

ALONG THE TOWPATH

A quarterly publication of the

Chesapeake & Ohio Canal Association

An independent, non-profit, all-volunteer citizens association established in 1954 supporting the conservation of the natural and historical environment of the C&O Canal and the Potomac River Basin.

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President's Report

By Bill Holdsworth

The Association remains in the state of semi-hibernation required by the onset of the COVID-19 pandemic. We have had to cancel every public event since March.

We try to carry on business as much as can under the circumstances. Steve Dean still produces a great newsletter. The Board of Directors has learned to use Zoom video conference software for our board meetings. I have been working to revamp the Association's website. The park has allowed a limited resumption of the Level Walker program. Ironically, the park is more popular than ever. At the August board meeting, we heard that 2020 could be the park's best year in terms of visitation statistics, even though all of the visitor centers remain closed. Not all of the visitation is welcome. Some people have decided the park is a perfect location for evening beer parties. Vandalism is another issue. When current crisis eases, there may be plenty of work to do.

I hope this newsletter finds you well. Please stay safe. I eagerly look forward to day when we can gather on the tow-path again.



Trent Carbaugh returns with another feature article in this issue. This time he leads us upstream on the towpath from McMahons Mill to the Opequon area. Known to Level Walkers as Level 34, this section of the canal includes some fascinating history and distinctive canal features. See page 4.



Nature Chair Paul Petkus didn't let pandemic-induced nature walk cancellations keep him from pursuing his interest in nature. Join Paul for a summer outing in Western Maryland to identify 16 different species of butterflies along the towpath. See page 18.

2021 World Canals Conference Update

By Bill Holdsworth

USA

The Association received a \$15,000 Maryland Heritage Areas Authority grant to support the 2021 World Canals Conference. Each year the MHAA provides dollar-for-dollar matching project grants to non-profit organizations for projects located within a certified Maryland heritage area. Our conference is located in the **Heart of the Civil War Heritage Area**.

Tours will take attendees to two other heritage areas, Montgomery County Heritage Area and Passages of the Western Potomac Heritage Area.

Last year, a Heart of the Civil War Heritage Area minigrant helped the Association fund the construction of the 2021 conference website, wcc2021.org.

Our conference preparations look to be in good financial shape, thanks to the grant and the generosity of

Audit Committee Assistance –

The Association is looking for a volunteer to assist Jon Wolz on the Audit Committee. Each February the committee reviews the Association's financial records, including bank statements, reconciliations, receipts and expenses. Reviewing the records takes three to four hours. After the review, the committee issues a report to the Association board at the annual meeting. A financial background is helpful. Interested members may call Jon at 240-888-5367 or email wolzjon@hotmail.com.

– Jon Wolz

Monocacy Aqueduct Repair Update –

The National Park Service informed the Association on July 27^{th} that the Monocacy repairs project was still in compliance review and requested additional information – a realistic and detailed scope of work, a site safety plan, containment of materials (i.e. sandblasted paint and abrasive material), and rerouting visitors into the trunk of the aqueduct during repairs. The request was forwarded to the contractor, who is now arranging on-site meetings to do a walk-through for the project.

– Rita Bauman

Association members, who have donated over \$36,000 to date to support the conference.

The conference, scheduled for August 30 through September 2, 2021, is less than a year away. The lingering effects of the COVID-19 pandemic loom as a threat. Leipzig was scheduled to host the 2020 conference this month. Sadly

> they were forced to postpone the conference until May 2022.

Our committee continues to operate under the assumption that we will be able to host the conference as planned, even though we can't predict how conditions will change over the coming year. We plan to re-evaluate at scheduled checkpoints along the way. In the

meantime we will continue to be cautious about making large financial commitments.

Hancock Named Maryland Trail Town

Hancock, Md, was named Maryland Trail Town by proclamation from Governor Larry Hogan. Mark Widmyer, Gov. Hogan's Western Maryland representative, made the announcement at the River Run Bed and Breakfast on June 6. Hancock town officials declared that the first weekend in June would be Hancock Trail Days. Town Manager Joe Gilbert commented that the Hancock was designated as the trail town because of the numerous trails and recreational opportunities in the area. Mr. Gilbert noted that Hancock intends to become the outdoor recreation destination in Western Maryland.

- Compiled from The Morgan Messenger; photo by Sam Judge



Along the Towpath, September 2020

Donors to Association Funds May 1 to July 31, 2020

Nancy C. Long Aqueduct Fund – A

- Supports restoration and preservation of the eleven aqueducts on the C&O Canal. The fund was established with a generous donation made by long-time C&O Canal advocate Nancy Long.

Davies Legal Fund – D

- Supports the Association's involvement in activities such as opposition to the transfer of public land to any individual or enterprise for private use.

Amazon Smile – R

Tim & Kathryn Banfield – ANicholas J. Barnard – A, D, R Franklin Bell – ACatherine Bragaw – WLarry Cohen – **D** Chris Colgate – SCumberland Valley Athletic Club -ALynn DeForge – **R** Sharrill Dittmann – DGerard & Jane Gold – W James & Linda Hahn – A, D, R, S, W Judith Hecht – A, R, W

Carolyn Hoover – S, WJames Johnson – **R** John & Carol Kimbrough Jr. – RLaila Linden – *R*

Ken Rollins C&O Canal Fund – R

– Supports current projects and programs in and for the C&O Canal National Historical Park.

Rachel Stewart Swains Lock Area Fund - S

- Funds improvements to the area around Swains Lock as they are identified in conjunction with the National Park Service.

2021 World Canals Conference Fund - W

– Supports the 2021 World Canals Conference at the C&O Canal.

Nancy & David Long -ACharlotte Loveless – WLinda & Michael Marmer – AJohn & Barbara McGraw – S Katherine Mabis McKenna Foundation, Inc. – A Edward Terhune Miller – A, D, R, S, W Douglas & Marilyn Mitchell – RKirk & Karen Moberley – D Coleman & Elizabeth O'Donogue – ARobert & Lucinda Reynolds - R, W Mary P. Stickles - R Richard O. Stoner - W Arthur Tsien – RPatricia Ann White – W J. Williams – RIn Memory of Randy Astarb Jane & Norman Liebow – **R**

C&OCA Welcomes New Members

Tiffany & Brad Ahalt, Jefferson, Md. Brian Dieffenbacher & Rachel Burchard, Lorton, Va. Heidi & Daniel Johnston, Shepherdstown, W.Va. Kenneth Perko & Felicia Candela, Hagerstown, Md.

Willem Polak, Glen Echo, Md. Kate Shunney, Berkley Springs, W.Va. Kenneth Valle, Greencastle, Pa.

If you ever have any membership questions, please contact Will Stewart, Membership Chair, at membership@candocanal.org.



The section of the C&O Canal upstream of McMahon's Mill, known as Level 34, is slated to be restored, as was the Big Slackwater area just downstream in Level 33 in 2012. Note that the level designations in this article are those used by the Level Walker program, and not the historical level numbers, which were based on lock numbers.

I figure this is a good time to document the level as it is before it changes for good. Possibly the restoration will be in the near future, but as with so many things in this time of involuntary changes in our society, I suspect it may now, unfortunately, be a while before this project happens.

Level 34 is subject to flood damage, which is the main reason for the restoration project. The surface of the towpath from McMahons Mill to Lock 41 undulates vertically, leaving some parts, mostly the stone causeways that go out into the river, scoured of their crushed stone filling. In times of high water these areas can become impassible to foot and bicycle traffic, necessitating a short but dangerous detour on narrow country roads. In the aftermath of high water events slippery mud can also be an issue, especially for cyclists.

But – before we move on, a little context might be helpful if you are not familiar with this part of the canal.

Big Slackwater, at the West End of Level 33

One of the places on the C&O Canal where nature said a big "NO!" to the canal company was the area known as Big Slackwater. This is the area above Feeder Dam 4 (Mile 84.40, built 1832-34). At Mile 86.94 limestone cliffs begin on the Maryland side of the river and continue to Lock 41 at Mile 88.90, with a single break where Avis Mill Road comes down to the mill. This is a distance of a little more than three miles of the canal. The canal company's engineers and builders, when presented with this topography, must have scratched their heads mightily (and probably expressed themselves with some colorful cursing as well).

The cliffs precluded any feasible idea for building a canal prism, so a towpath was built by cutting away parts of the cliffs as well as building on the rocks of the river's edge. Canal boats then were put into and out of the river by Inlet/Guard Lock 4 (Mile 85.62) upstream from Dam 4 and at Lock 41 at the west end of the cliffs. With the building of the dam, the river was made somewhat more manageable and safer for canal boats to travel on.

The Big Slackwater Restoration

In 1996 the National Park Service closed a 2.7 mile section of the towpath between Dam 4 and McMahons Mill (Level 33). This occurred due to flood and hurricane damage over the years, making the towpath in this section impassable with some areas having the foundations completely washed away. This necessitated a hazardous 4.6 mile detour on narrow country roads. The NPS considered this a dangerous set of circumstances and ultimately wanted to restore the area so the towpath was contiguous once again. Unfortunately this was a major, and quite expensive, restoration project. Various proposals and ideas were put forth to accomplish this goal as well as to make a safer detour, until at last an ambitious project was agreed upon.

