PRESIDENT’S LETTER

Greetings! We’ve just entered the year 2001, the first year of the official new millennium. I hope all ACS members will celebrate this event by doing something canal related that they have thought important for many years, but have been putting off for lack of something. If you need help with the project, contact us here at the ACS and we’ll see what can be done.

There are two special canal get-togethers that we are touting for the year 2001. One is the annual World Canals Conference, held this year in Dublin, Ireland, May 16 to May 18. Information should have been mailed out to likely participants this past month (January). If you haven’t received the necessary information yet, you may contact The World Canals Conference 2001, Conference Partners, 96 Haddington Road, Ballsbridge, Dublin 4, Ireland.

We’ve mentioned before in these letters that, in years when the World Canals Conference is in the spring on the other side of the Atlantic, the ACS will, in cooperation with one or more of the local canal societies, hold its annual meetings on this side of the Atlantic in the fall. This year, we will be cooperating with the Pennsylvania Canal Society the weekend of October 26-28 on their tour of the C & O Canal. Headquarters will be near Hagerstown, Maryland (at the intersection of I-70 and I-81). The Tour Master is ACS Director David Johnson. Anyone interested in participating in this tour should contact Dave as soon as possible and ask to be placed on the tour mailing list. Dave’s address can be found in the ACS officer’s and director’s list on page 2 in each issue of American Canals.

We are also working with officers and members of the Middlesex Canal Society toward the possibility of the ACS participating in the 200th anniversary of the opening of the Middlesex Canal, to be celebrated in 2003.

I would again like to ask ACS members to ransack their memories and help write a history of the early years of the American Canal Society. I’d like all our members who can provide information, data, stories, legends, et cetera, concerning our early history, to contact Bill Shank, Tom Hahn, Bill Trout, or me.

Our new web site is now active: www.americancanal society.org. Like all volunteers, our Internet Committee Chairman, Mark Newell, has to balance his work for the ACS with his own personnel life. We need all interested members to contribute to the web site’s viability with news and views and HELP.

We want to continue to solicit nominations and viewpoints to our ACS Canal Buffs Honor Roll. Our founding fathers, Bill Shank, Tom Hahn and Bill Trout, have been justifiably nominated for this honor. However, we need more details of their lives and accomplishments to (Continued on page 2)

NAVIGATING CHINA’S GRAND CANAL, 1948

Steering a barge on the Grand Canal at Suchow during the last year under Kuomintang. A report on the Grand Canal today, by Contributing Editor Bruce Russell, will appear in a forthcoming issue.

Bruce Russell photo archives, photographer unknown
President’s Letter (Cont.)

properly prepare the nominations and biographies. If anyone out there can provide such data, please contact me.

In 1986, federal legislation formed a great many “Canal Corridors” in the eastern half of our country. Now a great many local groups are converting canal lands into something else. It is this something else that concerns me. Too many times, in my estimation, the historical importance of what these lands once were is being downplayed, or completely lost. Instead, “Towpath Trails” are being formed, which may or may not follow any canal towpath. Watered canal lands are being allowed to dry up. Trees from forming these trails are being felled into the canal channel and the channels themselves are being allowed to revert back to nature. One County Park System is even considering amassing their park rangers. Is this a concern to anyone other than me? Should our Parks Committee be preparing some sort of canal park guidelines and/or goals that we can suggest the corridor entities consider? I’d appreciate hearing your comments. That’s about all I have to say this time. I’d like to hear from you, though. Until the next time, Headway to you!

Diana Wood

American Canals
BULLETIN OF THE AMERICAN CANAL SOCIETY

Editor: David F. Ross
Associate Editor: Kate Mulligan
Contributing Editors: David G. Barber
Bruce J. Russell

Address
For memberships, subscriptions, change of address, and other business matters:
c/o Charles W. Derr, 117 Main St., Freemansburg PA 18017

For CANAL CALENDAR items and for news of local, state, and regional canal societies:
c/o Kate Mulligan, 1301 Delaware Ave., SW, Washington, DC 20024; ph. (202) 484-3590; email: kmulligan@gsis.net

For other editorial matters:
c/o David F. Ross, 840 Rinks Ln., Savannah TN 38372-6774.

