Vol. 49, Issue No. 1 Winter 2020

# THE RIVER RUNS

News from the Cowpasture River Preservation Association



#### **Inside This Issue:**

- **From the President**
- **Executive Assistant's Corner**
- **Education / Monitoring Committees 4 Artistic Expressions**
- **Bath County Fair Highlights**
- Griffith Knob Ascent
- Atlantic Coast Pipeline Update
- **o** Thank You to our Donors
- Purple Loosestrife Research Paper 9 Join or Renew Your Membership

This wintry photo of the Cowpasture River was taken at Lynchburg Camp in the winter of 2018 by Norwood Morrison, one of our current board members. For more details, see page 3.

Please send us your best photos of the Cowpasture River and the wildlife that accompanies it.

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## From the President

As I write this in the first week of December, winter has come to the Alleghany Highlands and the Cowpasture River watershed. Not only are the days shorter, sunrise after 7:00 am and sunset before 5:00 pm, but the weather has taken a decided turn. The high temperature this week so far has been 36 degrees, and we've had intermittent snow. Mind you, I'm not complaining. Our former home in Wisconsin is under nearly a foot of snow right now with more in the forecast. Still, winter has arrived quickly after a protracted summer that lasted well into



October. We received more than an inch of rain over the Thanksgiving holiday, which was welcome. But we're well below our average flow, and unless we receive the most optimistic snow forecast, 2020 will open with a water deficit.

In this issue, we have another in our series of long-form articles from contributor Robert Slusser. Some of you will remember Rob, who spoke at our 2019 Annual Meeting. He has completed his research piece on *Lythrum salicaria*, better known as purple loosestrife. This and all our other essays will be available on our updated website later this month.

I've also included a brief update about the Atlantic Coast Pipeline. Important to note is that the US Forest Service vs Cowpasture River Preservation Association, et al., case will be heard by the Supreme Court. The date for the hearing is February 24, 2020.

Please consider gifting a membership to CRPA this holiday season. If anyone on your list can help us with our mission or just wants to learn more about our watershed, give them a 2020 CRPA membership. Send in the form on the back of this newsletter or visit our website, CowpastureRiver.org.

Choosing to save a river is more often an act of passion than of careful calculation. You make the choice because the river has touched your life in an intimate and irreversible way, because you are unwilling to accept its loss. — David Bolling Riverkeeper

Best Holiday Wishes, Dick Brooks

## **Executive Assistant's Corner**

Many thanks to Norwood Morrison for providing our cover photo. In the winter of 2018 at Lynchburg Camp, the river had frozen solid (6-8 inches in depth) and was then followed up by a flood that broke the ice apart. As the river went back down, it partially re-froze, producing the glacier-like effect, with large chunks of ice strewn over the dock and the bank. Norwood also provided us with an additional photo he took on that same day of the swinging bridge (see below).

On another note, our 2018-2019 Annual Campaign wrapped up on October 31, 2019. The additional donors who contributed to that campaign since the publication of our last newsletter are listed on page 15. Thanks to all of you for your generous contributions, which



continue to sustain this association. We began our new 2019-2020 Annual Campaign on November 1, 2019, and it will run through October 31, 2020. In addition, stay tuned for our new website that will be debuting soon. We have updated the site with a new look and design. We think you'll like it! We also hope to be on Instagram in the near future.

Finally, we are grateful to those of you who continue to come out and participate in the clean-up of the Walton Tract area of the Cowpasture River, which we did on October 26th. The Potomac Hunt Club members, in particular, are ever so faithful in participating in this task, and we are most grateful to them for their consistency. Be sure to check out our trash haul in the photo below.



Winter 2018 photo of the Cowpasture River at the swinging bridge.



<u>Walton Tract Clean-Up</u> — Front row: Marc Koslen, Dick Brooks, Puggy Farmer, Glovie Lynn. Back row: Bucky Wells, Jane Lindsey, Jim Bayliss, Mike Whiteside and Gilbert Raney. (Not pictured: Hank, the dog.)