In October of 2012, this area was open again at a cost of 19 million dollars, the largest building project in the park since the canal was built. A series of concrete bridges were attached to the cliff walls, these structures are designed to allow flood waters to flow around, under and over them during high water events mitigating the potential for serious damage. The bridges are connected to the few remaining places where the foundations of the stone-built towpath at the base of the cliffs still existed as well as building new foundations where it was feasible. The original towpath was restored wherever it was possible to do so. It is quite the engineering feat, to put it mildly.

Level 33 showing part of the Big Slackwater restoration



Big Slackwater

With that introduction, let us begin a tour, starting at the parking lot at the end of Avis Mill Road, off of Dellinger Road at McMahons Mill.

Level 34, Charles Mill Level, McMahons Mill to Opequon Hiker/Biker, 2.84 miles

McMahons (or Charles) Mill, Mile 88.10. The mill is built on Downey Creek at the only major break in the limestone bluffs of Levels 33 and 34 that is wide enough for a road. A mill was built here in 1778 and, with many changes, operated until 1922. Over the years it produced everything from plaster to electricity.

Walk out on the access road past the mill to the towpath and turn upstream where you will cross Downey Creek on a concrete bridge. If you look downstream you can see the Big Slackwater Restoration on a long curve of the river.

Fishing is quite popular in this area; on warm evenings you can see folks sitting in lawn chairs bank fishing. Most anglers are fishing for catfish, but pan fish and smallmouth bass are also frequently caught. Since the water is relatively deep here, you will see small fishing craft as well as the occasional powerboat at all points on the level.

Along this section, about a third of a mile upstream from Downy Creek, a dirt path leaves the towpath going uphill. This path follows the top of the limestone bluffs and was once considered, along with a similar path on Level 33, for improvement as an alternative detour route.



McMahons Mill with its steel waterwheel



Fisherpersons by Downey Creek; looking downriver towards Level 33



Grotto of Howell Cave



Swimming hole upstream from Howell Cave



Downey Creek in its flood control basin

Looking upstream you will see a long stretch of towpath built onto a causeway faced with stone on the river side. At this point the limestone bluffs begin to rise again. During the spring and early summer a large variety of wildflowers can be observed growing in cracks on the cliff faces.

Howell Cave, Mile 88.28. The first major feature that you come to next is Howell Cave, set into a magnificent limestone grotto. An intermittent stream flows out of the cave mouth and exits through a small drain culvert under the towpath into the river. This stream drops into a sinkhole up on the top of the bluff and then exits through the cave mouth. The actual cave itself opens into two large rooms from the small opening and purportedly you can get to the sinkhole stream entrance through a passage.

The towpath here is very close to the river's surface level and is prone to flooding in high water as well as flooding from excess water flowing from the stream out of the cave.

Just upriver from the grotto is a large block of limestone that I call "Arthur's Rock" after my son; we often sat on it to eat lunch during our adventures in the area.

Cliffs, Bluffs, and Other Interesting Features in this Section. About one tenth of a mile upstream from Howell Cave is a very well used, and venerable, swimming hole with a rope swing. Be wary of congestion at this point as well as flying teenagers. Unfortunately this area also collects a massive amount of trash from said teenagers.

From McMahons Mill to Lock 41 the berm side of the towpath is a series of limestone cliffs ranging from 20 or so feet high by the mill to 90 or 100 feet in some sections. Some of these cliffs were laboriously drilled by hand-hammered drill rods and blasted away with black powder charges. If you look closely in some places you can still see the remains of the drill holes. In other places the natural cliffs are set back far enough to allow space for the towpath. At some sections it was more expedient to build out into the river with stone walls that were then filled with loose stone surfacing and small gravel as a walking surface for the mules and packet boat horses. From the area of Howell Cave trees, some quite magnificent, are on both the river side and the berm side.

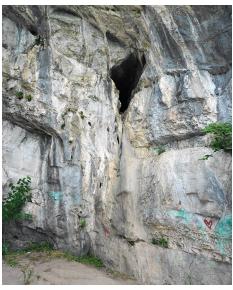
Stone Causeways. There are three extensive stone causeways built out on the river on rocks on the shallow river bottom. All three of these are fairly low and, especially in the case of the first one upriver from Howell Cave, subject to flood damage from high water events.

Little Howell Cave, Mile 88.59. Twenty feet up off the towpath and set back into a shallow overhanging spot in the cliff face is the entrance of Little Howell Cave. This cave extends 20 feet into the cliff.

Lock 41, Mile 88.90. Lock 41, with a lift of 10 feet, served as a river entry/exit lock. Boats traveling upriver would enter the lock. The lock was built of limestone blocks and later repaired with concrete. Although the current towpath continues on the river's edge, originally it continued on the berm side until Lock 42 where there was a mule crossover bridge. The "towpath" on the river side provides much needed flood protection for Lock 41 and the low section of towpath just downstream. The limestone bluffs continue here but they are lower and are further back from the river's edge leaving a narrow bottom-land that allowed construction of the canal prism to be resumed.



Stone causeway partially scoured by flood waters



Little Howell Cave 20 feet up on a cliff



Lock 41 in the winter



Downstream end of Lock 42 showing the remains of the towpath crossover bridge

Lock 42, Mile 89.04. Four tenths of a mile upstream from Lock 41 is Lock 42. As with Lock 41, Lock 42 has much concrete repair work. This lock had nine feet of lift and combined with Lock 41 raises the canal fifteen feet above the river. Fifteen feet of elevation over the normal river flow was enough to protect the area from reasonable flooding though high flooding was and still is a hazard at this spot. On the downstream end of the lock are the remains of a mule crossover bridge that allowed the mules to be brought over the lock to the towpath, which continues on the river side from this point.

Neither lock was built with a bypass flume, as Lock 41 exited into and out of the river. Water needed to operate Lock 41 came out of Lock 42.

Along the original towpath on the berm side of the canal, slightly upstream of Lock 41, there are a series of stone building foundations that were once part of a small community.

On the berm side of Lock 42 are ruins of the foundation of the lockhouse that served both locks. On the river side, there is a large pile of cut limestone blocks that were removed from the lock when concrete repairs were made.

Culvert 118 ¹/₂, Mile 89.21. Built in 1835, Culvert 118 ¹/₂ is a 4-foot span that drains water from a small stream that runs from farmland to the north. If the Potomac is low you can make out the remains of dock pilings in the upstream mouth of the stream exit.

Brunswick Farm. On the berm side of the canal, when the leaves are off the trees, you can see the bank barn and stone colonial house of Burnside Farm (built between 1760 and 1780). If you look upstream on the berm side of Culvert 118 ¹/₂ it is possible to make out a steel paddle wheel from a small mill that was on the farm.

On the towpath side is a gate that is closed during high water events, the road

that leaves the towpath at this point is the first part of the detour to go around this section.

Dellinger Widewater, Miles 89.63 to 90.24. This is a wide section of the canal prism that utilized the natural topography of the area to ease the building of the canal. Through this section there was naturally occurring high ground on the berm side that allowed an earthen wall to be built with less work. Widewaters were often used as stopping places at night by canal boats and also allowed space for boats to pass.

Opequon Hiker/Biker, Mile 90.94 Opequon (pronounced "opeckon") Hiker/Biker campground is on a terrace above the river just off of the towpath and is quite a pleasant place to camp. As with all hiker/bikers there is a picnic table, water pump, and a portable toilet. During warmer weather, the proximity upstream of the Potomac Fish and Game Club means you may get some powerboat noise into the evening hours.

Wildlife. On the first part of the level due to the steep terrain you will see more birds, in great variety, than anything else. Occasionally you can see tracks of the nocturnal presence of raccoons, opossums, and sometimes coyotes.

On the western end of the level you can see all of the normal wildlife on any other part of the canal in the west. Whitetail deer are a common sight as is the random flocks of wild turkeys that wander in from the local farms. One thing you will definitely see is squirrels: grey squirrels, fox squirrels, and pine squirrels (and a few chipmunks). For some reason there is a high population of these critters here. Every now and then box turtles, black snakes, and garter snakes can be encountered, along with various species of frogs when the area is wet.

Traveling on Level 34. The best time to visit this part of the canal is anytime you can, but the area is at its most spectacular in the fall. Winter is the ideal time if you want to examine the structures



Culvert 118 ½



Barn and waterwheel (on the right) of Brunswick Farm



Beginning of the Dellinger Widewater



Hiding fawn on the edge of the towpath



Bad weather on Level 34

around Locks 41 and 42 when the leaves are down and there is less undergrowth. Spring and summer can be rough weather-wise with thunderstorms and sudden rain complicating travel. Due to the terrain, storms can sneak up on you from the north and west. Parts of Level 34 can become very muddy and slippery, particularly for bicycles.

The area is also good for an evening paddle in a canoe or kayak. Boats can be put in at the Big Slackwater Boat Ramp off of Dam 4 Road. Paddle upstream along Level 33 and Level 34, and drift back to the boat ramp. There are some spectacular views from the river going both directions. Be wary of powerboat wakes on the river, and keep an eye on the weather.