The objectives of the American Canal Society are to encourage the preservation, restoration, interpretation, and use of the historical navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information. Manuscripts and other correspondence consistent with these objectives are welcome.

Annual subscription to American Canals is automatic with A.C.S. Membership. Annual dues: $20.00. Single copies $3.00. Four issues per year.

Copyright © 2001 by the American Canal Society. All rights reserved. Printed in the United States of America.

ISSN 0740-588X

AMERICAN CANAL SOCIETY
President: Terry K. Woods, 6398 Eastham Cir., Canton, OH 44708. (330) 832-4021
Vice President: David G. Barber, 16 Balm Rd., Hopedale MA 01747. (508) 478-4918 email: david.g.barber@ocnserve.com
William E. Gerber, 16 Princess Ave., N. Chelmsford MA 01863. (386) 251-4271, email: g_gerber@emrnuc.org
Secretary/Treasurer: Charles W. Derr, 117 Main St., Freemansburg PA 18017. (610) 691-0956 email: derr@act.com

Recording Secretary:
Nancy Dunneave, 471 Phillips St., Enderlin, NC 27019. (252) 482-5946. email: nancy@northspace.com

Directors:
Robert H. Barth, 214 N. Bridge St., Somerville NJ 08876-1547 (908) 722-7466 email: Robert.f.barth@worldnet.net
Thomas X. Grasso, 18 Summit Oaks, Pittsford NY 14534. (716) 387-0099
Thomas F. Hahn, 5761 Schellberg Dr., Sabal Springs Golf Club, North PT, Myers, FL 33917-2040. (941) 731-2087 email: thomas.f.hahn@aol.com
David M. Johnson, 90 Westwood Drive, Bethesda, MD 20817. (301) 550-7473
Keith W. Kroon, 2240 Ridgeway Ave., Rochester, NY 14628. (716) 225-0889
John M. Lamb, 113 Pine St., Lockport, NY 14094. (716) 435-7316
William J. McKeever, Jr., 103 Dogwood Ln., Berkshire Hills, NJ 07922. (908) 464-9353
Lance E. Metz, P.O. Box 877, Easton, PA 18040-6774. (610) 250-6774
Kate Mulligan, 1301 Delaware Ave., SW, Washington DC 20024. (202) 484-3590 email: kmulligan@gsis.net
Mike Newell, 262 Georgia Ave., North Augusta, SC 29841. (803) 279-9285
David F. Ross, 840 Rinks Ln., Savannah, TN 38372-6774. (731) 825-0099
Robert F. Schmidt, 5903 Waples Dr., Ft. Wayne IN 46804-3949. (219) 432-0279
William H. Sharr, 808 Rutherford Rd., York PA 17403. (717) 430-4035
Roger J. Squires, 46 Elephant Lane, Rodhenteja, Lebanon, MA 01581-4J4, England (171) 236-0978
Roberta Stoyan, P.O. Box 304, Thordor, Ontario L2V 3Z2, Canada. email: rstawy@beacon.com
Arthur W. Sweeten, Jr., P.O. Box 258, Canton Center, CT 06018. (203) 893-4027
Dr. William E. Trout, III, 35 Tawena Rd., Richmond, VA 23225, (804) 288-1304. email: wetrout@msn.com
Albright G. Zimmerman, 1381 River Rd., Yardley, PA 19067-1327. (215) 321-0193

Director Emeritus:
T. gibson Hobbs Jr., 3304 Landom St., Lynchburg VA 24503. (804) 384-8512

Committees:
ACS Sales, Keith W. Kroon, chmn.
Canal Archaeology, David G. Barber, chmn.
Canal Boat, William J. McKeever, Jr., chmn.
Canal Engineering, Maintenance & Operations, John M. Lamb, chmn.
Canal Parks, Terry K. Woods, chmn.
Historic American Canals Survey, David G. Barber, chmn.
Internet, Mark Newell, chmn.
Publicity, Terry K. Woods, chmn.

