

ALONG THE TOWPATH

A quarterly publication of the
Chesapeake & Ohio Canal Association

Concerned with the conservation of the natural and historical environment of the C&O Canal and the Potomac River Basin.

VOLUME XL

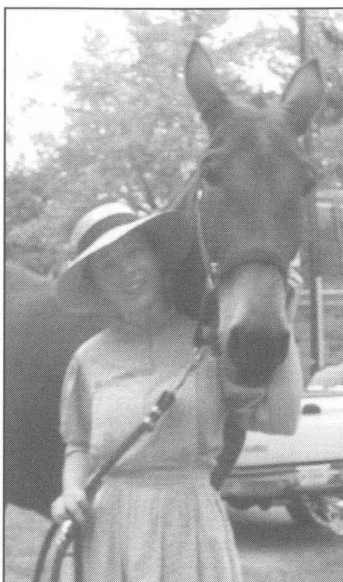
June 2008

NUMBER 2

“Hello Dolly” — Hugs ... Mule Style

Have you ever been hugged by a mule? Let me assure you, it is possible. If you happen to doubt, you clearly have not met the C&O Canal's newest mule Dolly. Personable almost to a fault, Dolly loves being around people and other animals; she does not like being left by herself. Every inch the youngster, she is very curious about everything going on around her, including watching the boat lock up and down in the lock and inspecting the bicycles as they zoom past. Dolly learns quickly and is very eager to please. If she is ever unsteady, she quickly regains her composure with loving words from her handler. Dolly is so gentle that small children can be placed on her back, much to their delight, and she is sure to appear in hundreds of family scrap-books this year.

Dolly joins five other mules currently working at the C&O Canal – Ida, Lil, Ada, Molly, and Nell. Dolly is a 4 ½-year-old bay mare mule, 15.1 hands high, weighing nearly 1000 pounds. She was purchased by one of the cooperating associations, the Friends of the Historic Great Falls Tavern, who generously donated her to the C&O Canal National Historical Park. The Friends also paid for a veterinary visit for Dolly before she joined the ranks of the Canal mules. She was then taken to Mt. Vernon to meet and acclimate to the rest of the mules. From there Dolly went to a Pennsylvania farm for 30 days of additional training. Hitched to draft horses, Dolly helped pull manure spreaders, wagons, harrows, fore-carts and drags. The noises created by all of these implements helped prepare Dolly for her duties on the towpath. To say that much is expected of the C&O Canal mules is an understatement. The



Dolly & Ranger Hannah Dixon

Photo: NPS

mules pull the boats while dealing with crowds of people—many of whom are not livestock savvy—kayaks, canoes, bicyclists, helicopters, maintenance and law enforcement vehicles, and a two-story canal boat. Dolly's main duty will be pulling the Charles F. Mercer at Great Falls. However, she may be trained to work in Georgetown as well.

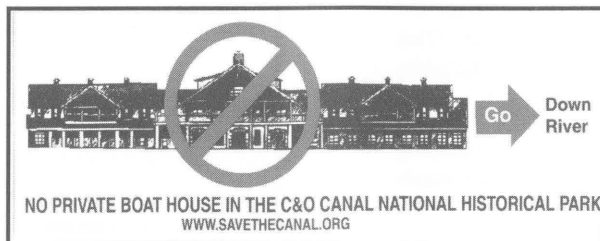
Dolly hails from Spotsylvania, Virginia, purchased through a contact of Mark Myers, the Canal's mule wrangler. The contact found Dolly at a farm in North Carolina and was impressed with her sweet disposition and calm nature. She had had some training in harness and under saddle. On April 12, 2008, Dolly officially joined the C&O Canal team. Park staff, members of the cooperating associations, and the public were on hand to welcome Dolly to her new home. Dolly was the subject of a “Name the Mule” contest, where the C&O Canal asked the public to help us come up with a middle name for her. Some of the names suggested were Ginger, Folly, Sadie, Valentine, Zephyr, and Oprah. The

Friends of the Historic Great Falls Tavern will make the final decision.

In her brief one-month working career, Dolly has been a busy girl. She has been pulling the Charles F. Mercer several days a week since her arrival. At the end of April, she met over 1,400 school kids at Allegheny Portage National Historical Site in Gallitzin, Pennsylvania. This month she is headed to the canal's terminus in Cumberland, Maryland, to meet approximately 700 more school kids.

(Continued next page.)

The bumper sticker to the right succinctly expresses the Association's opposition to Georgetown University's drive to put its boat-house inside the canal park just below the main campus. The very large structure would be wedged

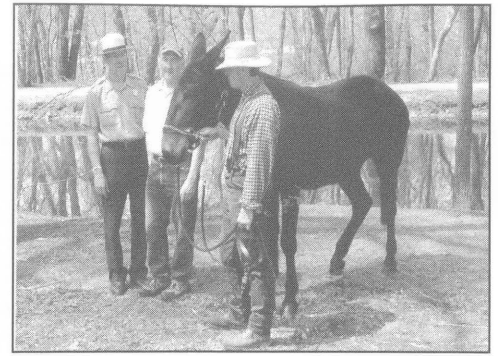
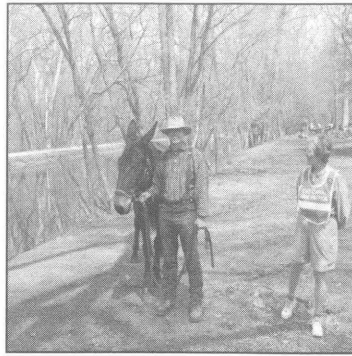


against the Capital Crescent Trail and the high canal wall. GU wants a football field sized parcel where the C&O's right of way opens out to its natural setting which the national park is designed to protect. (See page 2.)

"Hello Dolly," continued

Mules that work on the Canal are blessed with a long working life, usually living to retire in their late twenties. Dolly is so much more than a mule: she is the living embodiment of our historic past. She has the potential to work here for the next twenty years and introduce the next generation to canal life from a time gone by.

- Mark Myers



Left: Dolly with NPS "wrangler" Mark Myers & Jo Reynolds, in a photo by Don Harrison. Right, Kevin Brandt, Don Harrison, Mark & Dolly in a photo by Dave Johnson.

GU Boathouse Status

The March newsletter reported on the National Park Service announcement in December that it would prepare an Environmental Impact Statement (EIS) on the boathouse that Georgetown University wishes to build on a site within the C&O Canal National Historical Park and on a land exchange that would make such construction possible. NPS accepted public input on the scope of the EIS. Many of the resulting comments urged a broader review than outlined in the NPS's December announcement.

Between April 29 and May 12, NPS held a series of public focus group meetings for the several categories of interested citizens and organizations. These groups included a subcommittee of the C&O Canal Advisory Commission, two D.C. Advisory Neighborhood Commissions, historic preservation organizations, trail users, environmental groups and the boating community.

At the focus group meetings, NPS revealed that it had expanded the list of boathouse sites under consideration to seven: (1) the upriver site owned by Georgetown University; (2) the C&OCNHP site just upriver of the Washington Canoe Club, the "preferred alternative" in an earlier draft Environmental Assessment; (3) the "Dempsey site" in the C&OCNHP just downriver from the Canoe Club; (4) a site at Jack's Boathouse; (5) a site contemplated for George Washington University's boathouse in earlier planning; (6) a 34th Street site; and (7) improvement of Thompson's Boat Center. NPS indicated that it had decided not to include sites in Virginia or on the Anacostia River, and also that it would conduct a constructability study of the GU-owned site upriver.

NPS stated that the seven sites would soon be considered at internal NPS workshops, using a "Choosing By Advantage" process. Some sites would be eliminated, others chosen for detailed examination, and one selected as the preferred alternative in a draft Environmental Impact Statement to be published in early July. Public comment on the draft EIS would then be accepted.

As the EIS process moves forward under the National Environmental Protection Act, NPS will hold consultations under Section 106 of the National Historic Preservation Act. This would include a meeting with representatives of stakeholder organizations officially designated as consulting parties.

In the next column, a letter by C&OCA Environmental Committee chair Fred Mopsik outlines issues underlying the boathouse controversy and reflects the Association's standpoint.

- Ned Preston

From: *The Northwest Current*, 3/26/08

LETTERS TO THE EDITOR

Boathouse Site Would Compromise Park

The Current's Feb. 13 editorial "Move on the Boathouse" failed to mention the location proposed for a private Georgetown University boathouse - inside the C&O Canal National Historical Park. That is why the proposal is so controversial.

The C&O Canal Park is held in trust by the National Park Service by law, on behalf of the entire United States, not just one community. The entire park is protected, and sections of the park are not to be traded to private interests.

The C&O Canal Park encompasses the last intact piece of American canal history from the early 19th century, and federal laws serve to protect this scenic and historic treasure. Our national heritage must not be compromised for the sake of an enormous private boathouse for Georgetown University. There are places outside the C&O Canal Park that are more appropriate for boathouses.

I hope that *The Current* is not advocating that dedicated public lands are less important than the rowing needs of one group of private students. The C&O is one of the most visited national parks in the country, a major tourist attraction and part of what makes D.C. and the Potomac River so special.

Fred Mopsik

Environmental Chair
C&O Canal Association

(reprinted with the permission of *The Northwest Current*)

“The Best Career”: Robert Hartman Retires in July

Bob Hartman is retiring in July after 30 years of dedicated service in our national parks. Half of those years his assignment was in the C&O Canal National Historical Park. As maintenance chief for eleven years he worked with determination and skill keeping the canal park's 185 miles of infrastructure intact. The towpath only looks like a country path, but is part of the canal technology of early American civil engineering. As Deputy Superintendent during his last three years before his retirement, Bob Hartman continued to keep a close eye on a raft of maintenance issues facing the park. With his departure the park loses one of its most able hands-on executive managers. The official photo on this page might mislead the uninformed. Bob Hartman is not a “desk ranger.” His first love is to be out in the field where the action is.

During his tenure as Chief of Maintenance (1994 to 2005) Bob Hartman contended with big challenges to the C&O's integrity as a national historical park. Three major floods and several minor ones inflicted a lot of damage to canal structures. Two were “one-hundred-year” floods which struck in a single year, 1996. Repairs on the first were mostly done when the second hit the canal again, hard.

The big floods created a crisis for the C&O. Could the C&O make a comeback after this double whammy? The park leapt into the breach and congress came up with \$20 million in emergency funds for flood recovery. Bob Hartman and his maintenance team swung into action taking on the huge repair job with focused determination. The park was put back into operation in record time. Bob richly deserved the award he received in 1997 from the National Capital Region recognizing the excellence of his work in the flood recovery.

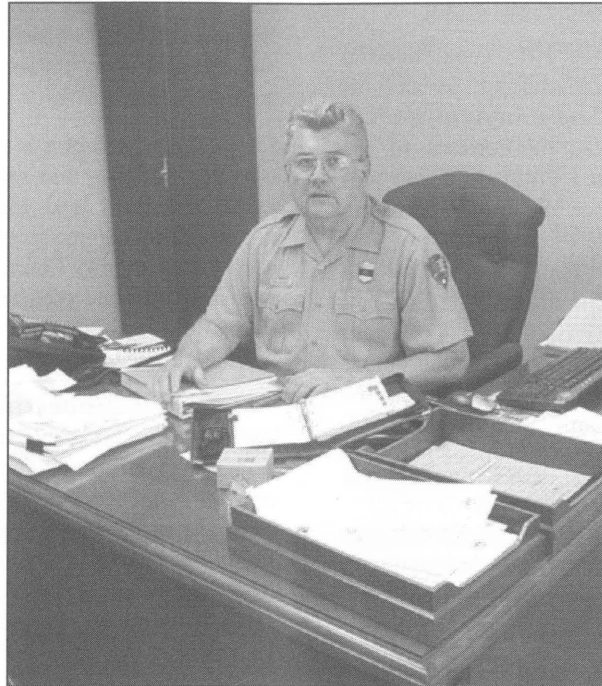
But once the flood emergency was over, the park was back on a penurious budget and Bob was back making do with limited resources. Yet, there were bright occasions during the next eleven years. A superb repair of the canal's “crown jewel”,

the Monocacy Aqueduct, was completed in 2005. A special congressional appropriation made this possible. The Great Falls Tavern was nicely renovated and refurbished. Three visitor centers were put into first-class shape. Lock 44 in Williamsport was rebuilt and made fully operable. The towpath section along Widewater that had fallen into rocky ruin was rebuilt. However, there was more, much more to be done on the long canal. Here Bob Hartman did the best he could with a stringent budget. And the

best he always did. Few people outside the park have a grasp of the magnitude of the maintenance task in the 185 miles of the C&O park. It has more than a thousand structures. Many of these are “no lose” structures that if lost disrupt the continuity and integrity of the park. These include the many culverts, the chain of aqueducts, the Paw Paw Tunnel, canal walls, and operating locks. Bob Hartman doggedly and impressively held the line in keeping these canal structures intact. There is now some hope. Canal funding through NPS programs has increased of late recently but there is a way to go before the park budget reaches an adequate level.