The upper path, though once a privately improved trail, is no longer. It is rough in places and in the summer can be very overgrown and as of summer 2020 there are some large trees down across the trail. Use caution if you choose to walk it. The tops of the cliffs are owned by the National Park Service, but the park boundaries are not marked and border private lands.

Major Features on Level 34

McMahons (or Charles) Mill, Mile 88.10 Howell Cave, Mile 88.28 Little Howell Cave, Mile 88.59 Lock 41, Mile 88.90 Foundations, Mile 89.01 Lock 42, Mile 89.04 Culvert #118 ½, Mile 89.21 Brunswick Farm, Mile 89.22 Dellinger Widewater, Miles 89.63–90.24 Opequon Hiker/Biker, Mile 90.94

Afterword. All of us who volunteer on the C&O Canal do so for a variety of good reasons. There are irreplaceable cultural and historic resources that absolutely must be protected. The nature that has returned to this once industrial corridor, in all of its delightful diversity, needs our

Along the Towpath, September 2020

help to continue to thrive. The volunteers for this park happily give up our free time in support of the park and the fine folks of the National Park Service.

These reasons, though, blend together into a solid cohesive whole that guides our personal efforts as well as supporting other volunteers and volunteer programs, and ultimately all who come to visit and enjoy the park and the Potomac River. We really don't need to come up with reasons, though. We volunteer because we love the place.

The C&O Canal National Historical Park and the Potomac River are a unique piece of American history. So many things happened in this area! Native Americans lived here. Three major wars were partially fought in the Potomac River Valley. The industrial revolution gave us the C&O Canal and its major commercial competitors the railroads.

Our predecessors had the great sense to turn the remains of the canal into a national historical park as well as beginning the long-term, ongoing project of cleaning up the Potomac and its tributaries. This once busy commercial corridor has now become a place of recreation, and more importantly, a place of recovering nature. During my lifetime I have been a witness and a participant in these efforts and continue to do so.

For many of us spending time on the C&O is something that has been a part of our and our families' lives for a lot of years. Many of my fondest childhood memories were of times spent having adventures paddling and fishing on the Potomac, hiking the canal, and just simply exploring as many interesting places as I could get to (despite my mother's objections to my caving, climbing and whitewater running proclivities). My father and grandfather instilled in me the reasons and desire to take care of the natural world. Scouting re-enforced this and taught me other skills, most of which were learned along the C&O and on the Potomac. These skills took me



View from the upper path



Limestone cliffs along the towpath



Path to the upper trail along the clifftop

competently to many of the wilder places of the world. But I always came back to the C&O.

To me the C&O is more than just a nice place to hike, ride a bike, or paddle. It is that unique blend of nature and history that appeals as much to my sense of the wonder of nature as it does to my sense of history. It is also a place of people, from the Native Americans, who left their slight elusive marks along the Potomac River, all the way to the modern folks that travel from far places to visit. We should also not forget the National Park Service personnel that do such a fine job of taking care of the place, even though they are often understaffed and underfunded.

Level 34, though, is a bit different for me personally as it has the element of bittersweet memories. It was my late son's favorite place to be on the canal. Having the opportunity to be a level walker on this particular part of the canal and to take care of a place my son and I both loved together, and for all of the other reasons stated above, I see as a privilege and an obligation.

References:

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Towpath/Detour Options for Big Slackwater, Final Report, prepared by Dewberry & Davis, Fairfax VA., 1998

Geology of the Chesapeake and Ohio Canal National Historic Park and Potomac River Corridor, District of Columbia, Maryland, West Virginia, and Virginia, Professional Paper 1691, U.S. Department of the Interior, U.S. Geological Survey. 2008

Towpath Guide to the C&O Canal (revised edition), Thomas F. Hahn, Harpers Ferry Historical Association, Harpers Ferry, W.Va. 2015

And many thanks to Karen Gray for kindly sharing her knowledge.

On the Level

By Steve Dean

The COVID-19 pandemic has affected virtually everything, and volunteer activity on the C&O Canal is no exception. Thanks to the efforts of the National Park Service, volunteer programs have gradually resumed. Each program has restarted activities in different ways, depending on the unique mission and requirements of the program.

The Level Walker program started to progressively resume activity in July and, to date, almost half of the level walker team has reactivated. Level walkers are reactivated a few at a time, when permission is given by the NPS. Some were eager to return, while others preferred to wait a while. The initial returning level walkers were people who had either asked about resuming, or have a recent history of frequent level walking activity. The level walkers who have returned have had their work cut out for them – visitation is up, resulting in more trash, wear and tear. The NPS is operating on a limited basis, so volunteer help is quite welcome.

If you are a level walkers who has not reactivated yet and would like to, please get in touch with me. You will be considered for reactivation when more return positions are authorized. Returning volunteers must review and acknowledge three NPS training documents, and complete a revised Volunteer Service Agreement (VSA) with specific COVID-19 wording. These are mandatory NPS requirements and until an individual completes these steps they are not authorized to serve as a park volunteer.

Level 4 Cabin John Creek to Lock 14: Alyson Miller reports July 28: The Lock 8 grounds were mowed. They looked much better. Wisteria and other weeds are quite extensive here and have taken over the prism walls beside the lockhouse. Earlier I reported to the NPS that a very large tree had fallen on the grounds of the lock house. The tree was since removed. One picnic table in the Lock 8 parking area had been thrown in the woods. There was quite a bit of trash in the Lock 10 parking area, which I removed. During the earlier phases of closure due to COVID-19, I walked the area and rode my bike a lot. The parking lots were usually full, and the park was full of visitors. There was also a lot of trash. I noticed some people picking up trash.

Level 10 Seneca Aqueduct to Milepost 25: Monica Hanna reports July 18: In spite of the high humidity and temperature, Level 10 was very busy. Noon on this Saturday brought over 50 bikers and three families, including four children in the picnic areas. A group of 10 young adults congregated near the aqueduct. Two men were filming something, perhaps a lone female paddle boarder. I saw nobody wearing a mask, except me. The trees and bushes on the level appeared healthy and the basin was not green like it was in July last year.

The recent interruption and restart are somewhat of a reset of the Level Walker program. There are specific requirements to serving as a level walker, so all volunteers are reestablishing their role in the program. As noted in the previous paragraph, level walkers must complete the NPS training and VSA. Additionally, level walkers must be current C&O Canal Association members and active – which means walking at least once a year and submitting a report. If a volunteer does not complete the NPS requirements, lets their Association membership lapse, and/ or fails to submit at least one level walk report in a year, then under the Association's rules and NPS regulations they are considered inactive.

With that, if you have lapsed on any of these requirements and want to resume as a level walker, or if you requested a level walker assignment and it was never completed for some reason, please contact me at levelwalker@candocanal.org.

This report includes May through July activity. Summaries of reports on dates before the formal reactivation of volunteer activities in July reflect findings from informal visits to the park by level walkers. It is evident from the report that the level walkers have been keeping very busy. A big word of thanks goes to all of them. We'll keep working at getting more level walkers out there soon!

Level 11 Milepost 25 to Sycamore Landing: Pat Hopson reports July 5: There was only a small amount of trash along the level and only small bits of trash at the Horsepen Branch Hiker-Biker. I didn't notice the yellow tabs on trees that I mentioned in my March 8 walk, so I think the Park Service has removed those diseased trees. There were several spots where there was ground-up sawdust on the side of the tow-path, and I assume that was from the removed trees. I noticed phlox blooming in a few places and a stand of blooming wild bergamot at about Mile 26.8; that was a treat.

Level 12 Sycamore Landing to Edwards Ferry: Pat Hopson, with Ray Abercrombie, Carol Ivory, Ron Wise and Frank Wodarczyk reports July 11: I made a pre-visit on July 10th and noted some potentially unhealthy trash at Edwards Ferry; thankfully the National Park Service had removed it by the next day. The weather was challenging — partly sunny, hot, and very humid. The combination sapped all of us to some degree. Some previously noted graffiti at Jarboes Store was also removed; possibly by Jim Tomlin. The towpath was in good condition and quite busy. There was plenty of trash to remove. Level 15 Whites Ferry to Lock 26: Jon Wolz reports July 13: It was a nice day for a walk on the towpath. There were 25 bikers and only two had face masks; the only walker I encountered did not have a face mask. The towpath was firm and smooth the entire level. There were some large trees that had recently been removed from the towpath. The grill at the Marble Quarry hiker-biker camp is still broken. There were numerous turtles sunning on logs in the prism and a very large snapping turtle. There were several zebra swallowtails butterflies out. I noted five different barred owls perched on tree limbs or flying. Paw paws were getting large on the trees.

Level 16 Lock 26 to Monocacy Aqueduct: Jon Wolz reports July 27: There were fresh hoofprints in the towpath and manure in places. The NPS recently cut the tall grass/small trees along both sides of the towpath from White's Ferry to the Monocacy Aqueduct. Five cyclists were noted; all without face masks. One walker was observed, with a face mask. The gutters on the Lock 27 house need cleaning out again. They are full, with several small trees growing. The dying giant silver maple tree at Lock 26 has not lost any recent branches. The large branches that were down several months ago have been removed. There is beaver activity now about Mile 41.5. Japanese stilt grass is growing along the towpath near Milepost 42.