## **Our Education and Monitoring Committees in Action**

Water Quality River Lab — On September 18, 2019, the CRPA hosted the 6th Annual Dabney S. Lancaster Community College Forest Ecology Water Quality River Lab at the home of Mike and Marla Whiteside. Dave Peters presented an introduction to water quality by having the students guess clean water from clear liquid samples. He then explained how the CRPA monitors the Cowpasture River water quality by collecting benthic invertebrates. Specimens of the invertebrates found in the river were passed around and their tolerance level importance explained. The CRPA provided lunch, during which questions were answered and additional information given. After lunch, the students went into the river for hands-on collection instruction by Mike Whiteside and Puggy Farmer. Scott Reigel, Forestry Department Leader, stated during discussion that the river lab presented each year by the CRPA is both fun and valuable. Maintaining and protecting clean water is highly emphasized in the students' forestry education. Being able to get into the river is a treat for the students because they normally are in the forest wearing protective gear. He truly appreciates the partnership CRPA has with the forestry program at Dabney. CRPA members participating in the river lab were Marla Whiteside, Kathy Farmer, Dave Peters, Mike Whiteside and Puggy Farmer.



Dave Peters and Mike Whiteside with the students.



Group photo.



Mike Whiteside and student in the river.



Puggy Farmer and students in the river.

AG Field Day — On October 30, 2019, Mike Whiteside, Jeremy White and Dave Peters of the CRPA, along with Chris Baroody and Rebecca Johnson of the local chapter of Master Naturalists, participated in the VA Cooperative Extensions AG Field Day at Dabney S. Lancaster Community College. All fifth graders in Alleghany County and Covington City and middle school students from The Boys Home attended. Our station on the tour provided a "meaningful watershed education experience" (MWEE) with a focus on watershed meaning, address and benthic macro invertebrates as a water quality indicator. Students had a hands-on opportunity to search for, view and identify freshwater benthic critters.





## The Bath County Fair

It was a beautiful, sunny day on Saturday, September 21, 2019, and we had great fun manning our CRPA informational table at the Bath County Fair. Many thanks to Nan Mahone Wellborn for making up such a fun fish-matching game for the kids!



CRPA Member Dr. Carol Gilbert and Board Member Nan Mahone Wellborn.



Nan Mahone Wellborn, Dick Brooks, Rebecca Brooks and Ellen Ford.

As a follow-up to Michael Hayslett's article regarding the Purple Loosestrife, which ran in the Winter 2019 issue of THE RIVER RUNS, we would like to continue that theme with a scientific paper written by Rob Slusser. Rob is a senior at Radford University in the Geospatial Science Department, and he presented his research to those of us who attended the most recent CRPA Annual Meeting at Camp Mont Shenandoah on May 18, 2019.

## Predicting The Potential Future Spread of Lythrum salicaria Using GIS and Remote Sensing in the Allegheny Highlands, Virginia

by Robert K. Slusser Radford University Department of Geospatial Science. 2019.

## **Abstract**

The Allegheny Highlands are known for their breathtaking natural Virginian countryside, which is home to a broad watercourse that collectively drain south into the James River in northern Botetourt County. In recent decades, an invasive wetland perennial known as the Purple Loosestrife (Lythrum salicaria) has made its appearance in close proximity to the waterways which flow directly into the James. This violet-flowered noxious weed threatens indigenous biodiversity of a top tier ecosystem primarily due to lack of natural enemies on the North American continent. The purpose of this research is to estimate the most vulnerable wetlands in the area of study. Geographic information systems (GIS) and remote sensing technologies were used to find the location of ongoing stands of *L. salicaria*. Data also collected from accredited sources was used to analyze the vulnerability of non-infected wetland areas. Suitability modeling techniques were used to create a predictive modeling of the spatial distribution of Purple Loosestrife. This is a new approach to understand the spread of invasive and non-indigenous vegetation.

## <u>Introduction</u>

Invasive plants have qualities in which make their survival a possibility in non-native areas. Often, these plants like the Purple Loosestrife (*Lythrum salicaria*) have made their way from foreign areas and inhabited our wetlands here in North America, specifically when this species was first discovered in North America in the 1880s. This violet-colored flower readily escapes from its normally ornamental plant setting around houses or in irrigation ditches, and spreads via water flow along rivers and streams, creating a homogeneous "purple desert," primarily because the plant has no known vegetative competitors in North America, whereas human impact also unintentionally disperses seeds.