There are good reasons why Bob Hartman loves the C&O Canal. He grew up with his family in his grandmother's home alongside the canal. His tie to the canal goes back to his great-grandmother who was a midwife. She delivered many a baby on the canal boats. He got to know the old canal backwards and forwards. In the years before entering federal service Bob Hartman served in U.S Army combat engineer units. His duty included nineteen months in Vietnam. After military service he learned the masonry craft and then supervised masonry construction projects. In 1975 his federal career began in the Public Works Department at the Naval Academy and this led to his selection for NPS training in restoration of historic structures. Bob says it was a memorable day for him when he joined the Park Service on January 29th, 1978 at the Cushwa Basin in Williamsport, MD. In a heartfelt comment Bob said that day was the day that led him into “the best career a man could have!”

- Carl Linden



The VIP Program: The Rewards Continue by Jim Heins

Earlier this year, our Volunteers in the Park program received the George B. Hartzog, Jr. Award for Outstanding Volunteer Group within the National Capital Region for 2007. This is the second time in three years that we have been so recognized. This is a commendation to all of the folks who have participated in our projects over the past year(s).

This year has started off equally as well with several projects being completed by members of the association with increasing support from volunteers outside of our group.

In March, the *Georgetown*, the NPS canal boat in Georgetown was repainted, a huge undertaking, as well as some sprucing up around the Visitor's Center. In April, the VIP program sponsored ten cleanup sites along the Potomac for the Alice Ferguson Foundation's 20th annual Potomac River Watershed Cleanup. Although the number of volunteers from C&OCA was limited, due to the nature of the event, we supported over 250 volunteers from around the region that day. In early May, our third project of the year brought out a small group to work on vegetation on the Billy Goat Trail. Very poor weather conditions forced us to suggest to many of the volunteers not to help. Trail conditions dictated we limit the number of helpers, but the work done significantly improved the appearance of the trail and should effectively encourage hikers to stay on the designated trail.

In June, there will be a project in the Carderock area to once again remove some of the invasive plants threatening to take over our beautiful park. Projects after this date have not yet been decided upon. Stay tuned.

During all of this, our "wayside exhibit team" again came to the front and installed wayside exhibits in Hancock on two different occasions and in Williamsport. Several more of these important signs will have been installed by the time this goes to press.

Please support our VIP program. This is one wonderful way to give a bit back to the park that has provided us with so much enjoyment.

How to get involved – let Jim Heins, VIP coordinator, know of your interest in and willingness to help with any of the projects that are scheduled to date. E-mail – vip@candocanal.org, or jheins57@verizon.net or call 301-949-3518.

TrailBook 2008 is now available to Association members at a steep discount in the "Store" section of www.candocanal.org. Published by C&OCA supporter, Jeff O'Brien, this detailed guide covers the Great Allegheny Passage and C&O Canal NHP. The guide includes an excellent removable map.

C&OCA Key to Catoctin Aqueduct Restoration Success

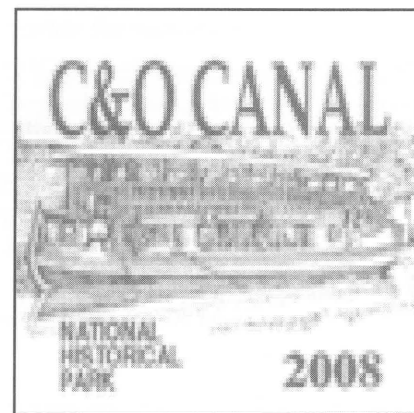
by George Lewis

The Catoctin Aqueduct Restoration Adopt a Stone program is finally up and running at www.catoctinaqueduct.org; go there and do the responsible canal parenting thing, click on the *Preserve Your Place In History – Adopt A Stone* "hot button", and get started adopting a numbered granite stone that will be used in the restoration of the Catoctin Aqueduct. There are eight categories of stones available for adoption (Key, Towpath Coping, Berm Coping, Ring, Water Table, Parapet, Prism, and Spandrel), five of which may be selected from either the upstream face or the downstream face of the soon to be restored aqueduct.

The Adopt a Stone website is interactive, educational, easy to navigate, and really cool; check it out. The website instructions will lead you through the simple stone selection, adoption, and donation certification processes and finally to a secure Community Foundation of Frederick County site where you can complete your adoption by credit card or check. Soon thereafter you will receive an adoption certificate and a site map identifying the exact location of your stone.

In recognition of major past donations to the Catoctin Aqueduct Restoration Project, the Catoctin Aqueduct Restoration Fund, Inc. has adopted a separate stone in the name of each of these previous major donors. In recognition of the outstanding key leadership role the C&OCA has played in raising funds for the aqueduct restoration, the center arch Key Stone (the most prominent of the keystones) on the downstream face of the Catoctin Aqueduct has been adopted in perpetuity - in the name of the C&O Canal Association.

C&OCA and C&OCA members, thank you for getting your hands into history; your help is still needed, and soon your heroic efforts will be set in stone.



Do you have a towpath pin showing the Charles F. Mercer? Get one at a C&O park visitor center. A five dollar donation is suggested. All donations go to the park. Pin by Tom Kozar

Along the Towpath

New Chief Ranger: Bradley Clawson

Bradley Clawson began his duties as the new Chief Ranger for Chesapeake and Ohio Canal National Historical Park in April. Clawson, who was Supervisory Park Ranger at the Delaware Water Gap National Recreation Area, succeeds Ryan Peabody who left the position in November 1997 a post with U.S. Department of Agriculture Animal and Plant Health Inspection Service.

Commenting on the National Park Service announcement, C&O Canal Superintendent Kevin Brandt said, "We are pleased to have Brad join our Park team. Brad's experience will facilitate the protection of our park's precious resources and ensure our visitors' safety." Clawson will supervise a staff of sixteen federal law enforcement rangers and will be responsible for managing the park's visitor and resource protection program which includes law enforcement and emergency services in the park.

- NPS

C&O Canal Pride Days

April 19 - May 10, 2008

The C&O Canal Trust, a newly formed nonprofit organization partnering with the C&O park, launched its first C&O Canal Pride Days on April 19th. Co-sponsored by the National Park Service, the goal was to complete nearly 100 revitalization and stewardship projects throughout the Park. Focusing on the most heavily-visited section of the Park, from Seneca to Georgetown, activities included painting lock houses, repairing and painting visitor signs, cutting back overgrown vegetation, and planting trees and flowers.

Businesses, Girl Scout troops, school groups and individuals gathered to take on much needed restoration and maintenance projects within the C&O Canal Park. According to the National Park Service, volunteer efforts with maintenance and restoration projects free up time for park rangers. "This is exactly the type of partnership organization this site needs to enhance the park in ways the National Park Service can't do alone," said park superintendent Kevin Brandt.

Volunteers Needed

Volunteers are helping staff the Ferry Hill Plantation House across the river from Shepherdstown on Saturdays, but more recruits are needed for Sunday duty from 12:00 to 4:00 pm, through Labor Day. Volunteers learn about Ferry Hill history and interpret the site for visitors.

Volunteers are also needed at the Cushwa Basin Trolley Barn Museum (Williamsport) and in Hancock as well. Contact Curt Gaul, West District Ranger at 301-582-0813 or at curt_gaul@nps.gov. The duties are instructive, fun, and helpful to our great park. Association members, friends of the C&O Canal! Step forward!

- NPS

Along the Towpath

C&O Canal Association Volunteer Team Honored for Outstanding Service

The C & O Canal Association Volunteer Team was honored for outstanding service with the George B. Hartzog, Jr. award by the National Park Service in the National Capital Region on April 16, 2008, at Wolf Trap National Park for the Performing Arts in Vienna, Virginia. The awards are named for the former National Park Service Director George B. Hartzog, Jr., who established the National Park Service Volunteer-In-The-Parks Program. The awards, established in 2002, recognize the commitment of the Park Service's most outstanding volunteers. The award given was for outstanding service by a volunteer group in fiscal year 2007.

The C&O Canal Association Volunteer Team independently completes maintenance projects through association members and other park volunteers. In 2007, association members completed eleven service projects with 136 volunteers for a total of 637 volunteer hours. Members removed invasive plant species, painted park structures, worked on trail restoration, repaired a public access trail, removed vegetation from historic structures, painted and repaired picnic tables, and installed interpretive wayside exhibits. The team also led the park's participation in the Alice Ferguson Foundation's Potomac Watershed Clean-Up. The C & O Canal Association Volunteer Team led groups at Swain's Lock, Angler's Inn, Pennyfield Lock, Riley's Lock, and Violette's Lock. In the past three years, the C & O Canal Association Volunteer Team has installed over twenty waysides and various types of signage throughout the park.

C & O Canal Superintendent Kevin Brandt commended the team for their efforts and dedication to the park. "The park is proud of this special group, and encourages others in the community to become great stewards of the C & O Canal as this volunteer team has done."

- from NPS News Release



Left to Right: Lisa Mendelson-Ielmini, Deputy Regional Director-National Capital Region; Jan and Jim Heins, representing the C&O Canal Association Volunteer Team; Rae Emerson, Site Manager-Ford's Theatre National Historic Site; Polly Angelakis, Acting Chief of Interpretation-National Capital Region; Joe Lawler, Regional Director-National Capital Region.

Update on the Sewer Venting Issue

by Ned Preston

Recent months have seen an upsurge of interest in resolving the long-standing problem of the strong, unpleasant odors that are sometimes present along portions of the lower C&O Canal towpath and in adjacent neighborhoods. The smell is caused by gas from a series of vents along the Potomac Interceptor (PI) sewer line.

The PI begins in the area of Dulles Airport and Leesburg, Virginia. The line crosses the Potomac near Great Falls, runs through parts of the C&O Canal NHP and Clara Barton Parkway, and ends at the Blue Plains Wastewater Treatment plant in Washington, D.C. Built by the federal government in 1963, the PI is now maintained by the D.C. Water and Sewer Authority (WASA).

In 1999, WASA devised a plan to reduce the odors caused by the PI venting by building six abatement structures in which sewer gas will be pumped through an activated charcoal filter. Two of the structures will be on the Virginia side of the Potomac and four on the Maryland/DC side: Site #27 in the C&OCNHP opposite Old Anglers Inn; #17 on Parkway land near the Beltway; #4 on Parkway land near the Little Falls Pumping Station; and #1995 in the C&OCNHP at Fletcher's Cove. The two structures within the C&OCNHP will also house public lavatories.

On April 1 of this year, several WASA officials spoke at a public meeting of the Palisades Citizens Association in Washington, D.C. Jerry Johnson, General Manager, and Len Benson, Acting Chief Engineer, addressed the group concerning the status of the abatement efforts.

As an interim measure, WASA added the chemical Thioguard to the sewer line during the summer of 2007, a step that the agency believes helped to reduce odor. This year, WASA plans to try adding a different chemical additive, called Vulcher. At the meeting, the WASA officials agreed to provide the Palisades Citizens Association with a monthly report on the progress of the interim remedy.

Although funds for the permanent abatement project have been approved, obtaining the necessary permits has lagged. In accounting for this delay, the WASA representatives stressed the need to obtain approval from 16 different governmental organizations. They noted, however, that NPS authorities were currently taking steps to move the process ahead. The WASA officials also said that they welcomed the interest of the public in the issue.

Subsequently, a meeting between WASA's Sewer Programs Manager and representatives of interested citizens groups was tentatively scheduled for early June.

ON THE LEVEL

By Level Walker Chair Bill McAllister

Association members, if you are not a Level Walker, why not join us, get to know and enjoy the C&O more and help out the park? Contact me at 301-577-4757 or level-walker@candocanal.org.. Without further ado here are excerpts from our latest reports on the levels.

Level #1 Tidelock to Incline Plane; John Barnett: 2/17, Aqueduct a bit messier as weather turns. Soon enough driftwood will gather at Tidelock lock for all DC fireplaces. 2/24, Tidelock itself is in fair shape. Gathered a bag of trash and deposited it at 34th Street. 3/9, Saw my first robin, he sneezed. Again I found the canal boat uncovered. 3/28, Traffic was light – a few joggers, bikers, dog walkers and pedestrians. The boat crew was training recruits on boat operations (with mules). Flowers and greenery are emerging! 4/11, Boat crew is working at Great Falls. Visitors' Center now open with a ranger in charge. 4/20, More boats jam the area now. Thompson facility over busy yesterday perhaps a regatta was held. 4/26, Not much trash at Tidelock.

Level #3 Lock 5 to Cabin John Creek; Marcus Boorstin & Allisa Stern: 3/23, river level very high. Beavers gnawed down trees and began a lodge. Towpath is eroding near Sycamore Island. Two eagles were nesting nearby! 2/18, The water level was still high, the water line just a foot below the towpath in places. Some flooding was occurring in the area between the inlet channel and canal from Lock 5 to Lock 6. The towpath was mostly clean except for this section. The prism was the most littered we had seen in the canal. Next time, we'll take a net to fish out the flotsam.

Level #4 Cabin John Creek to Lock 14; Larry Heflin: 1/11, Erosion still undercutting towpath just upstream of Lock 8. Dirt is still falling in the hole but a temp bridge allows safe crossing. 3/2, Park Police said (March 3) that in the past two weeks cars parked at Lockhouse lots 5-10 were broken into and things taken. 4/9, A Barn Owl sometimes is seen between Locks 8 and 9. The water fountain at Lock 10 is on: a sure sign of spring!

