberty on the CpR. At Windy Cove, samples are taken above and below Millboro Springs proper and where Stuart Run comes in. Both the BpR and CpR showed high levels of E. coli at some point during the summer, which tapered off in the fall. The northern waterways closer to the headwaters appear more vulnerable, possibly due in part to their smaller volume. It is important to note that this method gives levels but nothing about the sources of E. coli, which could come from any animal from humans to muskrats. High levels were most widespread in August, particularly at Bullpasture sites. There were storms impacting Bullpasture flow at the Williamsville gauge within 48 hours of the McDowell measurement, although they were also high at Clover Creek, sampled before those storms when levels were low. Many factors influence bacterial presence and growth including rain fall and flow volume, temperature, livestock density, migrating waterfowl, just to name a few. We hope to look at some of these factors as more data become available.

Health Matters: River “Critters” Pass the Test

Taken together, the data indicate that there are bacteria in the river, sometimes substantial amounts, but not all the time. There also appears to be a generalized trend toward lower values as one moves south toward the lower end of the watershed where the water volume is more substantial and would act to dilute bacterial concentrations. Natural processes that reduce bacterial levels are also at work as the rivers flow downstream.

Benthic Macroinvertebrate Data

Biological monitoring of insect larva and other aquatic animals is performed quarterly in this program. As of publication, these data have been gathered for the summer and, in some cases, fall time points. The sampling results, expressed as the VA SOS “multimetric index” are shown on the map at right. The index is a calculated value ranging from 7 (unacceptable conditions) to 12 (excellent conditions). The index is determined each time the stream is evaluated by counting the total numbers of animals followed by additional calculations based on groups of animals with differing degrees of tolerance to pollution. In previous evaluations, the CpR has always scored high on the scale and this report, which includes new sites, shows similar findings. The BpR tended toward lower scores. Scores were generally within the acceptable range with many sites scoring quite well. The goal in using this method is to find an “ideal” spot to sample within a site, and sometimes this takes a few tries. A particular riffle make look like it should be a good one, but when samples are taken and the count finished, it may turn out not to be the best in terms of numbers of bugs in the sample. As with any sampling in science, the more bugs, the better one can assess the population. So, part of establishing a site is to find the most

productive sampling area, which has to be done by trial and error to some extent. In the first samplings, there were two scores of eight, which indicates a borderline condition near unacceptable. But in each of these cases, as experience with that site was obtained, these numbers came up with the second sampling point in the fall. It will be important to examine trends over time and to look carefully at those areas that are lower in score to see how stable those scores are. While the bacteria tell us about a moment in time, the animals residing in the shallows of the stream speak to the longer term health of the river. This also reflects, as an example, oxygen availability since most of these animals require high concentrations of dissolved oxygen in order to survive. Bacterial levels per se may not affect insect populations, so this index provides a different perspective. One must remember that “pollution” in the case of macroinvertebrates also includes physical factors such as sediment deposits caused by erosion, high water, development, and any other soil disturbances along the watershed.

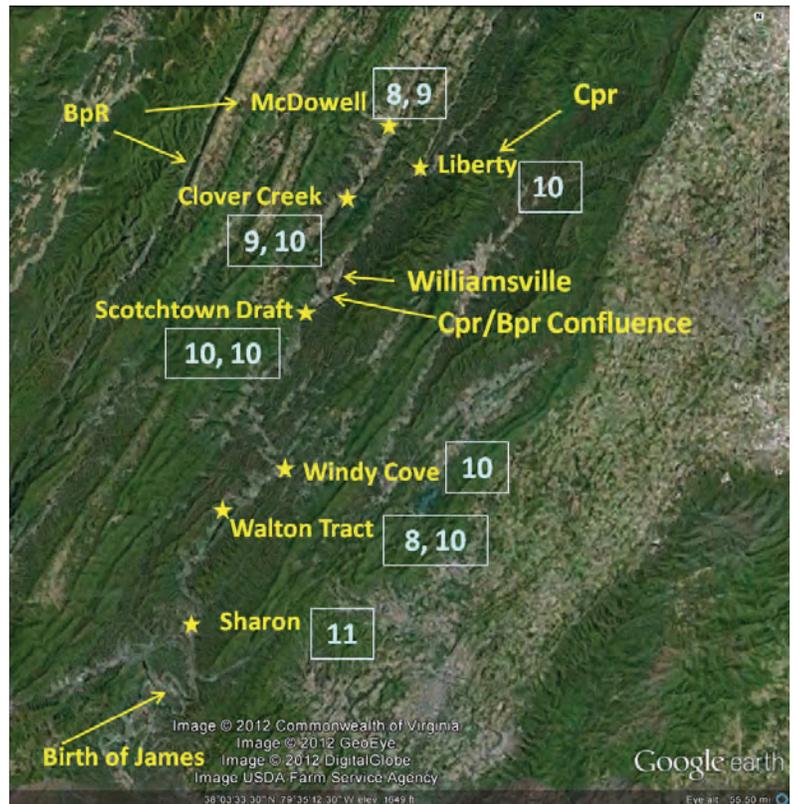


Figure 2. This map of the watershed shows the seven monitoring sites on the BpR and CpR along with some landmarks. Numbers in boxes indicate the summer and, where there are two, fall scores for each site. These populations are generally consistent throughout the year and so abrupt decreases in their presence and diversity can warn that a major change in conditions has occurred. Likewise, improvement in score can indicate a positive change in conditions.

Want to help? Contact Polly Newlon at keeperclean@gmail.com or call 540.474.2858.

40th Anniversary Commemorative Merchandise

Is now available on the CRPA Website

For the Holidays, gift a friend or relative with a CRPA membership and a treat such as a t-shirt, a mug or a tote bag



T-Shirts
100% Cotton
Available
in
Green or Blue

\$15 each
(SM, MED, LG, XL, XXL)



Large Cotton Tote Bags \$15



Mugs (14 ounce) \$10

Visit the CRPA website at www.cowpastureriver.org, click on the "Merchandise" link at the top right and follow the directions to place orders

Not a member? Want to help make another 40 years happen? Join today!

- \$20 Individual (minimum annual membership donation)
- \$50 River Guardian
- \$100 Headwaters Circle
- \$250 Watershed Steward Other _____
- \$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

PHONE

E-MAIL

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


Cowpasture River
Preservation Assn.
P.O. Box 215
Millboro, VA 24460

STANDARD
PRESORT
U.S. POSTAGE PAID
PERMIT NO. 38
DALEVILLE, VA



*Printed on recycled paper.
Please recycle this newsletter
when finished by passing it on
to someone else.*