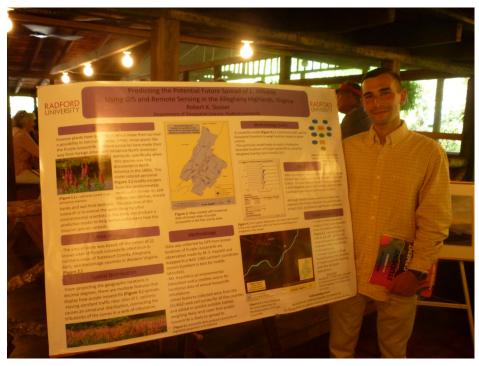
In the Allegheny Highlands (western Virginia), this plant has made its explosion as an invasive species, at times completely smothering the original vegetation seen decades before. Some efforts can be made to neutralize infestations of *L. salicaria*, and at times can be useful to an extent, but an individual plant can produce up to 2.7 million seeds annually. Often these seeds are spread mechanically by getting seeds carried by animals or physical properties like wind, water, and agricultural use where *L. salicaria* has infested a geographic location. The problem lies within controlling this "attractive menace" and restricting the spread of its seeds downstream, as well as physical dispersal of potential spread of Purple Loosestrife.

Efforts to alleviate the growing abundance of this invasive species in the Allegheny Highlands are growing in popularity thanks to Conservation Biologist Michael S. Hayslett of VA Vernal Pools LLC. The major ambition for this study comes from his initial response to the sighting of Purple Loosestrife in the Lynchburg area farther southeast from the Alleghany Highlands on the James River (Hayslett, 2018). Though this is an ongoing problem for the Cowpasture River Preservation Association (CRPA), knowing that *L. salicaria* is prevalent in the Allegheny Highlands is a great first step in controlling the spread of its invasive qualities. The purpose of this study is to apply the use of Geospatial technologies made available by Radford University and how they can be adopted into Purple Loosestrife eradication efforts by using the geospatial technology made readily available by the Radford University Department of Geospatial Science.

## <u>Literature Review</u>

The Purple Loosestrife is a common plant across the North American continent, Europe and Asia. Although there are many news articles, periodicals, and enough YouTube videos about the plant to understand where, why, how, and when it grows, the most helpful knowledge on protecting our native biodiversity from this plant was found by using online search engines to find critically reviewed articles about the controlling of this "Beautiful Killer." In an article by the Research Journal of Agricultural Sciences starting on page 96, the authors discuss how the plant originates in east northern Africa, Turkey, extending to Palestine and Lebanon. Even Japan and China have their own problem with the invasive flora. But it wasn't until the early 1800s that *L. salicaria* had been introduced to the marsh wetlands of the southeastern United States. We find in this journal that Purple Loosestrife can be found all around the world, except for high mountain areas at northern latitudes (Neacsu, Arsene, Imbrea & Nicolin 2016). Although all plants have natural enemies, this study was conducted to find what biological factors inhibit the reversal effect of the invasiveness of

the Purple Loosestrife. In the study, they found 59 insects which were feeding on this plant. 50 were eating on leaves, 3 on stems, and 6 on nreproductive organs (Neacsu, Arsene, Imbrea & Nicolin 2016). Summarizing this article, the researchers saw the plant as a problem with no apparent solution. Control methods are done by mechanical means (disking, mowing and pull-andbag methods), all of which help in assisting the spread of Purple Loosestrife seed banks. In order to properly remove these populations, this actions needs to be done before the plant



Rob Slusser and his presentation board at the 2019 CRPA Annual Meeting at Camp Mont Shenandoah.

blooms (MALECKI & RAWINSKI, 1985, in PASIECZNIK, 2007) as to not facilitate the spread of the species.

Before getting to know how to analyze the abundance of Purple Loosestrife using Geospatial Information Systems (GIS) and Remote Sensing, a better understanding of a possible solution for the areas that my model will predict was needed, as well as what action needs to be taken in order to validate my entire study. So from my literature, I call upon an article from the Cambridge University Press. This article refers to the effects of the *Galecrucella susilla*, a beetle in which feeds and reproduces on the leaves and stems of this wetland plant, eating away at the foliage and killing the plant (Katovich, Becker, Ragsdale, 1999). Research by these authors shows that this beetle is an efficient way to fight back the Purple Loosestrife in our hometown area as opposed to chemical plant control or mechanical needs to eliminate Purple Loosestrife. This serves as a possible question to ask at the end of my study: "Will *Galerucella Spp.* help fix the problem of Purple Loosestrife in the Allegheny Highlands?"