Level #10 Seneca Aqueduct to Milepost 25; Charles Mason White and Barbara Shelton: 2/9, It was a winter day, yet mild and pleasant. Many ducks were paddling in the canal near milepost 23. Weather permitting I plan to keep walking for the rest of the winter. 3/30, Charles White: Picnic areas were in heavy use but all was in order. It was a good walking day.

Level #10 Seneca Aqueduct to Milepost 25; John and Valerie Wheeler: 10/7/07, The weather was pleasant. 1/7, The towpath was in the good condition though muddied in places from rains. As we started we met a gorgeous blue heron standing in the canal pool! Many ducks were out. We spotted chickadees and nuthatches. At lunch at the picnic table near mile 26, Pat White was scouting the next Association hike. 4/12, Ducks, turtles, a snake, geese, blue herons. Wild flowers are now out: spring beauty, Virginia blue bells, Dutchman's britches, trilliums, trout lilies, grape hyacinths, violets. Invasive plants intrude among the wild flowers: multi-flora rose, bush honeysuckle, Japanese honeysuckle vine, garlic mustard.

Level #11 Milepost 25 to Sycamore Landing; Charles Mason White: 1/26, Little trash had to be removed. It was a cold but good walking day. 3/2, All was in order. Tow path was soft but not muddy. Still wintry but a happy hint of spring was in the air.

Level #12 Sycamore Landing to Edwards Ferry; Pat Hopson, Carol Ivory, aided by Sierra Clubers, Janet Kegg, Margaret Neuse, Samer Sibay: 3/9, We took out nineteen bags of trash, four tires, a rusty barrel. Thanks to the Park Service for clearing the path of three fallen trees. The Chisel Branch Hiker-Biker was in shape. Grass patches were emerging, and we saw a stand of five blooming spring beauties. The river was brim full in surge. Inlets, usually dry or low, were full. Though not on bird watch, we saw chickadees and a hawk.

Level #16 Woods Lock 26 to Monocacy Aqueduct; Michael Ciansiosi: 3/1, Two bicyclists and some twenty walkers came by. Two Bike Patrollers took to foot in the face of strong winds. Beavers were evident around mile 40.0. A large beaver-gnawed tree was treated to stop their progress. Now they are at it on another big tree.

Level #17 Monocacy Aqueduct to Nolands Ferry; Lawrence Kokajko: 2/22, The Monocacy Aqueduct's first arch has a protruding ceiling block. (Park Service says the protrusion of the block is original, Bill McAllister)

Level #17 Monocacy Aqueduct to Nolands Ferry; George Kennett & Mary Wheeler: 3/24, Two dog walkers at the Monocacy parking lot thanked us for what we do. Bridge work is complete on the access road, a job well done! An Amtrak train crossing the trestle bridge near Mile 43 was a beautiful sight.

Level #19 Point of Rocks to Catoctin Aqueduct; Marlow & Nancy Madeoy: 2/9, 22 We met four walkers with their dogs properly leashed, and six bicyclists. A camper had put up his tent at the Landers Hiker Biker. We bumped into George Lewis who leads the charge for restoring the Catoctin Aqueduct near Lander. Close to mile 50, a Barn Owl was heard. Six whitetails crossed Catoctin Creek.

Level #21 Lock 30 to Lock 31; Doug Zveare and Ann Schuster: 2/16, Towpath was muddy. The mud deterred cyclists. Only a few came by. Many downed trees had been cleared from the path except for one large branch. I cut and removed it. An historic culvert, no. 93 or 94, was collapsed in the canal bed. It is a safety hazard. Someone could fall into it.

Level #21 Lock 30 to Lock 31; Ron Howard: 3/14, I saw 24 cyclists, 12 walkers (5 with dogs), two riding horses. The towpath was in fine condition. Little greenery was seen, but the calls of birds were heard including pileated woodpeckers. "Peeper" frogs peeped the coming of spring. The weather was gorgeous and many came on the towpath to enjoy it.

Level #23 Lock 33 to Dam #3; Karen Gildea: 2/9, I went the distance from mile 60.7 to 63 clearing level #23 of trash, most of which was in the canal prism. 2/9

Level #24 Dam #3 to Dargan Bend; Ron Howard: 4/2, I saw three walkers and two bikers. The towpath was in fine shape. A tufted titmouse entertained me with its calls. I saw some ducks on the river, a few violets and another flower I did not know. Some low bushes were opening in delicate green.

Level #26 Lock 37 to Antietam Aqueduct; Jack and Karen

Forster: 4/26, New bridge across Lock 37 is fine and the tow-path perfect. Wild flowers of white, blue (blue bells) purple, dark red graced the way. Fields of yellow in the distance. A six-leafed star wild flowers about a foot high filled large groves. White, black and yellow moth-sized butterflies and a lone woodpecker were seen. April walks here are highly recommended.

Level #34 McMahon's Mill to Opequon Jct. Hiker-Biker; Tom Perry and David Crump: 3/23, Dave and I explored the area around mile 191, drawn to a chimney and fireplace. A multi-level home had been there. The nearby mound of discarded bottles and cans served as the family landfill. Although the dwelling was long gone, the family's daffodils were blooming in abundant profusion. We looked into some of the many caves in this area, a long time fascination of mine. C&O speleology is my hobby and ropes at cave openings can aid the explorer's entry. This man's aging bones counsel caution and hint that a rope ladder would be safer. Late Winter is the best time to spy the caves when the leaves are down.

Level #36 Lock 43 to Falling Waters; Dick Ebersole: 4/3, The grasses were greening the trees budding and a few wildflowers blooming. I met a canal work crew installing new biker gates.

Level #40 Nettle RR Bridge Piers to Dam 5; Bill Hibbard: 1/31, One biker was going west. All was in order, but no flowers and no critters were seen.

Level #41 Dam 5 to Four Locks; Bill Justice, Sr.: 3/31, I worked down the peninsula starting at guard lock 46. I went downstream, bounded by the canal on the north, the Potomac on the south and ended where the canal enters the slack water behind dam 5. I didn't get done and will return. I grossly underestimated the trash yet to be gathered and the time it takes to clean it up but I'll keep going until it's done. Total wt. 53 pounds! 3/17, also 3/18 Eight to ten potholes 300 yards east of four locks need about a ton of stone. If I could a truck onto the towpath, I'd fix them. (NPS says the potholes are now repaired. Bill McAllister) A large brown bird with rounded wing tips I was unable to identify flew from near the ground, close to me and landed in the trees across the river. 4/8, A wildflower was starting to bloom; I don't recognize it but it has oval leaves about two inches long alternating on a stem about 6 to 8 inches tall. A few stems were capped with purplish blossoms. The unopened blooms did not reveal their characteristics. On the way out, I spotted a small herd of half a dozen or so deer about twenty yards off, all antlerless and of varied sizes. I stopped, they grazed bit, then sauntered off one at a time. 4/14, An unidentified wildflower noted in my last report turns out to be *mertensia*, Virginia cowslip. The blossoms are violet trumpets an inch long. Some immature blossoms are pink. I also saw some small orchid-like yellow and brown flowers.

Level #41 Dam 5 to Four Locks; Mercedes and Paul Tibbits: 4/12, We list a deer, two water snakes, a large water fowl (egret or heron), a "bald eagle" (near dam #5). "Dutchman's britches" and Virginia bluebells abounded. Passerby's helped us identify several of the above.

Level #42 Four Locks to McCoy's Ferry; Carl Pedersen: 3/23, I walked the level Sunday, March 23. I spotted a beaver in the river at Four Locks and

On the Level continued on p. 9

FROM THE ASSOCIATION

From the President

Well, this was alarming: the newsletter editor has asked me for the president's report. Not much of a writer, I prefer walking. In fact, I first learned about the C & O Canal Association from a walker. Margot Foster had interrupted the 1984 thru-hike to host a garden party which my daughter and I attended. The idea that anyone could walk 180-plus miles this close to home with no traffic intrusion, just the river, the trees, the towpath, was an irresistible one. So I joined the group in time for that year's Heritage Hike. Judging by the number of hikers and diners at the banquet that evening, the organization was fairly small.

Now we are pretty much larger - over a thousand memberships, according to our Membership Chairperson. That means the total members (because a membership can include a couple or a family) might be somewhere in the neighborhood of 1250 to 1500 people. On the one hand, that's a good thing. It means more people who care about the canal. More people whose vigilance will protect it from incursions and encroachments and, yes, indeed, from deterioration. That vigilance, as we all know, has restored the Monocacy Aqueduct and the Widewater area. It has supported our Friends of The Historic Great Falls Tavern in its wildly successful campaign to fund and build a new canal boat; supported George Lewis' energetic efforts on behalf of the Catoctin Aqueduct's restoration; supported the efforts of Tom Perry and the Town of Williamsport to repair and restore the towpath at Big Slackwater; and supported the indomitable efforts of Emmie Woodward and the Western Maryland Rail Trail Supporters to convert that railbed, with its three tunnels and six high Potomac River bridges, into a trail through the Paw Paw Bends and the Green Ridge Forest and into and out of Morgan County in West Virginia.

And that vigilance has also challenged the Park on its plans to allow an oversized GU boathouse on a narrow and barely accessible strip of C&O parkland in Georgetown.

But we also take care of smaller things. Our VIPs have repainted the Georgetown canal boat and benches, bollards, tables, Riley's Lockhouse interior and its picket fences, spruced up Swain's Lock, helped move the visitor center back into the Great Falls Tavern, erected multiple wayside exhibits along the towpath, repaired eroded access paths to the towpath, and conducted efforts to rid the area of invasive plants - just a few of the VIP efforts. That committee worked hard enough to attract attention significant enough to win the 2007 George P. Hartzog, Jr. award, given annually by the National Capital Region of the Park Service to an outstanding volunteer group. Last year our Information/Public Relations Committee began emailing monthly calendar notices to members who have provided an email address, in addition to issuing news releases and providing content to the Webmaster (see <http://candocanal.org>). We have walked, in addition to the annual Douglas Hike in springtime and Heritage Hike in autumn, on the Continuing Hike series - which are monthly circuit

hikes; on semi-annual hikes that focus on geologic features of the ancient hills and mountains through which the towpath passes; and thanks to Peter Whitney and Marion Robertson, we have revived the spring wildflower walk. We have also assisted the Park with compiling information and funding for a brochure on lost villages at White's Ferry and at Monocacy Aqueduct, thanks to a grant from Heritage Montgomery.

And the Level Walker program. This is likely the most popular volunteer activity of our association. As you know, Level Walkers can request any of the 69 levels, which vary in length or the chair of the program may provide several alternative levels. The objective is to identify usage (human, canine, equine, and otherwise), and conditions that require maintenance, and serious hazards. A glance at the Level Walker report in the December 2007 issue of this newsletter shows some fairly extensive walking and reporting has occurred. My perennial favorite is the report from John Barnett on Level #1. This urban level, through the heart of Georgetown, is inhabited by a number of homeless persons who always seem to assist the reporter with clean-up and trash collection.

So it goes. Yes, people ride their bikes, some take their horses out. But mainly we walk and we observe and we enjoy the place year round.

We can do more. The C & O Canal National Historical Park is in a deteriorating condition. Its budget is slim and its personnel numbers have declined. Without employees, its operations suffer, despite the efforts of the dedicated personnel who remain. What one former president described as a "starvation diet" has resulted from a national policy for the Park Service to reduce operations everywhere.

Two bright lights have appeared. The 100th anniversary of the National Park Service arrives in 2016, and to commemorate that, the Administration proposed and Congress has passed a program called "The National Park Centennial Initiative". This will provide matching funds on a competitive basis to parks, their friends, and their partners. And the Canal Trust, organized last year, will do major fund-raising for Park operations. We as members of our C & O Canal Association welcome both. With over 1,000 memberships, there are lots of us who can help - in addition to our always-welcome money. The Visitor Centers will welcome you to greet visitors, provide information and answer questions. The Volunteers in the Parks will welcome you, particularly if you like digging holes and getting paint-spattered. The canal boat crews will welcome you, particularly if you like to dress up and entertain school children and tourists. The canal historians and interpretative staff might even welcome your knowledge and your organizational and writing skills. I have office skills - would they be welcomed as well behind the scenes?

- Rachel Stewart

From the Editor

Solvitur Ambulando

The other day a member of our Association came across this saying in Latin. He wonders whether it could be a kind of motto for our Association. One student of Latin translates it: "The problem is solved by walking." Or, ... "by walking along."

Mottos and the C&O go together. The old C&O Canal Company's bold venture was guided not by one but two Latin mottos: *Perseverando!* and *Esto Perpetua!* The first taken liberally means: "By perseverance (a noble work is done)." and the second: "It's for perpetuity" or, how about: "This (canal) is for keeps!"

The Latin, of course, lends an aura of wisdom long established. In this case it is more than an aura. To solve a problem or figure something out as one walks goes at least back to the Greeks. Aristotle's philosophy was dubbed *peripatetic*, literally a walking-about philosophy. He liked to walk along while teaching his students.. His teacher, Plato liked to stroll in the shade of the groves of academe and said: "Let us go together friends in learning." And don't forget those Tibetan monks who jog 100-mile stretches on high Himalayan paths, meditating all the way.