Level 17 Monocacy Aqueduct to Nolands Ferry: Earl Porter reports May 15, June 19 and July 15: The towpath was in great condition during all three walks, but some minor erosion was noted in places on edges. Trash was at a consistently high level during the monthly visits. The road into the Monocacy Aqueduct parking area is in increasingly worse condition. Visitation noted was at a high level on each date. In June only arch 7 of the aqueduct was blocked, but in July arches 1, 4 and 7 were blocked.

Level 19 Point of Rocks to Catoctin Aqueduct: James Spangenberg reports July 14: Considering that it was a Tuesday, the number of cars parked at Point of Rocks and Lander, as well as the number of bikers and walkers on the towpath, was remarkably high. The crushed stone dust towpath surface was very smooth and undamaged. The NPS had recently mowed the greenery adjacent to the towpath from Point of Rocks to Lander. The Point of Rocks and Landers areas were cleaner than I expected.

Levels 21 through 24 Lock 30 to Dargan Bend: Tom Crouch reports July 2 (21 – 24), July 7 (21 – 24), July 10 (21 & 22); July 13 (21 – 24), July 16 (21 – 23) and July 20 (21 & 22): Trash conditions, especially on levels 21 and 22, are extensive in this area and frequent clean-ups are needed. Trash is often dumped again overnight after a clean-up. Weverton has the most significant issue, and trash is frequently deposited by the "Trash Free Park" sign in the area; possibly by persons bringing their trash on the park to dump. The NPS is aware of the issue. *Special thanks to Tom for his frequent efforts in this area.* Fallen trees and branches were often encountered and reported. During the July 7 walk it was noted that the pedestrian bridge to Harpers Ferry was reopened.

Level 25 Dargans Bend to Lock 37: Barb and Dave Collins report July 26: It was a very hot day. One large branch had fallen across the towpath and was reported. There was only light trash on the level. We did not see any new damage at Culvert 97. The new towpath surface is in good shape there.

Level 30 Snyders Landing to Lock 40: Charles Connolly reports July 20: Towpath conditions were excellent except the great work done dealing with the rocks near Mile 78 has settled over time leading to uneven surface. I had to duck or swerve to avoid many branches hanging over towpath – not unusual amount – it was typical for the summer. Most trash was in the Snyders Landing area.

Level 31 Lock 40 to Marsh Run Culvert: Jennifer Bean reports June 28: All areas on the level were clean. The towpath surface was in good shape, with only a couple minor muddy spots. The only plant I saw blooming was jewelweed. I saw numerous bikers, including a small touring group, and several dog walkers.

Level 33 Dam 4 to McMahons Mill: Dick Stoner reports July 15: I noticed sumac and some sycamore seedlings. In an unmowed area above Milepost 87 I noted Johnson grass, which is a potentially harmful weed. Almost no trash was observed, even around the Dam 4 boat ramp. At McMahons Mill I encountered a family with two small children making their first visit – they were taking in the sights of this calm, quiet stretch on a weekday and started on a walk northbound.

Level 34 McMahons Mill to Opequon Junction HBO: Trent Carbaugh reports July 20: It was ridiculously hot and humid. I went from the McMahon's Mill parking lot to Lock 42 and collected four kitchen sized trash bags worth of beer cans, whisky bottles, bait containers, and assorted and sundry other detritus of folks who have never heard of Leave No Trace (nor probably ever care to) and decided to decorate the park. The recurring sinkhole on the last stone causeway has a barrel in it, which appears to have been placed to isolate the hole. I will be going back soon to get some more trash. I rode the whole level two weeks before just to see how bad it was going to be and most of this trash was not there.

Level 37 Falling Waters to Lock 44: **Jim Tomlin reports July 24 and 30**: I covered the upper part of the level on the 24th. I walked as far as Milepost 97, then turned around. The humidity was oppressive. I flicked a few sticks and picked up a small amount of trash. The park had recently mowed the sides of the towpath, which made for much easier trash collection. There were new signs at bridges crossing the canal at Lock 44

telling people not to ride horses across the footbridges. On the 30th the heat and humidity was again oppressive. I walked the lower end of the level, then turned around. There were lots of people bicycling, including what looked like two overnight groups. The holes in Culvert 121½ looked like they might be larger. It is hard to tell because the culverts on this level have not been mowed this year and the stilt grass was very tall and lush.

Level 45 Ernstville to Licking Creek Aqueduct: Dennis Kubicki reports July 7: I found little trash, but I did handle trash in accordance with the updated NPS Job Hazard Analysis and COVID-19-related safety guidance. I treated risky items as being "contaminated" with the virus. The towpath from Fort Frederick through to the Licking Creek Aqueduct was in good condition – still reflecting the resurfacing that occurred in 2017. Except for the river side of the towpath the bordering vegetation was overgrown. Additionally, there are places on both sides of the path where branches of varying types have extended well into the plane of the path. Finally, at approximately Mile 114.9 a tree completely blocked the towpath.

Level 47 Little Pool to Hancock: Mike and Judi Bucci report May 27 and June 22: Temperatures were in the 70s for both walks. Trash was generally minimal. Tree of heaven (ailanthus) is growing out of river side upstream wall of the Tonoloway Creek Aqueduct and will loosen stones. We trimmed back a lot of overhang in June between the Bowles House and Hancock.

Level 49 Round Top Cement Mill to Lock 53: Paul Petkus reports July 4: During my earlier informal outings it was apparent that the park is a popular destination during the pandemic. I think I've seen more families in areas of the park where I haven't seen many of them in the past. So, based on my recent experience I was a bit surprised that I saw as few people on the towpath on this holiday as I did. From the sounds emanating from the flotillas on the Potomac River throughout the afternoon it was apparent that more people opted for an afternoon on the river rather than the towpath or rail trail. Conditions observed were typical of early summer. The vernal pool that existed in Mile 128 in February has dried up. The towpath was in good condition overall. A small portion of the towpath has washed out at approximately Mile 128.9. It presently isn't a problem for anyone who is paying attention to what's ahead in the direction of travel. It needs to be monitored and checked after heavy rainfalls for any further degradation. Erosion was evident in the prism adjacent to the towpath of the unofficial trail that leads to the rail trail at Mile 128.5.

Level 54 Lock 59 to Lock 60: **Dennis Kubicki reports July 8:** I usually report that Level 54 is generally free of trash. That was not the case today. I found items from Lock 59 through

to Lock 60. They included small pieces of food wrapping, a smashed soft drink can, one "flip flop," (How does one lose only one?), and tissue paper. The flip flop and tissues were considered contaminated material. Visitation was moderate – although I maintained at least 6 feet of distance from the people that I encountered, I noticed that none of them wore masks. From Little Orleans to about Milepost 144 the tow-path was in generally good condition. The surface was even with only the occasional rut or pothole. But from Milepost 144 until Lock 60 I observed a significant level of degradation. In many locations there was deep rutting and pits. I have not seen any pothole repairs within recent memory.

Level 55 Lock 60 to Culvert 208: Paul Petkus reports July 18: A typical number of people were on the towpath in comparison with my past July visits. I observed a pair of bicyclists who appeared to be riding rental e-bikes. I was the first time I've seen an e-bike on the towpath. They were pedaling at a speed consistent with bicyclists out for a casual ride, and were no different than any other park visitor. Scattered puddles on the towpath were evidence of a recent rain shower. The towpath was slightly muddy in spots, but it was in good condition overall. Very few branches littered the surface. Lock 60 and Culvert 208 were both in good consition with no apparent changes. The water level in the prism was typical for this time of the year. Many frogs were also present in the prism. In one small area I saw and photographed at least seven frogs. One of them was the star of this outing's Creature Feature. Technically, it was almost a frog. It still had its tail, so it hasn't quite completed the transition from tadpole to frog. Turtles were present in large numbers.

Levels 65, 66 and 67 Spring Gap Recreational Area to Evitts Creek: Trent Carbaugh reports July 19: All three levels looked fairly good. The grass on Levels 66 and 67 was recently mown; Level 65 had not been mown recently. There were many limbs down on all three levels with a tree down across the towpath Mile 174.3. This was called in to the park and I did manage cut enough limbs away to allow passage. Weather was clear, mostly, but very, very, hot, with the added joy of high humidity. It was a high reptile day on the towpath as well; a large common brown water snake at Lock 75, a medium sized red slider on the towpath, a very aggressive small snapping turtle that came after me as I was attempting to get his good side by camera, and a small red slider who had taken up residence in a puddle on the towpath. I introduced this little guy to the canal as I didn't want him to get run down by a bicycle. I also was treated to two green herons at Evitts Creek, which of course could not bring themselves to sit still long enough for me to change lenses. There were seven walkers and six bicyclists, one of whom was riding from Seattle to Washington D.C. I collected one very full 30 gallon bag of trash.