From the main source of reference for this research, and what drew attention to this marshy monster, was the research of one Clifton Forge's own Michael S. Hayslett. Proud member of the CRPA, Principal of VA Vernal Pools, LLC, and rare mountain wetland specialist, Mike studies *Lythrum salicaria* intensively in his article available in the CRPA's Winter 2019 Issue of *The River* 



Flowering spikes of Purple Loosestrife in the Mill Creek valley of Bath County on July 26, 2018.

Runs (CRPA, 2019, p. 8-12). Described in the article entitled "Purple Loosestrife - An Attractive Menace" (Hayslett, 2019), Mike describes the importance of Purple Loosestrife control in the Cowpasture River basin because of its homogeneous overtake of typically native plant biodiversity, which is known for being a pristine ecosystem. He delivers concise locational data in his writeup, describing in detail where exactly these known Purple Loosestrife sites are along the James River Drainage Basin (JRDB). The rivers which drain into the James River are the Jackson, Cowpasture and Maury Rivers. In this study, the specific tributaries of the James refer only to the Jackson and Cowpasture River drainage systems. On pages 10-12, Michael refers to his monitoring efforts in these rivers' tributary streams in great detail. Numbers 13-19 seem to be the main points of interest for my specific study because they all reside in an area with a high concentration, and data available for analysis of the flood plain and soil type are, as well as the others, in a different area of drainage for the Jackson River. Mike goes on to describe how it is not surprising to find this plant in our area, for its original ornamental setting (Hayslett, 2019). Referring to this plant as an "alien invader," Michael really gives a good insight as to how relevant this problem is in my area of study.

## **Materials and Methods**

The objective in this project is to continue research on the species by others and to find the locational data of known Purple Loosestrife sites. Through research we understand what soil types, soil moisture, vicinity to different types of hydrology, and type of land cover are the most suitable for the growth of *Lyrthum salicaria* in the area in proximity to confluence of the James River (Cowpasture/Jackson/Maury Rivers). The integrity of this project relies on the accuracy of each: GIS, GPS, Remote Sensing and the predictive model to find the most suitable areas that Purple Loosestrife will blossom in the summer. Relating to the locational data of previous Purple Loosestrife sites, the values of suitability are found through the correct model which is built within the ArcGIS 10.6 model-builder. This model includes the correct analytical variables, as well as any other tools necessary to create a project workflow adequate to present with confidence in my methodologies and materials. This model will be known as the Purple Loosestrife Invasive Suitability Model (PLISM).

To start this project after all literature is acquainted for, plans were made to obtain locational data of all known Purple Loosestrife blossoming sites recorded by conservation biologist Michael Hayslett. These known sites will be important because they hold the key to predicting where certain suitability values will occur in the event of seed dispersal. From there, the location at which a considerable amount of Purple Loosestrife sites are apparent will be used in creating an area of study. This area of study planned to meet the extent of a general five-county designated area in order to focus on the streams that converge into the Cowpasture, Jackson, and Maury rivers. This scale is needed because Purple Loosestrife manifests in clusters of wetland areas and will be easily analyzed by digitization of my dataset. To label these sights, users had to digitize a dataset on ArcMap 10.6 from using aerial imagery of an apparent blooming season. Having a general area of study (The Allegheny Highlands) allows for us to conceptually understand the context of where this problem is occurring without having to digress about it in discussion.

When making a model, the software package used was ESRI's ModelBuilder. This is a quick way to streamline computations, using tools and datasets to analyze spatial phenomenon. In order to correctly arrange a suitability model, there needs to be variables put in place. These variables for the PLISM include SSURGO data from the SSURGO soil data viewer toolset made available by the USGS. The soil variables include: a high Hydric Ranking, close proximity to the Depth of Water Table (<16 meters), high Flooding Frequency, as well as high Ponding Frequency. From there, a Euclidean distance tool was ran to calculate proximity to water, as well as proximity to the CSX railroad right-of -way. These two variables are extensive vectors for the dispersal of Purple Loosestrife seeds, mainly because they have constant or frequent sources of moist hydric soil. Once the Euclidean distance had been found for both, that layer was also input into the model.