William O. Douglas's grand idea that the C&O Canal should be a national park, not a highway, probably came to him one day as he strode along the towpath. The more he walked the towpath the more his conviction deepened that this must be so. Next, he and fellow hikers walked the walk that led to the C&O Canal National Historical Park. The Justice often took to the towpath to think over and work out knotty legal issues coming before the Supreme Court. He saw the C&O as a special realm where the loftiest conceptions could enter one's mind. In his famous letter challenging the *Washington Post* editors to hike with him for the park, he depicted the C&O as nothing less than "a refuge, a place of retreat, a long stretch of quiet and peace at the Capital's back door—a wilderness area where we can commune with God and with nature, a place not yet marred by the roar of wheels and the sound of horns."

The C&O's special quality can hardly be better described. We in the Association can attest that the towpath is a rare place where you can go to think, reflect, ruminate, recreate, take stock, brainstorm and, yes, work through all kinds of problems and questions large and small. We all well know as Douglas knew that on the C&O we find ourselves happily free of the mind numbing hurly-burly, hyper-busy busyness of today's world. On the towpath there is time and room to think.. Walking the towpath we ought also to consider what we can do to preserve and protect this wondrous, but endangered, pathway through our country's history. We should do this not only for ourselves but for all who will discover it in the future. Like Douglas, then, we need to talk the talk and walk the walk for the C&O Canal National Historical Park.

Solvitur Ambulando!

- Carl Linden

Along the Towpath

On the Level continued from p. 7

took photos of the first bloodroot of the season blooming at McCoy's Ferry. A stray dog showed up near Marker 111. He had a tag. I prevailed on a hiker to take him to his owner. Despite high water, several bass boats were in the river. The towpath was in good shape. Maintenance has done a good job removing fallen trees. 4/1, During this visit, I simply policed the parking, picnic, and entry areas. The birds were busy singing.

Level #43 McCoy's Ferry to Fort Frederick; Carl Pedersen: 4/22, I took photos of flowering trees on the whole level. Fruit trees were past prime, but the dogwood were starting to bloom (the count last year - 256).

Level #46 Licking Creek Aqueduct to Little Pool; Margie Knott: 3/29, Towpath is in good shape for spring walkers, hikers and bikers. Park service graveled the towpath downstream all the way to Licking Creek Aqueduct. I preferred the old way with grass in the middle. Biggest treat was when three pairs of wood ducks flew by-so beautiful. I also saw robins, cardinals, red bellied woodpecker, two deer and a raft of turtles sunning on logs in the canal near mile 119.

Level #48 Hancock to Round Top Cement Mill; Phillip Clemons: 3/9, I saw five whitetails above mile 126, a large long-billed red, white and black bird, above mile 125. My National Geo Field Guide tells me it was a pileated woodpecker. Saw a redtail hawk below mile 125, a female cardinal at 127, a pair of Mallards at 124. One dark bird about eight inches long was pecking on a tree at 126. I hiked up and back to the cement factory. Level #52 Sideling Hill Aqueduct to 15 Mile Creek Aqueduct; Roger White: 4/10, I saw a large group of canoers at the campsite and outhouse cleaners at work.

Level #54 Lock 59 to Lock 60; Dennis Kubicki: 3/29, Quite a number of beaver-damaged trees that I noted in my January report have been cut down. I noticed no hazards this time. The beavers were now turning their attention, and teeth, to other trees. I was surprised to actually see two beavers, not just their aftereffects. One large fellow was swimming in Lock 59. A much smaller one was in the canal between the Western Maryland RR trestle and the derelict house further west. I glimpsed a few deer, but not nearly as many as usual. I heard the call of a wild turkey near Lock 59, but saw nothing.

Level #61 Town Creek Aqueduct to Lock 68; Steve Johnson: 4/26, One person was on a trike heading east down from the aqueduct. A ring-necked pheasant was back which I saw last year. Blue bells were blooming all along the right of way. Some cows grazed on the berm side at Long Farm. It was a peaceful Sunday on the canal.

Level #68 Evitts Creek Aqueduct to Wiley Ford Bridge; Bob Mischler: 3/14, I met twelve walkers, two bikers. The towpath was dry and in good condition. What I think is ground ivy was blooming at the aqueduct. Also, pretty, blue, 4-petalled flowers were in bloom.

If members would like a copy of the March annual meeting minutes, contact Bill Holdsworth, board secretary, via e-mail at secretary@candocanal.org. The minutes include all reports at the meeting.

C&OCA 2008 CALENDAR OF UPCOMING EVENTS

DATE	DAY	EVENT (visit www.candocanal.org for updated event info)
June - Sept.	Sat. - Sun.	Volunteers needed to staff the lockhouse at Lock 75 to welcome visitors. Contact William Bauman (540-888-1425)
June 7	Sat.	Potomac River Family Festival, Brunswick, Md.; also, Barge Bash, Hancock, Md., 2:00 p.m.
June 14	Sat.	One-day canoe trip at Violette's Lock (Lock 23). For information on this introduction to canoeing, contact Sonny DeForge (301-530-8830).
June 21	Sat.	VIP Work Party, invasive plant removal between Great Falls and Georgetown, 9 a.m. to 1 p.m. Contact Jim Heins (301-949-3518 or vip@candocanal.org).
June 28&29	Sat. & Sun.	Heritage Tour Days, Monocacy Aqueduct.
July 12	Sat.	Canal and Rail Fest, Cumberland, Md.
July 18	Fri.	Chesapeake and Ohio Canal National Historical Park Federal Advisory Commission Meeting, 9:30 a.m. at Park HQ, training room on second level, 1850 Dual Highway, Hagerstown.
July 19	Sat.	Canoe trip, Brunswick to Monocacy. Contact Bill Burton (billburton@earthlink.net or 703-801-0963).
July 26	Sat.	VIP Work Party, time and details TBD. Contact Jim Heins (301-949-3518 or vip@candocanal.org).
Aug. 3	Sun.	Board Meeting at Glen Echo Town Hall, 6106 Harvard Ave., 1 p.m.
Aug. 16	Sat.	Canoe trip, Old Patowmack Canal, Virginia. Contact Sonny DeForge (301-530-8830).
Aug. 23	Sat.	VIP Work Party, time and details TBD. Contact Jim Heins (301-949-3518 or vip@candocanal.org).
Aug 23 - 24	Sat. - Sun.	Williamsport Days, Williamsport, Md. Contact Tom and Linda Perry, 301-223-7010.
Sep 6	Sat.	Balls Bluff canoe trip. Contact Bill Burton at billburton@earthlink.net or 703-801-0063
Sep. 7	Sun.	Happy Birthday Montgomery County!, Beall Dawson House, Rockville, Md.
Sep. 14-17	Sun. - Wed.	World Canals Conference, Rideau Canal National Historic Site of Canada, Kingston, Ontario. For more information, see www.canals2008.com .
Sep. 20	Sat.	VIP Work Party, time and details TBD. Contact Jim Heins (301-949-3518 or vip@candocanal.org).
Sep. 26 - 28	Fri.— Sun.	Canoe trip in Paw Paw Bends area. Contact Barbara Sheridan at (301-752-5436 or barbara.sheridan@gsa.gov).
Oct. 4	Sat.	Geology Hike in the Great Falls and Billy Goat Trail area. Details TBD. Contact Marlow Madeoy (703-723-6884 or nancymadeoy@aol.com).
Oct 4.	Sat.	In the Streets, City of Frederick, Md., 9:00 a.m. until 4:00 p.m.
Oct. 5	Sun.	Board Meeting at the home of Tom and Linda Perry in Williamsport, 1 p.m.

C&OCA 2008 CALENDAR OF UPCOMING EVENTS

DATE	DAY	EVENTS, CONTINUED (visit www.candocanal.org for updated event info)
Oct. 13-18	Mon-Sat	Thru bike ride, Cumberland to Georgetown. No sag wagon. Call Tom Perry (301- 223-7010).
Oct. 17	Fri.	Chesapeake and Ohio Canal National Historical Park Federal Advisory Commission Meeting, 9:30 a.m. at Park HQ, training room on second level, 1850 Dual Highway, Hagerstown.
Oct. 18	Sat.	Pennsylvania Canal Society Fall Field Trip. Tour C&O Canal from Great Falls to the Monocacy Aqueduct, Ride <i>C. F. Mercer</i> , dinner, Life & Death. Contact Dave Johnson (301-530-7473)
Oct. 18	Sat.	"Life and Death on the Canal." Contact Great Falls Tavern Visitor Center (301-767-3714).
Oct. 25	Sat.	VIP Work Party, time and details TBD. Contact Jim Heins (301-949-3518 or vip@candocanal.org).
Oct. 25	Sat.	Continuing Hike Series, 10:30 a.m. Knuckles Cut on the Western Md. Railroad. Meet at Lock 70 in Oldtown, Md., mile 167.7. Contact Pat White (301-977-5628 or hikemaster@candocanal.org).
Nov. 1	Sat.	Annual Heritage Hike, Dam #5 to Little Pool area. Hikes of varying lengths will be available. Details to be in September newsletter. The evening program will feature an illustrated talk by Karen Gray on a 1904 packet boat trip down the canal from Cumberland to Great Falls.
Nov. 15	Sat.	Geology Hike in the Point of Rocks area. Details TBD. Contact Marlow Madeoy (703-723-6884 or nancymadeoy@aol.com).
Nov. 23	Sun.	Continuing Hike Series, 10:30 a.m. Goose Creek Navigation System, Golf Club Lane off Rte. 7, south of Leesburg, Va. Contact Pat White (301-977-5628 or hikemaster@candocanal.org).
Dec. 6	Sat.	Frostbite Hike, 10:30 a.m. Meet at Great Falls Tavern, walk to five points with fine views of the canal and riverscape. Contact Carl Linden (301-229-2398).
Dec. 7	Sun.	Board Meeting at Glen Echo Town Hall, 6106 Harvard Ave., 1 p.m.
Dec.	Wed.	New Year's Eve Hike. Details TBD.
Jan. 1	Thurs.	New Year's Day 2009 Hike. Details TBD.

THE ASSOCIATION WELCOMES OUR NEW MEMBERS

Leon Brewer, New Hope, MN
 Joe Butera, McLean, VA
 Patricia A. Castellano, Gaithersburg, MD
 Steve Dean, Saint Leonard, MD
 Christine Ford, Springfield, VA
 David & Heidi Gardner, Sterling, VA
 Wendy Gorski, Germantown, MD
 Pamela Hamilton, Keene, NH
 Sandra & Bob Haywood, Bucksport, PA
 Marianne Huffer, Waynesboro, VA
 Laura Jordan, Olney, MD
 Tim Long, Walterboro, SC
 Frances L., Lynch, Boonsboro, MD

Jim & Donna McCune, Keyser, WV
 Katrina Muehl, Germantown, MD
 David Richardson, McLean, VA
 Cay Savel, Gaithersburg, MD
 Martin Scherr, Washington, DC
 Sharon & Terry, Shrader, Williamsport, MD
 Kathryn Jean, Stansbery, Mt. Airy, MD
 Eric Steinbring, Johnstown, PA
 Patricia Tierney, Rancho Palos Verdes, CA
 Walter & Deborah Wagner, Altoona, PA
 Tim Whitehouse, Poolesville, MD
 John & Mary Jo Wilson, Rockville, MD

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 BC), Pro Publio Sestio

The Georgetown Canal Incline: Its Ups & Downs

The land currently owned by Georgetown University that is at the center of the Georgetown boathouse issue includes the remains of the Georgetown canal incline. The story of this structure constitutes a colorful chapter in a larger story that might well be called “The Trials and Tribulations of the Eastern Terminus of the C&O Canal.” The central theme in this story, and the reason for the incline, is quite simply the inadequacies of the tidewater end of the canal for the transshipment or delivery of canal cargos.

In October, 1849, a full year before the 50 miles between Dam 6 and Cumberland opened, Chief Engineer Charles B. Fisk wrote to Georgetown Mayor Henry Addison, concerning certain critical improvements to the canal as it passes through the city. He proposed, among other changes, the raising of some of the bridges over the canal to allow the passage of the larger freighters that were increasingly common on the waterway, the widening of the canal from the Alexandria Aqueduct to Potomac Street, and the construction of a turning basin for boats that unloaded above Lock 4. (Bearss, 28)

While the problematic bridges were raised after the Civil War, and certain other improvements were made in the Georgetown section of the canal, serious delays and difficulties continued to plague the terminus facilities, and even increased as shipping on the canal grew. At the 43rd annual meeting on December 29, 1871, C&O Canal Company President James C. Clark (who served from June 1870 to June 1872) reported that “often a string of loaded boats from half mile to a mile in length is seen lying above the Collector’s Office in Georgetown, waiting their turn to get in to the wharves to discharge their cargoes.”