Accompanied by the Past

By Karen Gray

History is the witness that testifies to the passing of time; it illumines reality, vitalizes memory, provides guidance in daily life, and brings us tidings of antiquity. Marcus Tullius Cicero (106–43 BCE), Pro Publio Sestio

1865–1867: Restoring the Multi-City Eastern Terminus¹

In the years of the war, the canal company, the boatmen, and all whose business or income was totally or heavily dependent on the canal faced continual difficulties and losses due to war actions. In addition, there was severe disruption to the labor force as many went to war for one side or the other. Then, as the unionists gained power, suspicion and paranoia hardened toward anyone who at any time or in any way had shown rebel sympathies or alliances—or was suspected of such. In consequence boatmen, canal company employees, and some of those who administratively or politically had supported the canal were sometimes fired or forced from their position.

Those who shipped on the canal found the number of freight boats declining and the canal company found itself sometimes having inadequate boats and scows for maintenance and company-use. With the government requiring the canal to stay open as much as possible, even in the winter, the company was caught in a catch-22: unable to do the maintenance it should and forced to keep the canal open.

Perhaps the most dramatic change concerned the canal's tidewater terminus. At the start of the war in 1861 canal boats were using a system of three canals to serve the capital area: the C&O, with its Georgetown terminus; the Washington City Canal, and the Alexandria Canal. The boats were going by canal directly to wharves in all three cities, as well as entering the river at the tidelock to be taken by tugs to their river wharves. However, with the outbreak of the war, Union forces took over the Potomac waterfront, closing the tidelock and Rock Creek Basin where silt and debris would gather and the structures would deteriorate. Additionally, the Alexandria Canal closed when the Potomac Aqueduct was turned into a road bridge serving the Union forces that held control of a large chunk of Virginia across the river from Washington and Georgetown.

Suddenly the canal boats were landlocked with only the wharves along the canal in Georgetown and their connection to its waterfront (35 feet lower and a long city block away), to serve the canal's cargoes arriving at the terminus. For the people in Washington and Alexandria who were formerly served by their city's wharves, supplies coming down the canal now had to be carried in freight wagons to their localities at a significant increase in cost—for coal an additional \$1 a ton. At the same time commercial shipping on the Potomac dropped dramatically and sometimes ceased entirely. Although the District's military needs grew, the loss of transshipment business to coastal and tidewater commercial traffic was significant.



The Georgetown trestles allowed coal to be transported from the canal to the waterfront, but then it had to be lowered into holds of the ships or dumped down – which broke the coal up badly. Image courtesy of the C&O Canal National Historical Park, National Park Service



Georgetown waterfront – 1865

1865: The War's Over-What Can Go Wrong?

With Lee's surrender on April 9th, the war for Virginia and Maryland was essentially at an end. At a later date, a canal official commented that typically 18 days are lost every boating season to stoppages of navigation *other than* the major floods, boatmen or miner strikes, or exceptional anomalies. However, as the C&O Canal's first post-war boating season developed, it turned out to be a particularly bad one for interruptions to navigation from the most common causes.

One of the major "ordinary" disruptions to canal traffic was the washing out of a section of canal berm due to the river running somewhat high or simply a weakness or leak in a berm. In 1865 the company experienced 11 such breaks between March (when a 40 ft. long and 10 ft. deep section of towpath below Cumberland gave way) and August (when a similar break, 30 ft. long and also 10 ft. deep) occurred on the same level. Unfortunately, all the breaks that year were bad, taking from five to 16 days to repair.

Another "ordinary" cause of boats being held up was broken gates. In 1865 this happened on five different occasions, two of them due to boats hitting the gates. Indeed, boats breaking gates was a recurring source of local stoppages and replacing or repairing a gate, whatever the cause, normally took one to two days, depending on the extent to which the affected canal section had to be drained and rewatered.

Between the stoppages for berm breaks and broken gates, some 50 to 60 days of navigation appear to have experienced significant interruptions, preventing boats from traveling efficiently up and down the canal. not pass under them without lowering the water level when they were light and riding high in the water. With increasing use in the 1850s of the tidelock and Washington City Canal (WCC) branch, that had become a major terminus issue.

As for the Alexandria Canal, the military continued to control the Potomac aqueduct bridge in 1865, keeping its future on hold. Washington, for its part, began to look at options for the WCC, which had largely become a silted-in putrid sewer—indicative of the city's need for a sewer along much of the canal's route. Of course, Washington also recognized that C&O canal boats' access to its canal and river wharves was tied to the C&O's Georgetown Rock Creek terminus issues.

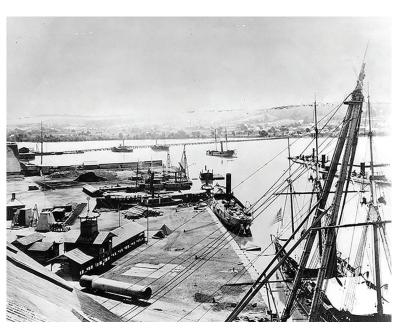
However, the transshipment of coal, especially at the District terminus, to ships coming up the Potomac was again becoming important as indicated in a September 30 notice in Washington's *Evening Star*:

There continues to be a demand at the docks for vessels fitted for the transportation of coal to distant ports. The shipments from Ray's Docks amounted to 4,550 tons; from the Cumberland Co.'s wharf 1,617 tons; Borden Co's. wharf 62 tons; Hampshire and Baltimore Co.'s wharf 1,869 tons.

1866: Washington and Alexandria Against Georgetown

On May 3, 1866, the Alexandria city council leased its canal to three businessmen for 99 years at \$1,000 a year. Restoration of the canal began even before the Potomac aqueduct was available—and in Georgetown the opinion quickly hardened against the reopening of the Alexandria Canal and its

With the end of the war in the region, throughout the three cities, people began to anticipate the return of the canal boats to their canal and river wharves. But that required reopening the branch canals as well as the river outlet at the Rock Creek Basin and tidelock. However, the Rock Creek Basin access to both the river and the branch to Washington's canal was hampered by the low bridges in Georgetown over the canal. Prior to the war it had been found that the large freight boats with high cabins that were built in Cumberland could



The Washington Navy Yard in 1866. Canal boats carried coal there until the canal closed.

Potomac Aqueduct converted back from road to canal use. At issue is the road connection between Virginia and Georgetown that had historically been limited to a ferry or to the Chain Bridge three miles up the river, and the Long Bridge between Arlington and Washington. Without a Georgetown Potomac bridge, the town was isolated from commerce with nearby Virginia. Significantly, many in Virginia also supported the Potomac Aqueduct remaining a vehicle and pedestrian bridge to Georgetown.

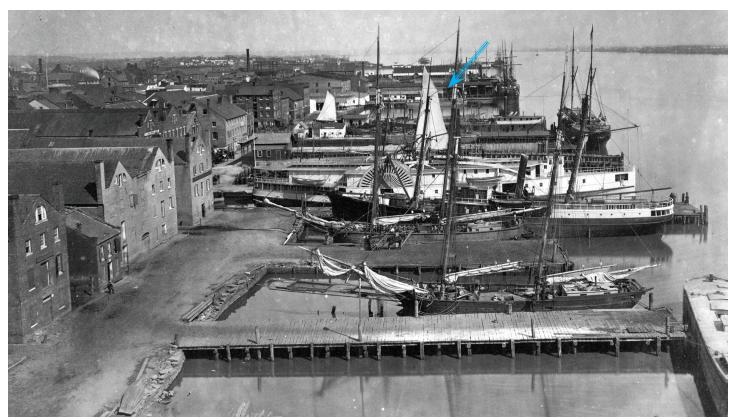
However, Georgetown was opposed not just to the restoration of the Alexandria Canal, but also to the Rock Creek Basin and tidelock, as it had greatly benefited from the C&O Canal boats being limited to its canal wharves during the war. The town had not forgotten that, by 1861, hundreds of canal boats had bypassed it, carrying their cargo to Alexandria and its superior port, or continuing to the Rock Creek Basin outlet or the short connecting branch canal to the Washington City Canal.

Meanwhile the possibility of a canal between the Chesapeake Bay's Severn River and the Eastern Branch/Anacostia, began to look like it might actually happen with the organization of the Chesapeake Bay and Potomac River Tidewater Canal Company. During the year three possible routes were surveyed by an engineer and, in November, a report detailed the preferred route. However, the company and its dream subsequently disappeared.

The year also was not good in terms of interruptions to navigation. Although there were only seven breaks in canal berms and only two broken gates, an estimated 35 days were lost due to shutdowns for repairs. Additionally, a break in Dam 1—a simple rubble dam—added to the growing tension between the canal company and the millers in Georgetown who relied on adequate water in the canal not only to run their waterpower machinery but also to bring the canal boats carrying grain and corn. If the Alexandria canal were reopened and boats were passing again through the four locks at the eastern end of town and into the Rock Creek Basin, large amounts of canal water would be used for those purposes and the frequency with which the Georgetown mills experienced disruptions due to inadequate water would increase.

Quite aside from the matter of the branch canal to the WCC, Washington was eager to see the Rock Creek outlet basin, dam, and lock restored so canal boats could enter the river and be taken to the wharves between the tidelock and Easby Point. A New York line of steamers was using its G St. wharf there and, during the war, the government had found its channel and waterfront to be significantly more convenient than Georgetown's. Indeed, the G St. Wharf had become "a depot for all kinds of supplies" according to a lengthy May 5, *Daily National Intelligencer* article.