A weighted overlay tool is used to weigh variables by their influence to exist in certain spaces or not able to exist in certain locations. All of these variables were weighed as follows: 16% influence for Ponding Frequency, 16% influence on Hydric Ranking, 16% influence on Depth to the Water Table, 18% influence on proximity to water, and 18% influence on proximity to railroad right-of-ways, with each of the six variables as being suitable places for Purple Loosestrife to invade. After building the weighted overlay, values needed to be extracted to also weigh in the previous year's known Purple Loosestrife locations (Figure 1—next page.)

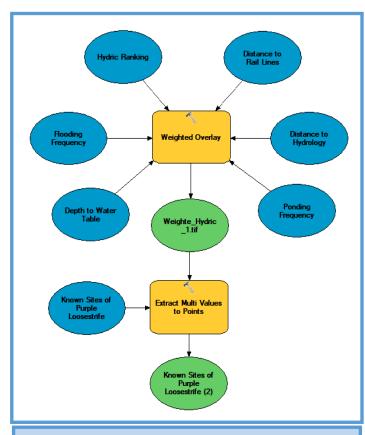


Figure 1. The completed PLISM.

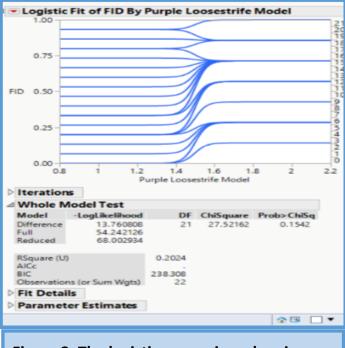


Figure 2. The logistic regression, showing the R Squared value to be .2024, meaning 20% of the data is statistically significant.

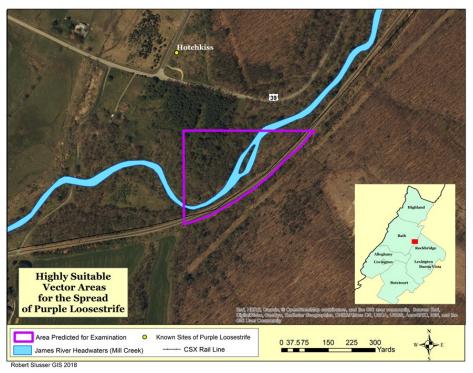
The Purple Loosestrife Invasive Suitability Model allows for a binary outcome of site-specific possibility that Purple Loosestrife will either A) Likely grow in the location predicted, or B) Not grow in the location. These are shown by polygons that have all the influential factors needed for the spread of this invasive perennial. In order to test this model's statistical significance, a JMP analysis is required. Because this is a binary model, predicting either a zero or a 1, a Logistic Regression (Figure 2.) is the best statistical analysis because this is a predictive regression allowing the dependent variable (the PLISM) to be categorical data.

#### Discussion

In discussion, a future model could be created using more variables suitable for Purple Loosestrife's invasive qualities. The six variables used could either be weighted differently, or more variables like a tree canopy layer, availability to sunlight, or simply going out and collecting more known Purple Loosestrife sites. However, for validation of the model's results and integrity, a field trip was planned for July 20th, 2019 by M. S. Hayslett and R. K. Slusser, as well as other volunteers in the community to obtain more locational data of Purple Loosestrife stands, and correctly pull-and-bag the existing plants. The area predicted for the highest suitability (Figure 3 on next page) displays what outcome was made available by the PLISM, specifically in the Allegheny Highlands subset.

The area labeled in purple portrays the highest suitable area for the potential future spread of *L. salicaria*. Although the significance of the Logistic Regression represents an R Squared value less than what would normally be satisfactory, it would be in the best interest of conservationists to visit the area most possible to spread from stand-to-vector to eradicate this invasive species, not only for the risk of current biota, but for future populations of

endemic species native to the Allegheny Highlands that are driven out by this "Asian invasion."



## **Conclusions**

As alluded to in the main article "Purple Loosestrife - An Attractive Menace" (Hayslett, 2018), this plant is a real-life problem for naturalists across North America. Being that there are massive infestations lower than the James River in Iron Gate and Eagle Rock, VA, it is our duty to predict where Purple Loosestrife will emerge, and literally "nip it in the bud" with this invasive perennial. There is much work to be done in order to eliminate how much area this species has already

infested. Probably 20 years of no action on conservationist parts will take at least another 10 to see a change in the effects of *Lythrum salicaria*. But with efforts like this research, and the eradication efforts of the community, a fully biodiverse and indigenous list of biota may once emerge in the absence of this "Marsh Monster."