To address this situation, Clark introduced an idea that first appeared during the Civil War: constructing outlet locks (also known as river locks) above the aqueduct. These would serve the many boats that pass into the river for towage by tugboats to a destination below Georgetown, leaving the Georgetown segment of the canal to boats delivering their cargo there. However, the Canal Company, under court order to pay down its debts with the profits it was now earning, was focusing on the reduction of the interest on the construction bonds of 1844 and decided that it was, therefore, impossible to undertake the expense of such a project at that time. (Sanderlin, 228–229)

In the spring of 1872, H. H. Dodge, a local politician, advised the canal company that he would construct an outlet lock and lease it to the company. On May 10, 1872, the canal company signed a contract with Dodge’s Potomac Lock and Dock Company to do so. However, it was soon realized that lockage capable of overcoming the 40 feet between the canal and the river at the proposed location, would require a great deal of water—a commodity already often inadequate on the Georgetown level. (Skramstad, 552)

The canal company turned to William Rich Hutton, its chief engineer from 1869 to 1871, as a consultant. Hutton recommended an inclined plane or lift as an alternative to locks. This led to the company amending the contract with the Potomac Lock and Dock Company to allow “inclined planes, lifts, or other devices for obtaining the same end” as outlet locks. Hutton, as a consultant for the Potomac Lock and Dock Company, considered several plans, but ultimately designed the inclined plane, the cheapest option (\$80,000 compared to \$85,000 to \$125,000). (Skramstad, 552–553)

Construction began in the spring of 1875, having been delayed as a result of financial uncertainties arising with the panic of 1873. The caisson was 112 feet long, 16 feet 9 inches wide, and 7 feet 10 inches high and rested on six six-wheeled trucks that moved on two pairs of iron rails 600 feet in length at a slope of 1:12. It was balanced by two counterweights moving on two pairs of 300-foot iron rails at a slope of 1:10. Two steel wire ropes supplied by John A. Roebling’s Sons, interconnected the system that included two pairs of winding pulleys, powered by a water turbine fed by a sluiceway between the canal and the river. The caisson, rails, counterweights, and machinery were built by the Vulcan Iron Works of Baltimore. (Skramstad, 553)

The incline worked by bringing the caisson up against a gated headwall in the towpath berm of the canal, to which the caisson would be held fast. The headwall and caisson gates were then opened, admitting water into the caisson and, once it was filled, a boat. When ready to descend, the gates would be closed and the caisson would descend down the incline to a river basin where the caisson’s lower gate was opened, allowing the boat to pass into the basin where it would be connected to a tug for its journey downriver. The entire process took only 12 to 18 minutes. (Skramstad, 554, 555)

The Canal Company’s President Arthur Pue Gorman (who held the office from June 1872 to August 1882) and the Board approved the incline on July 6, 1876. On January 11, 1877, a contract for a 25 year lease at \$15,000 per year was executed between the C&O Canal Company and Dodge’s Potomac Lock and Dock Company. This would have paid Dodge \$225,000 for the project that reportedly had cost \$145,556.79. (Skramstad, 554)

As fate would have it, tonnage on the canal was dropping by this time and the congestion that had created the need for the incline was rarely a problem. Still, the incline operated more or less constantly until late 1879 when it began to be used only on those occasions when the Rock Creek outlet was inadequate or dysfunctional.

However, in August 1880, a flood severely damaged the Rock Creek outlet, causing it to be abandoned and requiring the use of the incline by all boats with destinations down the Potomac. This situation appears to have continued throughout the 1880s until the 1889 flood destroyed the incline, closed the canal, and forced the C&O Canal Company into bankruptcy. The 1890–91 restoration of the canal under the receivership returned the

Rock Creek basin and outlet structures to service, and left the canal incline to pass into near oblivion. (Skramstad, 555)

There can be no doubt, however, that the C&O's incline was one of the major engineering achievements in the canal's history. In 1876, prominent 19th-Century engineer James McAlpine referred to it as the "largest incline in the world"; and it was paired with the caissons for the Brooklyn Bridge tower piers to represent the best of American engineering at the Paris Exposition of 1878. Additionally, many European technical journals described the work, and it was one of the inclines featured in an 1881 classic work on inclines by M. Joseph Hirsch. (Skramstad, 555)

But the incline's story doesn't end here. Despite the praise it garnered, it also provoked controversies over aspects of its design, even causing some engineers to question the efficiency and safety of inclines and lifts in general. Significant technical difficulties had emerged in its operation and at one point it was determined that the automatic friction brakes were ineffective and they were removed for modification. This left only a pawl and ratchet system to control the caisson in the event of a failure of either the cable or winding machinery. (Skramstad, 554, 555)

In the fall of 1876, while adjusting the counterweights, the caisson slammed against the headwall, slightly cracking it. At the time it was felt that the damage was not important enough to report, although note was made of it in March and May of 1877 on two occasions when winding pulley axles cracked. Then, on May 30, 1877, as the caisson was descending with a fully loaded boat, one of the masonry anchors for a winding pulley gave way, releasing the wire ropes that sheared off axles and allowed the counterweights to run down their tracks and smash into the incline's lower wall. (Skramstad, 556)

Amazingly, the caisson and the boat it carried were not damaged, but three men were killed: Assistant harbormaster John Mead who was crushed by a counterweight, and two other incline workers who were struck by the lashing cables. From every direction blame was heaped on Hutton and his incline, and the report of the coroner's jury stated:

We find that the accident...was on account of the insufficient strength of a portion of the iron work and masonry for the purpose intended, which from the evidence adduced was suspected by both the contractors and employees of the canal company for some time. (Skramstad, 557, citing the Washington, D.C. *Evening Star's* June 2, 1877 coverage of the jury's findings.)

Hutton then made a series of improvements, including the replacement of the iron rails with steel rails, a new and improved braking system, and the use of heavier winding pulleys. More significantly, it was decided to operate the caisson dry by draining the water from it once the boat was inside, allowing the boat to settle onto the caisson's deck. This meant that the weight of the caisson and counterweights could no longer be equalized by adjusting the level of the water in the caisson, which in turn eliminated some of the advantages of the incline system and placed new stresses upon it. (Skramstad, 557)

To counter reluctance to use the incline, Canal Company President Gorman commissioned P. H. Dudley—a renowned railroad engineer and recognized expert on wheel and axle loads—to evaluate the incline. Dudley's May 1879 report highlighted three major faults in the design and construction: (1) excessive weight on the wheels, axles, and rails supporting the caisson; (2) unequal distribution of weight when the caisson was operated dry, resulting in the axles being bent and rails crushed; and (3) the winding machinery being more complex than necessary. (Skramstad, 557)

Dudley also recommended a significant number of changes, including the addition of more wheels under the caisson. Hutton responded in July, admitting that more wheels might be desirable, but denying their necessity, and arguing against some—but not all—of Dudley's other recommendations. Hutton also identified "the excessive pressure of the wheels on the rails" as the chief defect of the incline, but he insisted that the dry operation ameliorated the problem. However the decline of the canal company's financial situation resulted in none of Dudley's recommendations being implemented. (Skramstad, 558)

In 1880 and 1881, when James B. Eads promoted a large ship railway across the Isthmus of Tehuantepec in Central America, he cited the Georgetown incline in defense of his plan. Criticism immediately emerged, and S. L. Phelps, a ship captain, published a pamphlet attacking Eads plan, also citing the Georgetown incline to support some of his own arguments. In particular, Phelps, who had polled C&O Canal boatmen who used the incline, emphasized their fear of it and their belief that excessive strain was put on their boats when the caisson was operated dry. (Skramstad, 559)

Phelps's pamphlet also quoted a letter Hutton had written to an Eads critic, Daniel Ammen. In that letter Hutton admitted that the friction in the Georgetown incline's machinery had proved to be "far beyond anything we could have expected." He also acknowledged that the unequal distribution of weight on the axles was still a problem despite its being alleviated by allowing about 20 inches of water to remain in the caisson. Hutton himself emphasized that the Georgetown incline did not support the argument for a large, interoceanic ship railway. (Skramstad, 559)

In a subsequent, private letter to Ammen, Hutton corrected errors in Phelps's pamphlet and denied that the boats were damaged by transport in a dry caisson. He pointed out that the boats were flat-bottomed with "hog irons" to prevent the ends from sinking, and he asserted that it was over tightening the hog irons that caused a permanent camber in some boats. He also noted that, in any case, the boats often lay on the bottom of the canal when it was dry (as was the case every winter season).

Perhaps the most telling indicators of Hutton's own early and late opinion of his incline were his admission in an 1878 letter to Gorman that he was uneasy about it, and his decision to leave it entirely out of an 1893 professional vita. (Skramstad, 560)

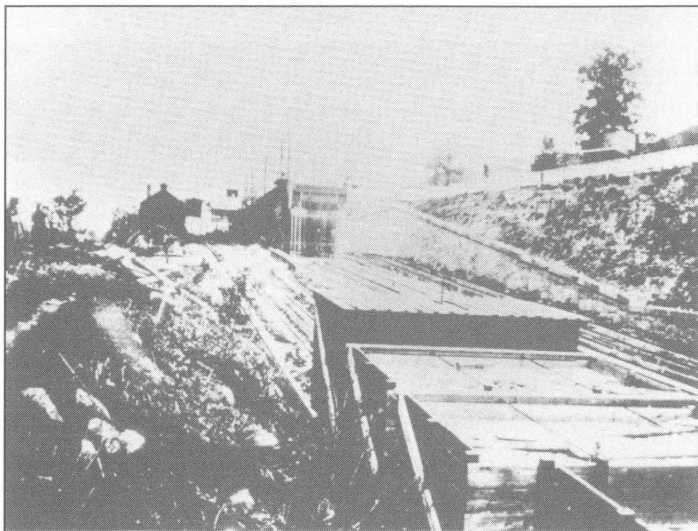
Resources:

Beer, Edwin C. *The Bridges: Historic Structures Report—Part II*. National Park Service, January 31, 1968.

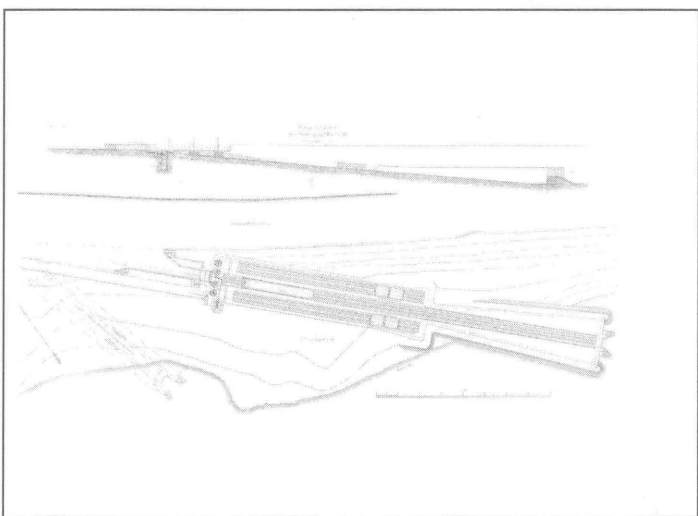
Continued next page.

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Skramstad, Harold. "The Georgetown Canal Incline" *Technology and Culture*, Vol. 10, No. 4 (Oct. 1969) 549-560.



Rare Photo of the Incline - Photographer Anonymous



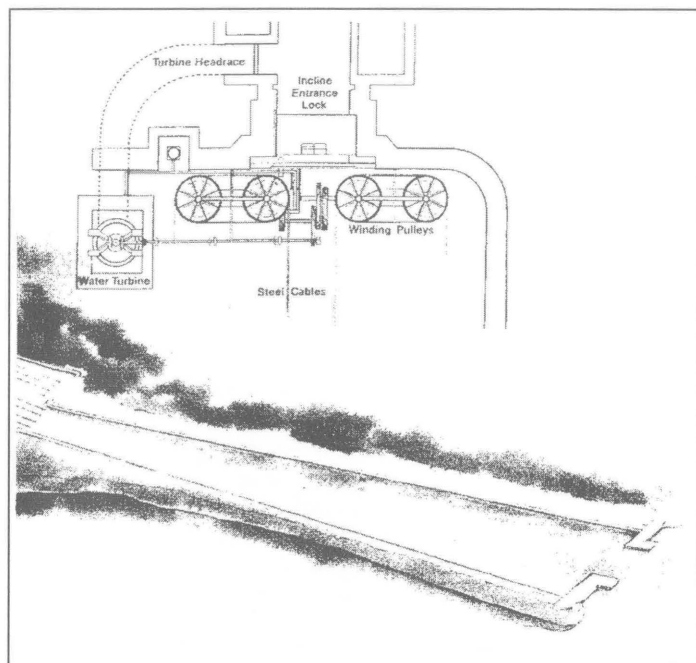
Incline Plan & Elevation - Zeitschrift fur Bauwesen (1878)

Champion Trees on the Canal

Many of us are familiar with the array of wildflowers found along the C&O Canal, especially in the early spring, but are you missing the trees for the flowers? Along the 37 miles of the canal in Montgomery County at least 10 county champion trees, the largest known trees of their species in the county. Four are state champions, and one is a national champion. All are worthy of closer scrutiny.

A magnificent silver maple (*Acer saccharinum*) is at Lock 26. It is not the most prized of maples, but is the prettiest you may ever see. It scores an impressive 363 points.