Some Georgetown leaders mounted an attack on the raising of the bridges, knowing how they served to discourage the river wharf and WCC traffic. They also attacked the Potomac Aqueduct, championing Georgetown's need for a road and pedestrian bridge and noting that the aqueduct prevented larger sailing vessels from passing to the waterfront above it where some of the town's businessmen desired to improve the wharves. Some even called for the aqueduct to be replaced with a bridge that would have a section that could be raised like that in the Long Bridge to allow the passage of the taller sailing vessels farther up the tidal Potomac.



Alexandria waterfront in 1865. The blue arrow indicates a C&O canal boat (behind the boat with its large white sail up).

Georgetown lost its battle over the canal bridges, the replacement of which began in 1866 and was finished in early 1867. The battle over the aqueduct, however, produced multiple incidents, newspaper editorials, and letters to the editor during the year. The town's leaders pressured Congress and the military to retain the aqueduct as a road bridge and there was even a suggestion that the Alexandria Canal be extended up to the head of Little Falls where a connection with Inlet No. 1 could be created for C&O Canal access.

In May of 1866, with the Potomac Aqueduct still in government hands and to the consternation of the people in Georgetown, work began on restoring the Alexandria canal to usability, including its short aqueduct at the Four Mile Run. As the summer progressed rumors and activism by Georgetown citizens resulted in confusing incidents in which the lessees, military, and the people of Georgetown reflected competing understanding of the aqueduct's status. On one occasion in July, a warrant was issued for the arrest of the lessees' contractor who was driving piles under the aqueduct (still open to road and pedestrian traffic). The piles were, in fact, not provided for in the canal's charter, and ultimately were removed.

Bowing to heavy pressure from Alexandria, on September 26, 1866, the military turned the aqueduct over to the lessees of the Alexandria Canal and on October 1, the Potomac Aqueduct bridge was closed to vehicular and pedestrian passage and work on restoring the trunk of the aqueduct begun. In an Oct. 1 article on "Georgetown Items" in the Washington Evening Union, the complaint appears that Georgetown was in danger of becoming "a mere station, instead of the main terminus of the Chesapeake and Ohio Canal." By mid-November enough water had been let into the aqueduct to reveal that "little streams are pouring out from the bottom and sides of the trunk in many places, and if they increase in size as rapidly as they have in number, the aqueduct will be of but little use to the canal company."

During the year, the contentious issue of the Alexandria Canal was sometimes made more confusing and divisive by rumors that the lessees intended to allow a railroad to be built on its berm and on the aqueduct piers and abutments—speculation usually centering on the B&O or the Orange and Alexandria Railroad. Late in the year, that possibility led to a bill promoting the railroad idea being submitted to the Virginia legislature.

On December 22, Alexandria's City Council unanimously approved a resolution stating (among other things) that it was "not adverse to a sale of the privilege of erecting a railroad over the aqueduct and on the berm bank of the Canal" **but only** "if a proposition is made for its purchase, and the contracting parties come to such terms as will secure the compensation and a permanent structure for Canal purposes over said aqueduct." In other words, they would agree to having both a canal and railroad, and getting paid for the canal properties used! Alexandria's Common Council took the position that the lessees "shall first compensate the city of Alexandria for the use of said berm bank and aqueduct piers" if they were to be used for a railroad.

On January 12, a *Gazette* article regarding the canal stated: "We want every possible safeguard thrown around this [the canal], our last artery of trade. – Losing the Canal, we lose all." Ultimately the railroad option died, and lessees decisively rejected it themselves.

1867: Georgetown Loses Its Monopoly

On January 8, 1867, the Alexandria *Gazette*, anticipating the canal's reopening at the beginning of the boating season, printed a lengthy article that included the following observations:

The farmers all along the Chesapeake and Ohio Canal, are looking to the Alexandria Canal as affording them the only cheap outlet to the eastern markets for their grain. If they send their wheat by rail, to Baltimore, they have to pay about thirty-eight cents per bushel for transportation. They can send the same wheat to the same market, by the Canal, for about ten or fifteen cents per bushel.



Washington waterfront. The blue arrow shows a canal boat at a wharf.

Hence, the Canal will bring an immense amount of grain to this city for shipment to the eastern markets.

With the grain, it will also bring horses, cows, pork and a part of almost every article of produce of the country through which the Chesapeake and Ohio Canal passes; and in return carry back fish, oysters, stoves, tin ware, hardware and merchandize generally.

Even the tow-boy will not leave without spending his dollar or two, in this city; and hardly one member of the business community of Alexandria will fail to be benefitted directly or indirectly, by a communication of two hundred miles with a wealthy and populous country.

The coal trade alone, is worth, to Alexandria, about forty thousand dollars a month, and one merchant on King street, sold annually, when the Canal was open, ten thousand dollars' worth of dry goods to the town of Hancock.

In mid-January it was reported that two of the Maryland coal companies that had been operating in Georgetown, had taken a five year lease for a coal wharf on certain property in Alexandria south of and adjoining that city's Pioneer Mills. With a superior port to Georgetown's in terms of its depth and ease of access, it was virtually inevitable that Alexandria would begin to attract to their waterfront at least some of the companies that had been forced to use Georgetown's canal wharves during the war.

On March 28 water was admitted from the C&O Canal to the Alexandria Canal and an American Coal Company boat left Cumberland for Alexandria. On the 29th it was reported that invoices for several more cargoes had been received (telegraphs were used for such notifications at the time).

On April 2 the Gazette triumphantly declared:

Navigation on the Alexandria Canal, after a total suspension for six years, has again been resumed, and with—as everyone interested in Alexandria's future prosperity will be pleased to learn—every prospect of an uninterrupted continuance during the rest of the season. The article also mentioned that the level of the water on the Georgetown level of the C&O had been increased. That resulted in the Alexandria canal attaining a depth four inches greater than previously, putting greater pressure on its berms than the old canal had sustained, and necessitating the raising of the sides of the canal six inches—a project rapidly and energetically worked on. In addition, the sides of the basin above the locks to the river, were sodded to prevent washing.

All was not well with the Alexandria Canal, however, as within a few days a significant break occurred near the Four Mile Run Aqueduct and the Potomac Aqueduct was determined to be leaking so badly that it created a current at its connection with the C&O sufficiently rapid that boats continuing down into Georgetown had trouble getting past. Ultimately in June the Potomac Aqueduct would be closed to navigation and not opened again until the wooden trunk had been rebuilt.

By this time all the bridges over the canal in Georgetown had been raised and the C&O Canal Company was busy cleaning out the Rock Creek Basin and repairing the dam and tidelock with predictions that they would be ready by fall. Needless to say, Georgetown's powerbrokers renewed their attack on the Alexandria canal, arguing that tugs could take canal boats from the Georgetown outlet to Alexandria's wharves, as well as to Washington's Anacostia River wharves. Thus, the Alexandria Canal was unnecessary!

Nevertheless, Georgetown would again lose. The aqueduct would be rebuilt and the Alexandria Canal reopened in 1868; the Rock Creek outlet in late 1867 would again provide for tug-pulled canal boats to serve all the waterfront wharves in the three cities, The situation with the Washington City Canal (and thus the C&O branch to it) remained the subject of debate and studies until late 1870, when a contract was let for its dredging. In reality, it never became a part of the C&O's eastern terminus waterways again, although some of waterfront wharves in both Washington and Alexandria would continue to be visited by canal boats until the canal's last season of 1923.

Note:

1. The primary source for this information is found in newspaper articles transcribed by William Bauman in his canal trade searchable pdf files on the Association's website: www.candocanal.org/ histdocs/newspaper.html



Volunteers in Parks

By Jim Heins

Crawling Out From Under a Rock

Where did the summer go? My yard has never gotten so much attention and the park, so little. But it appears we are final-

ly able to gradually and carefully emerge from our house arrest. Following strict guidelines from Park Service, we are returning to our beloved park to try and spruce it up and make some of the necessary repairs and improvements we have looked forward to since going into hibernation last winter.

The VIPs of our association held a rain soaked partial cleanup of the Swains Lock area last month followed by a good trash cleanup by Ned Preston just recently. The area is looking pretty good, particularly considering it is being used extensively during this pandemic.



Several of us reported to the Monocacy Aqueduct recently to reposition several of the nomadic picnic tables and anchor them down in an attempt to avoid their being washed away during "high tide."* Also on the horizon is the installation of an additional six new benches which should be ac-

complished prior to when this newsletter appears in the mail.

We are still awaiting action/ approval by the park to install waysides developed and prepared by our association at Carderock.

Other projects that had been considered for this year will remain on the drawing board until COVID-19 is under control and it is safer to proceed.

* river flooding

Jim Heins, Doug Zveare and Dave Shumaker install a picnic table – Photo by Jon Wolz

A Fallen Champion

By Marney Bruce

During a January walk on the Valley Trail on the Gold Mine Tract, I saw that the State Champion mockernut hickory had split in two. One trunk fell across the trail and the other trunk fell up the slope. In June, Ralph Buglass, Ginny Barnes and I went out to give this giant our last respects. I read a piece I wrote and tucked it in a hole in the trunk.