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(Target Journal)

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## The Griffith Knob Ascent



An autumn photo of the beautiful Griffith Knob!



Grant Colip (left) from the United States Geological Survey came along on the hike to educate the group on the regional geological features. Here he is with Connie Russell, Jim Slough and Candice Dupoise.





From left to right — Katherine Dupoise, Grant Colip, Candice Dupoise, Connie Russell, Puggy Farmer, Charlie Kahle and Jim Slough. Not pictured — Dave Peters.

On the chilly morning of Saturday, October 5, 2019, several folks gathered at the home of Dave Peters to begin their ascent to the top of Griffith Knob. The journey began at river level (about 1,200 feet) and culminated to nearly 2,800 feet at the summit. The hike was the brain child of Dave Peters. He had made the trek several times in the past and was anxious to share it with some of our members. We were fortunate to have Grant Colip from the United States Geological Survey join us to co-lead the hike along with Dave. He graciously provided geological insights along the route, and he shared this anecdote with us: "While on the hike, Candice found a beautiful example of a doubly terminated quartz crystal that is roughly 2" in length (see photo on bottom left). It exhibits beautiful clarity and is exceptionally well-formed; you can observe both crystal terminations are very well-preserved given it was found out in the open on the surface. Griffith Knob is a syncline exhibiting outcrops of Devonian strata, namely the Brallier shale and the Greenland Gap sandstone, so if this quartz crystal truly originated here, it was likely from somewhere in one of those rock units. This isn't completely unheard of, as some have said that the type of environment necessary to produce such crystals may have indeed existed here. . . This extremely clear and well-formed variety of quartz crystal is often referred to as a Herkimer diamond (named after the famous locality of Herkimer, NY where many such specimens come from), but it is unusual to find such a beautiful example of this originating in Virginia — quite a remarkable find."

## **Atlantic Coast Pipeline Update**

## by Dick Brooks, CRPA Board President

The proposed Atlantic Coast Pipeline is still officially in a work stoppage. Some stabilization activities have been approved. Notably, in West Virginia, ACP has attempted with mixed success to prevent slips (aka landslides) where construction has already taken place. Extreme measures that were not included in the Environmental Impact Statement such as wood pilings driven into the hillside have been tried with only modest success. This is especially troubling as the proposed construction has yet to reach the route's steepest slopes here in Bath and Highland counties.

This work slowdown has had significant impact on each of the partners who plan to build and operate the project. For Duke Energy it has meant securing additional funding in the form of a stock issue totaling \$2.5 billion. The day this was announced, Duke common shares tumbled 2.5 percent. And, they have told their shareholders that the new in-service date is 2022. Dominion is sticking to their latest forecasted in-service date of 2021, but the investment community is becoming somewhat skeptical. Duke's announcement came after the third-quarter investor call for Dominion, so we'll see how they respond in the new year.

Meantime, the US Supreme Court has decided to hear the US Forest Service vs Cowpasture River Preservation Association, et al., case on February 24, 2020. Briefs are due December 19, and a decision is expected to be handed down in June or July of next year. Dominion has increased public relations efforts across the board, and the White House and Attorney General Barr have all sided with Dominion. No matter how this case is decided, multiple other permits are still overturned or in play. Here's the latest list:

- The FERC Certificate. This was to be heard in September, but was deferred pending the Forest Service case.
- The Fish and Wildlife Permit. Additional endangered species are pending and new sightings
  of endangered species have been documented on the route.
- The National Park Service Permit. This has been pulled by the Service; it is for permission to cross the Skyline Drive.
- The Army Corps of Engineers Permit. This has been pulled by the Engineers because of different state level water crossing rules.
- The Buckingham County Compressor Station Permit. The Fourth Circuit Court of Appeals heard oral arguments in October, and a decision is expected early in 2020.

So, the fight continues and we're still in it. According to FERC, approval for the important Fish and Wildlife permit (which had been vacated twice by the courts) must now come from them, meaning FERC, prior to going back to Fish and Wildlife. They don't expect to have all the new information processed until early next year. So it is believed that no tree cutting or other activities can begin until fall of 2020.