The score is a tree's circumference in inches measured at 4½ feet. height is measured in feet, and the spread of its branches in feet in two directions, averaged, and divided by 4. The circumference in inches, the height in feet, and one fourth of the spread's average in feet are added to give the point score, so a 363 point maple is a huge tree.



Guide to the C&O Canal NHP (1989)

Even more impressive than the silver maple is a 404 point sycamore (*Platanus occidentalis*) close by but nearer the river. Many large sycamores are found all along the C & O Canal. I know a hollow sycamore near the Catocin Aqueduct that can hold at least five sixth graders. For a long time the largest tree east of the Mississippi was a sycamore near Jeromesville, Ohio, that scored 727 points. Sycamores can grow to a larger trunk diameter than any other native hardwood. The largest one in Maryland in Carroll County scores 464 points.

A sycamore comparable to the 404-pointer above near Dickerson grows about 1¼ miles upstream from Seneca Aqueduct. Only about 100 yards from the towpath, it is located in the McKee Beshers Wildlife Management Area. It is visible from the towpath in winter when leaves have fallen.

Farther downstream a bit on the canal's north side is a champion basket oak (*Quercus Michauxii*), also called a swamp chestnut oak because of similar leaves. Fibers obtained by splitting the wood were used to make baskets. Another beautiful basket oak of comparable size is in the woods about a quarter of a mile downstream in the county's Blockhouse Point Park adjacent to the canal.

Just south of the Great Falls Tavern is a small clump of paper mulberries (*Broussonetia papyrifera*). None are large, but they are unusual being native to Asia. No one seems to know how they got there. They were used to make paper, hence the common name and the Latin name. Further down the towpath, opposite Bear Island midway along Widewater, a very old overcup oak lives about 200 yards east of the towpath. It scores 277 points. It grows at the edge of a depression which usually holds water or is damp most of the year. This past summer was very dry, and the tree is in a stressed condition now. This large tree is a state champion. It is unusual to see one here. It is considered a southern species with the Maryland Coastal Plain its northern limit. It seems like the state champion should be on the Eastern Shore or in Southern Maryland. This oak's acorns have caps that almost cover them, thus the name, "overcup."

Loop B of the Billy Goat Trail is a wildflower wonderland in spring, but at riverside a humongous cottonwood (*Populus deltoides*) lives. Not only among the largest eastern hardwoods and fastest growing, its trunk is now close to 13 feet in circumference. Its score increases every year. Sad to say it is short-lived, but large ones are not uncommon along the park's riverside. Remember in Spanish the cottonwood is the "alamo".

Along the Towpath

Another state champion is in the southern part of Carderock on the riverside trail. Though not so large with its trunk just a bit over 26 inches, it is large for a pawpaw (*Asimina triloba*) at a score of 88. It shares the crown with an 85 point pawpaw at Hard Bargain Farm on the Potomac in Prince Georges. (Trees of the same species that score within five points are deemed co-champions.) Ripe pawpaws are tasty and are akin to the tropical soursop and custard apple. The name derives from the papaya of the Arawakan Indians, which oddly enough is not related to the pawpaw. These two trees should reign as national co-champions.

Another large chinquapin oak grows south of Carderock on a hillside below the towpath. Scoring just over 300 points, it is just 20 points shy of the state champion at Sotterly Mansion in St. Mary's. The oak takes its name from its leaves resembling chinkapin chestnuts.

A fifth of a mile downstream from Lock 7 on the berm a magnificent Shumard oak grows (*Quercus shumardii*). John Bennett, volunteer coordinator of Maryland's Big Tree program, calls it "a most impressive tree" with its 20-foot plus circumference and height of 129 feet. The 17th largest known tree in Maryland, it's worth the trip.

If you've kept track, you'll know the Shumard oak is the ninth champion along the C & O Canal discussed so far. You may wonder about the

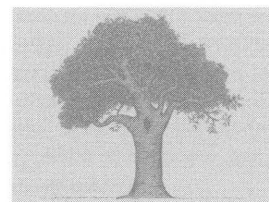
tenth one. It's out there somewhere still unreported. Why not be on the lookout for it. Should you find it, report the tree's name, circumference, and location to the Montgomery County Forestry Board at the Maryland Dept. of Natural Resources, Forestry Division, 17400 Annapolis Rock Road, Woodbine, MD, 21797. The Board will confirm its identity and measurements. You will be named as its *nominator* in the annual Register of Champion Trees of Montgomery County! Wow!

Joe Howard

301-585-8818

9501 Bruce Dr.

Silver Spring, MD 20901



ANNOUNCEMENTS

Nominating Committee

Have you ever considered becoming more involved in the C&O Canal Association? Would you like to help in shaping and guiding this organization as we move forward with our commitment to assist in the protection, preservation and promotion of the Chesapeake and Ohio Canal National Historical Park? Do you have ideas or suggestions as to how we can better serve the Park we love so much?

If you answered "Yes" to any of the questions above, you may be just the person we are looking for! The Nominating Committee will be meeting early in the fall to determine the candidates for the 2009 officers and board of directors. The elections will be held at the annual meeting next March.

If you are interested in a position on the Board or you know someone who would make a good candidate for office, please contact one of the members of the Nominating Committee. This year's members are:

John Wheeler, Chair, compostman@att.net; 202-362-6009

Sonny DeForge, 301-530-8830

Jim Heins, jheins57@verizon.net; 301-949-3518

Dave Johnson, 301-530-7473

George Lewis, lewisdvm@aol.com; 301-834-4044

Western Maryland Rail Trail

The Western Maryland Rail Trail extension from Pearre to Paw Paw, WV is still on track. We are waiting for the C&O Canal NHP to get the Environmental Assessment done, which will take about six months, and the construction (planning and executing) from Pearre to Little Orleans, the Phase 4 of the entire project. The web site for the Western Maryland Rail Trail Supporters group is now up and running. Take a look at www.westernmarylandrailtrailsupporters.org.

River Center at Lockhouse 8

Potomac Conservancy Summer Schedule—2008

Open House: River Center at Lockhouse 8, C&O Canal National Historical Park, Cabin John, MD *Saturday and Sunday, through October 26, 10 am - 2 pm*

Potomac Conservancy docents will be on hand to lead groups through the restored lockhouse and interactive exhibits that show the connection between the Canal, the Potomac River, and the Chesapeake Bay. **For more information about River Center events, contact Bridget Chapin, River Center Coordinator, at chapin@potomac.org or 301-608-1188 x213.**

River Center Open

Saturdays and Sundays, 10 am-2 pm

The 2008 season at the River Center was officially opened May 10th.

Bike Tour

Saturday, June 14, 9am

We will meet at the River Center at Lockhouse 8 and pedal along the C&O Tow Path and Berma Rd. to the scenic Great Falls and then return to the River Center. Potomac Conservancy docents will be on hand to lead groups through the restored lockhouse and interactive exhibits that show the connection between the Canal, the Potomac River, and the Chesapeake Bay.

continued p. 16

My Great-Grandfather Tended Four Locks

The gentleman in the photograph below, Joseph Gustavus Brewer, was lock master at Four Locks. He oversaw canal boat traffic coming through locks 47, 48, 49 and 50. He tended the locks for two decades from 1861 until he died in 1881. I am proud to say he was my great-grandfather. My grandfather, Lewis Stanhope Brewer, was born in the Four Locks lock house. The house still stands in reasonably good condition. (See photo) It was refurbished some years ago and was used as the district park ranger station for a time. On my first motorcycle trip to the area in 1990, I had the pleasure of going through it and getting a feel for the old homestead. I was delighted to see where my great grandparents lived and where my grandfather was born and raised. I found one of the locks in good shape but sadly all were waterless. Another lock was filled with dirt to keep the walls from falling in. The lock walls had moved quite a bit.

During the time my great-grandfather was overseeing the locks, there was a Lewis Stanhope who was either a canal official or a previous lock tender. My great grandfather obviously thought highly of him. My grandfather's middle name was "Stanhope" and so is mine.

Four Locks is at mile 108.8 on the canal nine miles above Williamsport going west. Four Locks enabled the canal to take a short cut across Prather's Neck rather than following a much longer route around the river bend.

At the time of my visit the district ranger, Mike Mas-trangelo, was living in the large and elegant stone house, the "Hasset House." Its early owner evidently ran a canal oriented business. I recall my dad telling me about him. Mike was most welcoming. He showed me pictures of Four Locks taken many years ago. The school my grandfather attended is but a short walk from Four Locks and is still in good shape. Four Locks is picturesque and a classic canal setting on the C&O.

My Dad once gave me George "Hooper" Wolfe's entertaining book, *I Drove Mules on the C & O Canal*, full of stories and pictures of the old canal. In my copy, I found a newspaper clipping from the Hagerstown *The Daily Mail*, of January 3, 1976. Though not about Four Locks, it interviewed Glennie Zimmerman Brewer, who lived with some of her family on a canal boat. At 16 she became the boat cook and washerwoman. At age 20 she married a distant relative of mine, George Lancelot Brewer. I think he and my dad were second cousins.

Though I live in Minnesota, I have visited the canal on three occasions and plan to come again. I am most grateful to my daughter and son-in-law for giving me a membership in the C & O Canal Association. My son and daughter are the couple in the photo of the Four Locks lock house in the accompanying photo.

- Leon Stanhope Brewer



Great Grand Daughter & Great Grand Son of Joseph Gustavus Brewer

Julie & Rod Brewer

Announcements, continued from p. 15

Photography along the Canal

Sunday, June 22, 8-10 am

River Center at Lockhouse 8

Join photographer Joanne Miller for some one-on-one pointers as you capture the sights along the C&O Canal. Bring your favorite

Continued from p. 15

camera and a good eye. After the session Potomac Conservancy docents will be on hand to lead groups through the restored lockhouse and interactive exhibits that show the connection between the Canal, the Potomac River, and the Chesapeake Bay.

Picnic and Canoe Clean-up

Saturday, June 28, 9am-12pm

River Center at Lockhouse 8

Help protect our waterway by taking a short canoe trip to Minnie's island. After an island/river clean-up we'll enjoy a relaxing picnic lunch on the island, dessert will be provided. After the clean-up Potomac Conservancy docents will be on hand to lead groups through the restored lockhouse and interactive exhibits that show the connection between the Canal, the Potomac River, and the Chesapeake Bay.

CONTRIBUTORS TO ASSOCIATION FUNDS

With deep appreciation, the C&O Canal Association acknowledges the following persons who have generously contributed to its funds since the last report in *Along the Towpath*. Contributions received after May 5, 2008, will be acknowledged in a future issue of the newsletter. Donation options currently include: the C&O Canal Fund (a revolving fund to support current projects and programs in and for the C&O Canal National Historical Park); the Davies Legal Defense Fund; and the Big Slackwater Fund to support the restoration of the towpath between miles 86.7 and 88.1 so that hikers and cyclists will no longer be forced to detour around that area.

ALBRECHT, William	GALBLUM, Harry & Velma	LONGFELLOW, Richard	SHERMAN, Sally
ALKIRE, William & Alice	GARRON, Steven	MATULA, Stephen R	SICKLES, Thomas & Katherine
ALLEN, William H	GILLIAM, Randy & Sandra	McELRATH, Charles D	SILENAS, Rima V
BANISZEWSKI, Joseph	GRAMS, Reese & Nancy	McGRAW, John & Barbara	SKIVER, Malcolm & Robin
BARNARD, Nicholas J	GRECO, Elisabeth R	McMANUS, Robert J	SMITH, Sherwood
BARR, John F	GRIGGS, M. Meridith	MILLAR, John D	SOKOLOW, Jayme A
BARRY, Dennis M	GROEN, Hendrick G	MILLAR, James & Hete	STERNS, Russell & Marilyn
BECK, John E	GUNDERSON, Norman & Kathryn	MILLER, Edward T	STOLL, Richard & Anita
BISER, David & Barbara	HADLEY, Linda A	MITCHELL, Douglas & Marilyn	SUMMERHILL, Diane E
BOERNER, Michael & Dorothy	HAIDEMENOUS, Julia A	MITCHELL, Gerald & Germana	SUNDERLAND, Frances
BOGDAN, Jr, John R	HALL, Thomas B	MOPSIK, Fred & Judith	SUNG, Carolyn Hoover
BOIES, Robert & Donna	HALLQUIST, Theresa E	MUNDELL, Leonard & Susan	SWANK, Lowell & Jean
BREWER, Julia A	HARVEY, Phillip D	NAGELHOUT, Nancy N	TRAILBOOK,
BRUBAKER, Patricia G. Barnett	HATHAWAY, James & Alice	NELSON, James & Judith	VALENTINE, Frank W
BUCCI, Michael J	HIBBARD, Jr, William D	NICOLSON, Charles & Elizabeth	VAN NEWKIRK, W. Karl
BURWELL, Gale S	HILL, James & Donna	ODOM, Louis & Janice	VAN VLIET, Peter
CAHILL, Lora	HUDSON, Dennis M	O'MEARA, James & Clare	VENN, Porter W
CARPENTER, Hilda H	HUFFER, Marianne R	PAULL, Joan G	WAGNER, Ira & Marcia
CLARK, C.L. & J.L.	HUNTER, Sally Lee	PENNER, Jeannette M	WAGNER, James & Shelly
CLEM, William & Mary	JACKSON, Thomas B	PHELPS, Harriette L	WALSH, Hilary
COMPHER, Maurice & Geraldine	JACOBS, Barry & Susan	PITTMAN, Penny S	WEEKS, John & Elizabeth
CONLON, Thomas F	JOHNSON, Jean H	POORE, Katherine L	WEISEMANN, Jane
CONROY, M. Ryan	JONES, John F	POWELL, William & Nancy	WILLARD, Daniel & Linda
COOK, Thomas R	KECKLER, Judith A	REYNOLDS, Grant & Jo	WILLIAMS, Daniel & Martha
DAR, MD State Society	KENT, Carl & Dawn	REYNOLDS, Robert J	WILSON, Mary Pat
DAVIS, Daniel	KLEIN, Marguerite A	ROBERTSON, Marion O	WODARCZYK, Francis John
DAVIS, Harry & Phyllis	KUMM, Henry & Loraine	ROCKWELL, Phillip J	WOOD, Gregory & Patricia
DeFRANCO, Anita	KUSHNIR, Andrei	RONAN, Jr, James A	WRIGHT, Christopher
DeLANOY, Steve	LANDRIGAN, Michael J	ROUSE, Maurice C	WYETH, George B
DERDICH, Kathryn A	LANGAN, Laurence V	ROWLAND, Sue Anne	YU, Victor & Leepo
ECKELS, Joseph & Jane	LIDE, Jr, David R	SCHMIT, Lynn M	
ECKELS, Ruth Stone	LINDEN, Laila	SCHWARZ, Kurt R	
FERRARIS, Clarissa F	LOCHSTAMPFOR, Bernice Ann	SEMMES, Harry & Lurette	
FERRIS, Mary E	LOGAN, Matthew B	SENGSTACK, George F	
FOSTER, Marguerite Peet	LOHSE, Gwendolyn	SEXTON, Ruth A	
		SHALLENBERGER, Michael D	