A tree once so tall and mighty has fallen on the Valley Trail

Who will fix this hole in my soul now that you are gone?

What amazing sights you must have witnessed!

Who will dance with the wind now that you are gone?

The memories are kept in your rings of birds and squirrels and man's great follies.

Who will host the wonderful mosses and fungi now that you are gone?

But there is still life around your base in soft and dewey moss.

Now you will live on in another form, giving life to myriad organisms. I will miss you my friend.



A Butterfly Outing in Western Maryland

By Paul Petkus – Nature Committee Chair

Due to the pandemic, the Association's nature walks on the C&O Canal, including the butterfly walk, were canceled this year. Other organizations made similar decisions. The group butterfly surveys in Howard County, Maryland that I've participated in during recent years were also canceled this year. Although outdoor activities are safer than indoor activities, they are not without risk. Additionally, butterfly activity in the region has been lower than normal in June and July. The prospect of seeing few butterflies during the outing made the decision easier to wait for better things in 2021.

My best butterfly outing on the towpath so far this year was in mid-May. It was my first outing to the park in the spring, when I decided to visit the park after the stay-at-home order in Maryland was relaxed. I am a level walker and support two levels in western Maryland. One of the levels is in Washington County about 3.5 miles upstream of Hancock. The other one is in Allegany County located about four miles downstream of the Paw Paw Tunnel. Based on my experience supporting those levels, I knew it's much easier to practice social distancing in Western Maryland than at parks near my house. So, with bike and camera, I set out to observe nature while getting some exercise and fresh air. It ended up being a great outing for observing nature. I saw four wood turtles on the towpath. American toads were calling. It was also a great day for viewing and photographing birds. I briefly chatted with a bird watcher who was excited to see an indigo bunting in the short time he had been out. I didn't see an indigo bunting, but I saw and photographed other birds. They weren't the stars of the day for me, however. The butterflies were. I saw at least sixteen species throughout the day. Since my outing didn't involve a level walk, I didn't take notes. I believe there were species that I saw that I didn't get photos of, but I don't recall what they were.

On many outings in the past, I've had good luck seeing butterflies around the Devils Alley camping area. On this outing they were very active in that area. In fact, the butterflies were numerous for a one mile stretch running upstream from that campground. That was the area where I saw the greatest variety of species on this trip. The butterflies were attracted to the dames rocket, in peak bloom, which lined that stretch of towpath. On my outbound journey, I decided to walk through that area. It was a beautiful day. I was in no hurry and there were a lot of great photos to be had. After the wildflowers and butterflies thinned out, I resumed my bike ride.



Spicebush swallowtails on the towpath - All photos by Paul Petkus

It quickly became apparent that I probably wouldn't see another area comparable to it that afternoon. I originally planned on taking a longer bike ride, but I turned around and returned to it after only traveling one and a half miles upstream from it. I spent the bulk of the remainder of my outing enjoying the beautiful spring activity in that area. Bike riding seemed less important.

The butterfly species I confirmed seeing included cabbage white, cloudless sulphur, eastern tailed blue, monarch, painted lady, pearl crescent, pipevine swallowtail, sachem skipper, silver spotted skipper, spicebush swallowtail, sleepy orange, tiger swallowtail, wild indigo duskywing, Zabulon skipper, zebra swallowtail and a hairstreak of some kind. I may have seen others. I didn't take notes, so I can only rely on the photos that I took that day for confirmation of which species were present.

Swallowtails were present in large numbers throughout the day. Spicebush swallowtails were the species most commonly seen overall. In Mile 143, a group of them puddled on the towpath to extract nutrients from it. They were also present anywhere wildflowers were blooming. I took many photos of them throughout the day. Without the photos, it would have been easy to miss the presence of a similar species such as the pipevine swallowtail. Note they only have one row of large orange spots where the spicebush swallowtails have two rows of orange spots. Sightings of tiger and zebra swallowtails were also common. They were also easy to photograph as a result.

Getting photos of some of the other butterflies could be challenging at times, but in a fun way. If I miss an opportunity for a photo, there's always a chance that I'll be successful at another time. Sometimes I only get one chance in an outing, but I only know for sure at the end of the day. And if I'm unsuccessful on a given day, maybe I learned something that will help me get that elusive photo the next time out.









Top to Bottom – Monarch, pearl crescent, pipevine swallowtail and silver spotted skipper See page 21 for more butterfly photos.

I think I saw an orange sulphur flying around the camping area. It never landed in an area long enough for me to get its photo. It flew off any time I came close to getting it framed and the camera focused on it. That was a missed opportunity for the day. The photo that follows on the left is one of an unidentified hairstreak. It turned to face me by the time got it in focus with my camera. After I got a couple of photos of it looking directly at me I tried to move to try to get a photo of its markings on the side of a wing. Alas, that didn't work out well. It flew off as soon as I moved. It was the only hairstreak that I saw that afternoon.

At other times I was a bit luckier. I got a photo of a sleepy orange and then, as luck would have it, the battery in my camera needed to be replaced. By the time that I got a spare battery out of my backpack and into my camera, the butterfly flew off. I didn't see another one of that species the rest of the day, but at least I got the one photo. Earlier, I got a couple photos of a partially obscured monarch before a passing bicyclist caused it to fly off. It took a few hours, but fortunately I saw another one visiting the dames rocket near the Devils Alley camping area. I was able to get some great photos of that one.

It pays to be patient and to keep looking. Most of the eastern tailed blue butterflies I saw were too active to photograph. As I made the return trip to my car I happened to spot one puddling in the prism at mile 143.3. I ended up with some of the best photos of it that I could hope for. Sometimes it's simply best to be at the right place at the right time.

It was a fun day. Getting photos of sixteen different species was better than I expected for a spring outing. At the time, the emergence of so many butterflies seemed to be a hopeful sign that things were returning to normal. It didn't turn out that way since it looks like it's going to be a longer and bumpier ride to normal times. In the meantime, observing butterflies will continue to be a pleasant diversion.

Along the Towpath, September 2020

Nature Notes

By Marjorie Richman

The Underappreciated Kingdom

Around 3200 B.C. a lone traveler set out to cross the Alps. He died and was entombed in a glacier. The glacier slowly carried him down the mountain and deposited him, exposed, close to the Austrian-Italian border. A well preserved 5,000 year old man is a remarkable find, but most remarkable for my-cologists is the fact that the Ice Man (as he came to be called) carried three carefully packed fungal products with him. One was identified as a fungus used as tinder. It makes sense that the Ice Man planned to start a fire. The other two packages contained fungi used in herbal medicine for such ailments as fatigue and wound treatment. The use of fungi for human needs, going back 5,000 years, simply confirms what we all know: fungi are important.

What is less known is that fungi are not plants. Until as late as the mid-1960s, fungi were classified as members of the Plant Kingdom. Many people probably still think of fungi as plants. After all, they look like plants; they grow in the same places; many provide food, such as mushrooms; and they are immobile. In the 19th century scientists realized that certain fungi cause diseases that damage crops, once again confirming a relationship with plants. Perceptions changed with the development of sophisticated methods to study plants and animals. Fungi are now classified within their own kingdom, the Fungi Kingdom.

The kingdom is vast. It consists of tiny, unicellular yeast, which we use in making bread and wine, as well as the largest organism on our planet, a fungus that grows in the Malheur National Forest in Oregon, *Armillaria ostoyae*. According to the best estimates, it covers 3.7 square miles, weighs about 35,000 tons, and is about 2,400



Above – Leaf with initial invasion of mold Below – Leaf at advanced stage of decay Photos by Marjorie Richman



years old. It is the largest, heaviest, oldest living organism on the planet. If it could walk we would have to call out the military. Fortunately, most of the fungus remains underground. In between the smallest and the largest fungi are a variety of organisms, such as mushrooms, a familiar food source, and molds, the superheroes of our planet's ecological well-being.

Imagine a world where tons of leaves fall from the trees each autumn and remain on the ground. Imagine trying to walk in such a forest. Fortunately, we don't have to because molds are on the job, recycling organic matter. How molds accomplish this process is quite unique. Molds cannot photosynthesize and therefore must break down organic matter in their environment to obtain food. To do this the fungi release their own digestive enzymes into their surroundings and then absorb the results. This method is very different from that

> of plants, which make their own food, and animals, which take in food from their surroundings and absorb it internally.

Decomposition of organic matter is the life force of our ecological system. Besides simply removing debris, decomposition results in the production of carbon dioxide and, eventually, oxygen. As decomposition proceeds, carbon dioxide is released. Plants use the carbon dioxide for photosynthesis. The end product of photosynthesis is the oxygen that we need to live. At the end of the process, the decomposed leaf litter becomes the humus that forms our soil. Without fungi we would have to figure out some other way of recycling organic material.