## **Artistic Expressions**

by Nan Mahone Wellborn

For the first time in CRPA history, we sponsored the Bath County Art Show by offering an award: "Cowpasture River Preservation Association Award......\$200, Best Cowpasture River or Bullpasture River: Any Medium." We wanted to bring our rivers to the attention of artists and art viewers. The Bath County Art Show attracts hundreds of artists that submit over 600 works. Artists find the show appealing due to the number of awards and the prize money. Art buyers enjoy the large selection of art offered for sale.



To get the word out to artists, we worked with Liz Delahoussaye, Director of Highland County Artists' Weekend, to secure a painting day at Hayfields Farm on the upper Bullpasture for the 30 plus artists who attended in June. The Bath County Arts Association listed the award on their website, and we used "word-of-mouth" to let artists know about the new opportunity.

There were around 20 entrees that featured either the Bullpasture or Cowpasture River. Much to my surprise, the judge pinned the award on my painting (left), "Moody Blues on the Cowpasture!" Yikes! It was a thrill to be

honored! My favorite artwork is created along the banks of the rivers we work hard to protect. As a CRPA board member, I can't accept award money from our organization. I "recycled" the \$200 prize money, returning it to CRPA to underwrite next year's Bath County Art Show's "Best Cowpasture River or Bullpasture River" award.

Encourage your artist and photographer friends and family to get out to the Cowpasture or Bullpasture and let them know of the award opportunity! Participating in the Bath County Art Show is a wonderful way to support Bath County and all it has to offer. The show is open to all artists, sculptors and photographers. The next show will be held on July 18-26, 2020. More information can be found at https://bathcountyarts.org/2020-art-show/

## Remembrances

We had a wonderful response to the remembrances shared by John and Jim DeVenny in our last newsletter. They had one additional memory that we wanted to squeeze in here:

In the summer, the families of John and Jim would all come together at the camp. There would often be as many as four DeVenny grandchildren in the river at the same time, and they would all have a blast. They loved to gather around the large table on the back porch, sharing memories with one another. John's and Jim's father, in particular, would like to share the following story with the grandkids: "One day, Dad told the kids that just as we drove down the lane to the camp, Peace and Quiet headed up over the bank, saying they would be back later! From then on, thinking Peace and Quiet were real children, the kids would always ask — when can we meet and go swimming with Peace and Quiet?"

## **Thank You To Our Loyal Watershed Members**

We are grateful to the additional donations we have received during the 2018-2019 Annual Campaign season that have come in since our last newsletter was published. These members who have recently joined or renewed their membership are listed below. (Note: New members are listed in bold.) Also listed below are those who were accidentally left off of the listing in our prior newsletter. Our apologies. Thanks to all of you for your generous support. **Total donations for the 2018-2019 Annual Campaign came to \$42,031.00.** 

Our new 2019—2020 annual campaign kicked off on November 1, 2019 and will run through October 31, 2020.

### **BEDROCK PATRON**

Cleve and Barbara McGehee

## WALLAWHATOOLA SOCIETY

Lou and Betty Robinson

## **WATERSHED STEWARD**

Bill and Norvell Adamson

#### **HEADWATERS CIRCLE**

Elizabeth N. Hulette

## Norah S. Knutson

Lloyd and Elizabeth Lipscomb

Dave and Sandra Peters

John H. Turner, Jr.

### **RIVER GUARDIAN**

#### Pamela Minkler

Terra Bella Farm — Wade & Nia Neely

Kate Van Lear

**Roger Wilson** 

## **INDIVIDUAL**

**Candice Dupoise** 

Katherine Dupoise

Richard A. Lambert

**Susan Mead** 

**Jeff Staples** 

## **IN MEMORY OF:**

Layton T. Hulette

By Elizabeth N. Hulette

## Give the Gift of a CRPA Membership



It is the holiday season, and the more members for the association, the better! Think about a gift membership for someone you love who has experienced the Cowpasture during his/her lifetime. It can be a young person who may have been a camper or someone you'd like to introduce to the watershed, or even someone you'd like to be envious of such a treasure. All are welcome and what a great gift! See the last page of this newsletter for details on how to give. Or go online to https://www.cowpastureriver.org/donate/member-gift.



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☐ \$100 Headwaters Circle <i>Donation</i>	☐ \$12 Junior Membership Dues
☐ \$250 Watershed Steward <i>Donation</i>	☐ I am a NEW member! ☐ I am RENEWING
☐ \$500 Wallawhatoola Society <i>Donation</i>	☐ This is a gift membership from
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