NATIONAL CANAL MUSEUM EXHIBIT

The traveling National Canal Museum exhibit, *Building America's Canals*, is at the Trolley Barn across from the NPS visitors center in the Cushwa Basin building in Williamsport, MD. The exhibit is open daily from 10 am to 4 pm through October 12, 2008. It is a must see for young and old, and it is a hands-on affair. We are invited to build a canal, construct aqueducts, operate lift locks, pilot a canal boat, load and unload the boats. The exhibit is espe-

cially helpful to anyone who is not quite sure or is a total novice when it comes to knowing how canals work. The C&O Canal National Historical Park and the C&O Canal Trust partnered in bringing the exhibit to the Trolley Barn. A number of local businesses and organizations provided funds in support of the project. The exhibit is inter-active, highly instructive and a lot of fun as well for young and old. Many school kids are enjoying it.

The Wildflowers of Spring

On the second Sunday of April I led a party of twenty down the towpath from Old Angler's Inn on a spring wildflower walk. We headed to the initial portion of the Billy Goat Trail (Section A) on Bear Island where it leads away from Widewater. Here by the trail and the adjacent C&O Canal Towpath an abundance of different habitats and, therefore, a greater variety of species can be discovered. We did seek and we did find. Despite the chilly and cloudy weather we were richly rewarded. We were fortunate to see some 40 different species of flower. Rain threatened but did not fall and the sun came out to greet us as we completed our floral adventure at the Old Angler's parking lot.

04-13-08 Flowers seen - Bear Island, vicinity, C&O Canal (fm Botany Society list, Dan Nicolson)

Generally around parking area down to Towpath

1. Scrophulariac. **Veronica hederifolia* (ivy-leaved speedwell)
2. Lamiac. **Lamium purpureum* (purple dead-nettle)
3. Acerac. *Acer negundo* (box-elder, ash-leaved maple)
4. Brassicac. **Cardamine hirsuta* (bitter cress)
5. Brassicac. **Alliaria petiolata* (garlic mustard)
6. Oleac. *Fraxinus americana* (American or white ash)
7. Legumisa. *Cercis Canadensis* (redbud)
8. Ranunculac. *Ranunculus abortivus* (crowfoot)
9. Caryophyllac. **Stellaria media* (common chickweed [3 styles, petals < sepals])
10. Caryophyllac. *Stellaria pubera* (star chickweed) [3 styles, petals > sepals, lvs broad]
11. Ranunculac. **Ranunculus ficaria* (lesser celandine)
12. Asteraceae **Taraxacum officinale* (dandelion)
13. Violac. *Viola sororia* [incl. *papilionacea* Pursh]
(common blue violet)
14. Fumariaceae *Corydalis flavula* (yellow corydalis)

Towpath

15. Brassicac. *Dentaria laciniata* (toothwort)
16. Asterac. **Senecio aureus* (golden ragwort)
17. Liliac. *Erythronium americanum* (trout lily)
18. Annonac. *Asimina triloba* (paw-paw)
19. Saxifragrac. *Saxifraga virginensis* (early saxifrage)
20. Caryophyll. *Silene caroliniana* (wild pink) [sepals connate]
21. Portulacac. *Claytonia virginica* (spring beauty)
22. Brassicac. *Arabis laevigata* (smooth rock cress) [lower lvs toothed]

Widewater, then on east path out to river

23. Lamiac. **Glechoma hederacea* (ground ivy)
24. Fumariac. *Dicentra canadense* (squirrel corn) [spurs short, rounded, together]
25. Fumariac. *Dicentra cucullaria* (dutchman's breeches) [spurs, "breeches" widely spreading]
26. Liliac. *Trillium sessile* (toad trillium, sessile trillium)
27. Boraginac. *Mertensia virginiana* (Virginia bluebells)
28. Violac. *Viola pubescens* [incl. *pensylvanica* Michx.]

- (stemmed yellow violet)
29. Polemoniaceae. *Phlox divaricata* (blue phlox)
30. Lamiac. **Lamium amplexicaule* (henbit)
31. Caryophyllac. *Cerastium arvense* (field chickweed) (narrow lvs, deeply cleft petals)
32. Ranunculac. *Aquilegia canadensis* (columbine)
33. Violac. *Viola spp* (white violet, species not identified)
34. Brassicac. *Arabis lyrata* (rock-cress)
35. Composit. *Antennaria spp* (pussy toes)
36. Polemoniaceae. *Phlox subulata* (moss phlox)
37. Ericac. *Vaccinium* (not sure which species) (blueberry)
38. Hydrophyllac. *Phacelia dubia* (small-flowered phacelia) – one plant classified as rare that we saw
39. Apiac. *Osmorrhiza claytonii* (sweet cicely)
40. Cornac. *Cornus florida* (flowering dogwood)

Saw but not certain if correctly identified

- Apiac. *Erigenia bulbosa* (harbinger-of-spring)

Saw but not in flower

- Rubiaceae. *Galium aparine* (cleavers)
 Berberidac. *Jeffersonia diphylla* (twin-leaf)
 Betulac. *Carpinus caroliniana* (ironwood)
 Composit. *Hieracium venosum* (rattlesnake weed)
 Papaverac. *Sanguinaria canadensis* (bloodroot) – in seed
 Rosac. **Duchesnea indica* (false strawberry)
 Rosac. *Potentilla canadensis* (cinquefoil)
 Berberidac. *Podophyllum peltatum* (may-apple)
 Crassulaceae. *Sedum ternatum*

- Peter Whitney, Nature Committee, C&O Canal Association



Prickly Pear Cactus

Photo: Marion Robertson

More photos on next page

Along the Towpath



Lyn Petty Checks Guide with Peter Whitney

Photo: Marion Robertson



Wild Blue Phlox

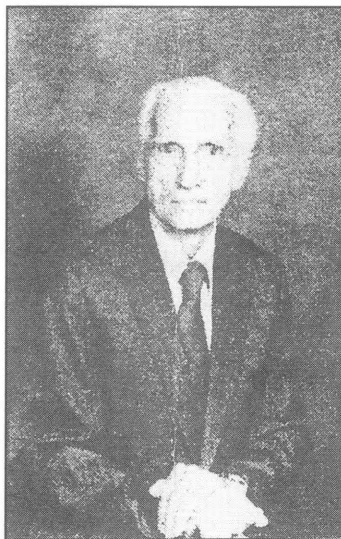
Photo: Marion Robertson

ACROSS THE BERM

Lyman M. Stucker

The C&O Canal Association has lost another of its long time members. Lyman Stucker passed the last lock on March 12, 2008. Like Job, he was "full of years" and was just four years short of the century mark. He was born in Portsmouth, Ohio, in 1911. He went to work for the telephone company in 1928 and retired in 1970. In 1932, he moved to Alexandria, Virginia, and resided there for the rest of his life. About five years after coming east, he married his beloved Wilma, a union that lasted fifty seven years until she died in 1994. Lyman leaves a son, daughter, five grandchildren and fourteen great grandchildren.

Lyman was an Association member for more than fifty years and loved walking the towpath. He served as level walker chairman and board member for many of those years. He devoted many long hours to the level walker program helping make it the success it enjoys today. As level walker chairman he organized monthly hikes, a forerunner of today's Continuing Hike Series. Lyman gave each level walker an opportunity to show the distinctive and interesting features of his level to the other hikers. Lyman liked to schedule these outings in scenic Washington County. Members who hiked with him remember the stops for lunch and pie at Weavers and the Red Bird. He walked the full distance from Cumberland to Georgetown on the 1979 and 1984. Douglas thru-



hikes. After he ended his tenure as level walker chief in 1987, Lyman continued to serve on the board for another ten years.

Lyman was also an active member of the Potomac Appalachian Trail Club. After retirement he worked with the visitor contact staff and the information desk at PATC headquarters as well as the Highacre overseers committee. The PATC awarded Lyman an Honorary Life Membership in recognition of his more than fifty years of activity in the organization.

Lyman's generous volunteer activities were wide ranging. His work in the Boy Scouts of America reached back to 1936 when he was the founding scoutmaster of a new Boy Scout troop at his church. He was given the Silver Beaver Award for his long service in the organization. He also was a long-time volunteer with the National Archives, the Red Cross, and the Telephone Pioneers.

Lyman brought "sunshine" to our hikes. When rainy weather threatened we needed Lyman. Again and again when he showed up the clouds scattered and the sun broke through. He leaves many friends in the Association, the PATC, and the other organizations he served so faithfully, for so long. All of us who knew him will miss his warm and friendly presence.

- Dave Johnson and Lou Odom

The Dams

Virginia troops entered Harpers Ferry on the day following Virginia's secession on April 17, 1861 but before they could take possession, the Union garrison burned their intended conquest, the United States Armory located there. The town became a base for training Southern volunteers, and soon, a staging area for raids on the C&O Canal and the B&O Railroad to impair their usefulness to the Union army. Col. Thomas J. Jackson was assigned command on April 27, to be replaced by Brig. Gen. Joseph E. Johnston on May 15.

By June 1861, both shores of the Potomac River around Washington, and Cumberland, Maryland, were occupied by Union forces, protecting Dam Nos. 1, 2 and 8, but Dam Nos. 3, through 6 remained highly vulnerable. Dam Nos. 3 and 6 were constructed of rock filled cribs, Dam No. 4 had recently been rebuilt as a masonry structure, and Dam No. 5 was a combination of the two, being only partially rebuilt. Other than the new Dam No. 4, none of the dams needed a war, what with periodic floods washing away sections of the structures and droughts exacerbating the porous quality of the rubble construction. Nevertheless, the dams now had another destructive force to contend with and they didn't have long to wait.

On June 8 the Virginia militia attempted to put "a blast into Dam No. 5." The Clear Spring Guards were dispatched to the dam and drove off the rebels, but that night they returned with a cannon to defend those working to destroy the dam. An explosive charge was ignited, destroying a small part of one stone-filled crib, but no serious damage was done. Union reinforcements arrived from Williamsport in the morning and again drove off the rebels but skirmishing continued for almost a week.

Around mid-month the Virginians directed their efforts toward Dam No. 4, working at night by lantern to drill into the rock foundation to place explosives. Reportedly the work was supervised by Redmond Brown, the man who superintended the Dam's construction and who now had sons in the Confederate army. Union companies from Boonsboro and Sharpsburg converged and drove the Confederates from the field. While this stopped the direct attempt to destroy the dam, the proximity of Southern troops forestalled repairs, specifically to the stop lock, and until the damage was repaired, a number of coal boats were stranded. With Union forces now in Cumberland to the west and nearing Williamsport to the east, Gen. Johnston feared being trapped at Harpers Ferry and pulled back to Winchester on June 15.

Meanwhile, Dam No. 1 was leaking badly, but a Union officer warned that no repairs should be made, and if they were, he would have the dam torn down! With friends like this ... ? There was relative calm until mid-October when Confederate cavalry set out from Romney, (West) Virginia, with orders to destroy Dam No. 6. While attempting to blow up the South Branch railroad bridge they were driven off by Union infantry, ending that threat to the dam. The lack of success in putting the

canal out of commission led some Virginians, notably Representative Alexander R. Boteler, to ask President Jefferson Davis for an experienced commander to lead the local recruits. On November 5 Davis ordered the return of Jackson, now a Major General and "Stonewall" as a result of his Manassas success.