The slow decay of leaf litter is particularly noticeable in the fall and winter months. Decay happens slowly and, unusual as it may seem, the fungus actually keeps photosynthesis viable as long as possible. Note in the first picture that the leaf has been invaded by mold but the center remains green. The green

Butterfly Outing Photos (Continued from page 19)



Eastern tailed blue



Cloudless sulphur



Painted lady



Zabulon skipper



Hairstreak



Sachem skipper



Zebra swallowtail



Tiger swallowtail



Sleepy orange



West indigo duskywing



Cabbage white

Nature Notes (Continued from previous page)

color means that the leaf continues to photosynthesize and therefore continues to manufacture food. The longer the leaf photosynthesizes, the longer the fungus receives nutrients. It seems the fungus is in no hurry to consume the leaf entirely. As time goes on, the green color steadily diminishes. The second picture shows a leaf that no longer is able to photosynthesize but still is not decayed enough to become leaf litter. It has probably been on the forest floor for at least two years.

Did you ever wonder why a fungal infection is so difficult to eradicate? Think of athlete's foot, for example. Recent genetic studies have come up with an answer.

Way back in the history of our planet, plants, animals and fungi shared a common ancestor. About 1 billion years

ago plants diverged from the common ancestor and continued their evolution apart. Animals and fungi continued evolving together until about 800 million years ago when animals and fungi diverged. This "close" relationship is accepted as the reason fungal infections are so hard to cure. 800 million years is a long time in our history, but only the blink of an eye on the evolutionary time scale.

We think of spring as the most dynamic time of year, but fall is equally dynamic. In spring we see the surge of new growth; in fall we see the recyclers at work preparing the products of the growing season for reuse. It will soon be a good time of year to see these changes.

Calendar of Events - 2020

C&OCA Business

C&OCA Bike Ride

C&OCA Hike

C&OCA Hike and Dinner or Key Event

Oct. 4, Sun., **Board Meeting**, 1 p.m., at Williamsport Town Hall, 2 North Conococheague St. **Note**: May be rescheduled as Zoom meeting depending on COVID-19 assembly restrictions.

Oct. 9-14, Fri.-Wed., **Through Bike Ride**, Cumberland to Georgetown. No sag wagon provided. Reservations are closed. For more information, contact Denny Sloppy at dennysloppy@yahoo.com or 814-577-5877.

Nov. 22, Sun., **Continuing Hike Series**, 10:30 a.m., Knuckles Cut in Oldtown. See the article on this page for further information.

Dec. 5, Sat., **Frostbite Hike**, 10:30 a.m. at Great Falls Tavern. See the article on this page for further information.

Dec. 6, Sun., **Board Meeting**, 1 p.m., at Glen Echo Town Hall, 6106 Harvard Ave. **Note**: May be rescheduled as Zoom meeting depending on COVID-19 assembly restrictions.

Aug. 30 – Sept. 2, 2021, Mon.-Thu., **World Canals Conference**, Hagerstown, Md. Follow this newsletter for updates on the conference.

Important Information –

- Liability waivers are required for many Association activities. You will be asked to sign a waiver before participating in certain events.
- Hikes require proper footwear.
- Paddling, hiking and biking participants are responsible for their own equipment and food.
- Reservations are required for many events.
- Outdoor events are subject to cancellation in the event of inclement weather or COVID-19 conditions. Contact the event coordinator in the event of weather concerns.

Frostbite Hike –

When the leaves drop at Great Falls, they unveil some wonderful views of the C&O Canal and Potomac River. Join Bill Holdsworth at 10:30 a.m. on December 5 at the Great Falls Tavern for the annual Frostbite Hike.

Bill will lead the group up the hill behind Lock 19 to the Overlook Trail. Then they will head to Widewater and out to Olmsted Island. Total distance is about five miles. There are a few spots where a walking stick might be handy. For more information contact Bill Holdsworth at 301-762-9376 or website@candocanal.org.

Continuing Hikes -

We are hopeful that the virus will abate enough so we can have the November continuing hike upstream from Oldtown. Weather and beavers permitting, we plan to check out Knuckles Cut on the Western Maryland Railway. Cancellations will be posted on the Association's website, Contact Pat White for info or to verify the status of the hike at hikemaster@candocanal.org or 301-977-5628.

Heritage Hike and Dinner Cancellation -

Due to the uncertainty of the bus services and public assembly policies, we have canceled the 2020 Heritage Hike and Dinner. We determined that this was the safest approach to minimize risks to people and possible confusion from last minute changes or cancellations. We hope to return to our normal schedule in 2021.

The *TrailGuide* generates excitement among those planning trips along the C&O Canal Towpath and Great Allegheny Passage! It's packed with great photography, insider travel tips, and updated lists of lodging options, eateries, bike rentals, tour planners, and shuttle services. Further information is available from the Allegheny Trail Alliance at www.GAPtrail.org. It's selling out fast this year, but the Association store still has a few for sale.

Get your copy at the C&O Canal Association store at **www.candocanal.org/store.html**. While you're there, check out our selection of other books, including the *The Chesapeake and Ohio Canal Official National Park Handbook*.



C&O CANAL NATIONAL HISTORICAL PARK Telephone Numbers and Personnel

C&O Canal National Historical Park Headquarters

1850 Dual Highway, Suite 100, Hagerstown, MD 21740

0 ,,	0	
Superintendent	301-714-2202	Tina Cappetta
Deputy Superintendent	301-714-2200	John Noel
Superintendent's Assistant	301-714-2201	Mackensie Henn
Chief Ranger	301-714-2222	Ed Wenschhof
Chief of Business Mgmt.	301-714-2204	Ben Helwig
Chief of Resource Mgmt.	301-714-2225	Jeri DeYoung
Chief of Maintenance (Acting)	301-714-2211	Jim Yelton
Chief of Interpretation, Education		
and Volunteers	301-714-2238	Christiana Hanson
Partnerships Coordinator	301-714-2218	Anthony Bates
Volunteer Coordinator	301-491-7309	Emily Durán Hewitt
Cultural Resources		
Manager/Historian	301-491-2236	Vacant
Volunteer Historian	301-714-2220	Karen Gray
Safety Office	301-745-5804	John Adams
IT Specialist	301-745-5817	John Lampard

Palisades District – Mile 0 (Tidelock) to Mile 42.19 (Monocacy River) 11710 MacArthur Blvd, Potomac, Md.

Interpretive Supervisor	301-767-3702	Pete Peterson
District Ranger Law Enforcement	301-491-6279	Joshua Cunningham
Supervisory Visitor Use Assistant	301-767-3703	Vacant
Georgetown Partnerships		
Coordinator	240-291-8466	Millie Jimenez

Great Falls Tavern Visitor Center 301-767-3714 11710 MacArthur Blvd, Potomac, Md.

Western Maryland District – Mile 42.19 (Monocacy River) to Mile 184.5 (Canal Terminus, Cumberland, Md.)

District Ranger Law Enforcement Cumberland Subdistrict Hancock Subdistrict Ferry Hill Subdistrict	301-722-0543 301-722-0543 301-678-5463 301-714-2206	Todd Stanton
Williamsport Visitor Center 205 West Potomac St., Williamspo	301-582-0813 ort, Md.	
Supervisory Park Ranger	240-625-2931	Joshua Nolen
Hancock Visitor Center 439 East Main St., Hancock Md.	301-745-5877	
Supervisory Park Ranger		Stephanie Siemek
Cumberland Visitor Center	301-722-8226	
Western Maryland Station, Cumbe	erland, Md.	
Supervisory Park Ranger		Stephanie Siemek

OTHER USEFUL TELEPHONE NUMBERS:

Great Falls Boat Operation Boathouse at Fletcher's Cove (concessionaire) Carderock and Marsden Reservations Canal Quarters Program Williamsport Boat Operations 301-767-3714 202-244-0461 301-767-3731 301-714-2233 301-582-0813

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C&O CANAL ASSOCIATION

Membership in C&OCA is open to all persons with an interest in the C&O Canal, the C&O Canal National Historical Park, and the Potomac River Basin. Annual membership dues are: \$15 individual, \$20 family, and \$25 patron, assessed on a calendar-year basis, and include subscription to the newsletter. Dues should be mailed in to the C&O Canal Association. C&OCA is a non-profit organization as defined by section 501(c)(3) of the Internal Revenue Code, and all contributions are tax deductible to the fullest extend of the law. A copy of our current financial statement is available upon request by writing to C&OCA at the address above or calling 301-983-0825. Documents and information submitted to the State of Maryland under the Maryland Charitable Solicitations Act are available from the Office of the Secretary of State for the cost of copying and postage.

C&OCA maintains a home page at www.candocanal.org. The webmaster is webmaster@candocanal.org. C&OCA also maintains a telephone number for recorded information and inquiries: 301-983-0825.

Association Officers

President: Bill Holdsworth, president@candocanal.org

First Vice President: Vacant

Second Vice President: Anthony Laing

Secretary: Kerry Gruber, secretary@candocanal.org

Treasurer: Richard Radhe, treasurer@candocanal.org

Information Officer: Doug Zveare, inquiries@candocanal.org

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You may have noticed coping stones along the edge of the towpath as you traveled on Mile 132. They are the top of the high headwall for Culvert 197, which features a long 90 degree wing wall on the downstream side of the outflow. An occasional stream flows through this 4-foot culvert. Photo by Steve Dean



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