In early December Jackson determined to destroy Dam No. 5, choosing it for two reasons – the new masonry Dam No. 4 was closer to Frederick where a Union division was headquartered, plus it was possibly "the strongest of its kind in the country." On December 7 Confederates began pounding Dam No. 5 and houses on the Maryland shore with artillery. All buildings in range were hit but the dam was unharmed. The Union companies on site were armed with smoothbore muskets that were ineffective against the attackers across the Potomac. A boat dispatched for reinforcements returned that night with a company armed with long range rifled muskets. They were deployed behind trees and told to hold fire until ordered. When on the morning of December 8 the Confederate artillery, confident that they were still in no peril from the Federals, moved their pieces to the river's edge and resumed their assault on the dam, the Union troops opened fire and drove the Confederates from their guns. Without sufficient troops or supporting artillery, the Federals were unable to capture the six abandoned guns which were withdrawn by the rebels that night. The next day the Confederates, covered by small-arms fire, began digging around the Virginia end of the dam abutment. By dark, water was coursing around the base of the dam and the work party was recalled. Thinking they had successfully disabled the dam, the Confederates returned to Winchester. As luck would have it the level of the Potomac was falling fast and the trench was soon dry.

Jackson mounted another attack on Dam No. 5 the night of December 17. After sending a brigade to feign a threat on Williamsport, his Stonewall Brigade moved onto the hills overlooking the dam. A work party was sent to the center of the dam and into the water to tear away the dam's cribs. Their efforts escaped detection by Union sentinels till daybreak when a pitched battle took place. Confederate artillery drove the Federal riflemen from the scene but Union artillery arrived soon to drive off both the rebel artillery and the work party. They returned to renew their work on the nights of the 18th, 19th, and 20th when Union artillery and infantry again drove them off. Jackson, thinking the dam breached sufficiently to cripple the canal withdrew his forces. The damage was not that extensive and army work parties assisted canal crews in repairing the dam so that navigation could be resumed on the 21st. Jackson's final unsuccessful attempt to destroy Dam No. 5 with artillery was made on January 4, 1862.

While military assaults on the dams eased off for the balance of the conflict, those of Mother Nature continued as normal. Repairs to Dam No. 5 had not yet been completed by mid-May when high water caused it serious damage. During a period of severe drought in early August 1862, a leak in Dam No. 6 stopped traffic on the canal which would not had been the case had the damage done by the Confederates to the steam pump at South Branch the previous winter been repaired. In late August,

heavy silt accumulations at Guard Lock No. 3 were delaying loaded boats. The gates at Guard Locks Nos. 3 and 4 were burned during the September 1862 Antietam invasion, and high water in late October again breached Dam No. 5. The dam was repaired by mid-November, giving full water on the entire canal.

The gates of Guard Lock No. 2 were destroyed during Gen. J. E. B. Stuart's cavalry crossing at Rowsers Ford on the way to Gettysburg in late June 1863. They were replaced by the end of the month. Leaks were still plaguing Dam No. 5 in October 1864, and in early March 1865 a heavy flood tore logs from the dam's cribs.

A November 1865 engineering study revealed that Dam Nos. 1 and 2, being composed of brush and loose stones, needed repairs estimated at twenty-five thousand dollars. Dam No. 3

needed only ordinary repairs. (It is curious that Dam No. 3, being located at Harpers Ferry which changed hands between the Union and Confederacy eight times during the war, apparently went relatively unmolested by the combatants.) Dam No. 4 was in sound condition. Dam No. 5 was two thirds new with one third yet to be rebuilt. Dam No. 6 was in generally good condition and Dam No. 8, exclusively stone, was in perfect order. Dam No. 7, due to the foresight of not having been built, escaped wartime damage.

Material is mainly from Harlan D. Unrau's *History of the C & O Canal*

THE ANNUAL DOUGLAS HIKE - 2008

A NEW TRAIL IN HONOR OF DOUGLAS

As is customary, the Association's annual hike in April honors Justice William O. Douglas for his key role in the creation of the C&O Canal National Historical Park. Douglas founded the association to promote the idea of a C&O national park. This year's hike on April 12th in the Seneca to White's Ferry area was followed by our usual social hour and banquet at St. Francis Episcopal Church in Potomac. A very special guest joined us both on the hike and as our banquet speaker. He is Ray Paoella, president of the William O. Douglas Trail (W.O.D. Trail) Foundation in Yakima, Washington. Yakima was the Justice's home town. Health reasons led him at an early age to take up hiking. He loved hiking the trails leading up to Mt. Rainier National Park much as he later came to love hiking the C&O towpath. Only the most hardy could keep up his vigorous pace. The W.O.D Trail was recently established in honor of Douglas. The W.O.D Trail and the C&O are kin. What follows is the substance of what Ray Paoella told us about the new W.O.D Trail.

The William O. Douglas Trail

YAKIMA TO MOUNT RAINIER

by Ray Paoella

The Washington State Heritage Trails project connects eastern to western Washington through the William O. Douglas Trail, Cowlitz Trail, Mount Rainier National Park, and the Upper

Nisqually Heritage Trail to create a multi-modal recreational system that recognizes the state's cultural heritage, diverse natural landscape, and scenic beauty. Combined, the trails tell the story of the significant role of historic paths in our state's cultural heritage and how these historic trails have linkages that are important to this day.

The William O. Douglas Trail is an 80-mile recreational pathway which courses through the City of Yakima, traverses Yakima County, and reaches portions of Lewis and Pierce Counties, connecting to Mount Rainier National Park. It is named after influential Supreme Court Justice William O. Douglas, perhaps the most famous person to grow up in Yakima and the longest serving justice in United States history. Stricken with serious childhood disease and in a weakened physical state, William O. Douglas frequently walked along the trail to strengthen his legs. As the most prolific author in the history of the Supreme Court, Douglas wrote several books about the historical, cultural, and natural features of Washington State.

This trail interprets numerous historic and natural sites that Douglas visited and wrote about. The W.O.D. Trail connects Douglas's boyhood home site to the Wilderness Area that bears his name by Act of Congress. Because of the Cascade Mountain rain-shadow effect coupled with rapid changes in elevation and precipitation along the 80-mile trail route, the Trail passes through twelve different ecosystems from steppe to forest to alpine zones, and contains some of the greatest biological diversity found in the U.S. over a comparable distance. The

Continued next page.

eastern portions of the trail near Yakima pass through a significant intact relic of the shrub-steppe ecosystem, including sensitive plant/animal species, carpets of spring wildflower fields, and sweeping scenic vistas. The trail is 90% complete based upon the linking of existing public trails and lands.

The W.O.D. Trail will be open to all forms of muscle-powered users, including pedestrian, bicycle, equestrian, snowshoeing, and skiing. This trail also follows many miles along the ancient Cowlitz Pass Indian Trail where thousands of moccasins have passed through the centuries across Yakima County and the Cascade Crest near Mount Rainier. The mountain figures prominently in the state's history and natural environment, serves as an icon of the region, and connects eastern to western Washington. Riparian restoration/revegetation efforts will be undertaken within parts of the trail corridor that pass near sig-

nificant watercourses, such as Cowiche Creek, thereby improving fish/wildlife habitat and water quality.

The William O. Douglas Trail offers many ways to interpret the significant cultural heritage sites as related to Douglas himself and other individuals, communities, events, and Native American history. Trail users can learn about our heritage through interpretive projects such as trailhead signs, information kiosks, brochures, and a website.

Students and teachers in the Yakima Valley are already using the trail as a significant "on the ground" educational resource by integrating hiking with important aspects of natural history, literature, and social studies.

Our Potomac: From Great Falls through Washington, D.C. Roy Sewall presents photos from this section of our national river which reveal its dramatic beauty in striking perspectives. C&OCA members, who have the book, recommend it. In a 3rd anniversary sale, Roy offers his book at deep discount, \$23 plus tax (for MD residents), and shipping. Contact Roy at roy@sewallinc.com.

Membership Form for New Members

Please enter the following membership in the C & O Canal Association in the category indicated:

NAME: _____	(Select one) <input type="checkbox"/> Individual \$15
ADDRESS: _____	<input type="checkbox"/> Family \$20
CITY/STATE/ZIP: _____	<input type="checkbox"/> Patron \$25
E-MAIL: _____ PHONE: _____	
Total: \$ _____	

Please make your check payable to the **C&O Canal Association** and mail to: P.O. Box 366, Glen Echo, Maryland 20812-0366

Name to appear on badge: _____

Second name to appear on badge (Family or Patron memberships): _____

Gift from (if applicable): _____ Enclose card ☐ Enclose note ☐

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

Reception Desk	301-739-4200	
Superintendent	301-714-2202	Kevin Brandt
Deputy Superintendent	301-714-2200	Vacant
Chief Ranger	301-714-2222	Bradley Clawson
Admin Officer	301-714-2204	Jeannie Denk
Chief, Natural and Cultural Resource Management	301-714-2210	Brian Carlstrom
Chief, Interpretation	301-714-2214	Bill Justice
Natural Resource Program Mgr	301-714-2224	P. Scott Bell
Public Affairs Assistant	301-745-5804	Vacant
Special Use Permits	301-745-5817	John Hitchcock
Chief of Maintenance	301-714-2239	Bradley Hofe
Partnerships Coordinator	301-714-2238	John Noel
Volunteer Coordinator	301-714-2233	Daniel Filer
Engineer	301-745-5818	Dan Copenhaver
Historian	301-714-2211	Sam Tamburro

Palisades District, Milepost 0 (Tidelock) to Milepost 42.19 (Monocacy River)

Palisades District

11710 MacArthur Blvd., Potomac, Md. 20854	
District Ranger	301-767-3720 Margaret Anderson*
Fee Collection Supervisor	301-299-3603 Paul Johnson

Georgetown Visitor Center 202-653-5190

1057 Thomas Jefferson St., NW, Washington, D.C. 20007	
Supv. Park Ranger, Interpretation	Alyssa Baltrus

Great Falls Tavern Visitor Ctr. 301-767-3714

11710 MacArthur Blvd., Potomac, Md. 20854	
Supv. Park Ranger, Interpretation	301-767-3702 Alyssa Baltrus

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

Western Maryland District

District Ranger	301-714-2236 Leigh Zahm*
Cumberland Subdistrict	301-722-0543
Hancock Sub district	301-678-5463
Ferry Hill Subdistrict	301-714-2206

Williamsport Visitor Center 301-582-0813

205 West Potomac St., Williamsport, Md. 21795	
Supv. Park Ranger, Interpretation	Leslie Brodhead

Hancock Visitor Center 301-678-5463

326 East Main St., Hancock, Md. 21750	
Supv. Park Ranger, Interpretation	Leslie Brodhead

Cumberland Visitor Center 301-722-8226

Western Maryland station, Cumberland, Md. 21502	
Park Ranger, Interpretation	Rita Knox

* = Acting

OTHER USEFUL TELEPHONE NUMBERS:

Georgetown Boat Operation	202-653-5190
Great Falls Boat Operation	301-767-3714
Boat House at Fletcher's Cove (concessionaire)	202-244-0461
Carderock and Marsden Reservations	301-767-3731

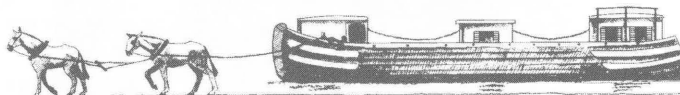
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C&O CANAL ASSOCIATION

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 to the C&O Canal Association, P.O. Box 366, Glen Echo, MD 20812-0366. 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 extent 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 <http://www.candocanal.org>. The webmaster is Matthew James Teigen (webmaster@candocanal.org). C&OCA also maintains a telephone number for information and inquiries: 301-983-0825.

2008 Association Officers

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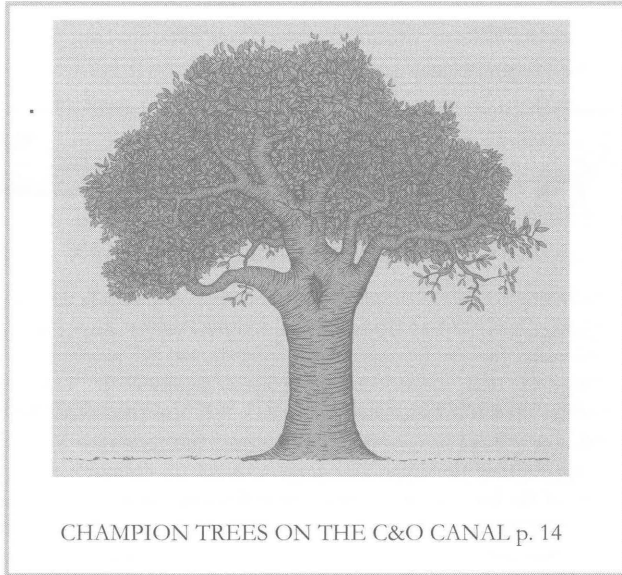
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Along The Towpath

Chesapeake & Ohio Canal Association



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