Other publications:
The Best from American Canals, William H. Shank, editor
American Canal Guides, William E. Trout, editor and publisher.

Page Two

AMERICAN CANALS, XXX-1 Winter 2001

CALENDAR CANAL


April 29 - May 12, 2001, Canoe the Canal: Interpretive Center, Old Santee Canal Park, 900 Stoney Landing Road, Monroes Corner, SC. Call: 843-959-5200.

May 12-30, 2001, Ireland 2001 and World Canals Conference, a Canal Society of NJ tour including a cruise of the Royal Canal and participation in the World Canals Conference in Dublin. Early reservations are advised because of anticipated high demand for a limited number of canal boats. Contact: Bill McKeever, (908) 484-9335.


DEADLINE: Material for our next issue must be on the associate editor's desk no later than April 1st, 2001.
THE MIAMI CANAL
by Nancy Savage Gulick

A title, such as Pigs, Paper and Pilsner clearly defines the industrial history of this part of the state of Ohio, and formed a framework for the Canal Society of Ohio tour that took place October 27 through 29, 2000. While retracing the route of the original Miami Canal from Middletown to Cincinnati, we could readily see the initial purposes for building such a canal. Hydraulic segments and locks provided plenty of power, water supply, and shipping access for a wide variety of paper mills. The same could be said for the transportation of that staple in American diets, pork, the reason for Cincinnati’s 1800s nickname of “Porkopolis”. The canal also became the transportation medium of choice for Cincinnati’s 100 breweries, producers of another staple in American homes.

The Miami Canal was begun in Middletown, Ohio on July 21, 1825, with the required turning of the first spadeful of dirt on the cut that would run 45 miles south to Cincinnati. On hand for this momentous occasion were DeWitt Clinton and a future president of the United States, William Henry Harrison. The planned canal extensions from Middletown northward were later delayed due to political infighting and financial turmoil. The entire 249 mile Miami & Erie Canal was not completed to Toledo, on Lake Erie, until 1845. Since water supply was crucial for the Miami Canal, the tour began at the site of the Middletown Dam, north of that city. The timbered remains of the original dam form a ragged line of broken shafts poking up through the still waters of the Great Miami River. Hard by is a concrete improvement dam. Both structures diverted water from the river to the feeder leading to the canal proper and to a hydraulic canal. Much of the latter remains watered today. Following what canal

prism remains, the tour progressed to the Canal Museum located on the watered hydraulic and then to the Dedication Rock, where an 1825 newspaper article was read by Sam Ashworth, curator of the Canal Museum. The article described the festivities and DeWitt Clinton’s speech dedicating the new Ohio canal.

Proceeding south, the tour stopped at one of the more visible remains of the canal, Excello Lock, the first lock on the system. Located close by was the usual paper mill. The next stop at Pt. Union offered a view of aqueduct abutments that took the canal trough over a minor steam flowing into Mill Creek. Here, tour participants heard of the efforts of the Butler County Canal Coalition and communities along the canal to develop an all-purpose recreation trail that would eventually connect with other regional trails in Ohio. Wending our way through southern Butler County, we passed the barley barns of some of the Cincinnati brewers who located their summer homes and barley fields on the canal. This area is now a fast-developing industrial site and the land upon which the barns sit will soon serve a purpose other than agriculture.

A stop at the site of the Crescentville Aqueduct was of some importance to the canal society. The Champion Window, Siding, Patio Rooms Company, in constructing its plant and office building, had preserved the site of the aqueduct.

Tracing the canal through Cincinnati from Bellevue Overlook
duct. In recognition of an admirable effort to preserve this historic canal structure, Dr. Charles Brausch, president of The Canal Society of Ohio, presented Manager Gary Markowitz with a commemorative plaque.

Following a box lunch in the village square of the historic Village of Glendale, the tour proceeded south a few miles to Lockland, named for the four locks located there. Little remains of the canal, since I-75 roars down the former canal channel. The high retaining walls of the expressway dip periodically however, clearly showing us where the locks once were located.

Approaching Cincinnati, we traveled down I-75, mostly in the canal bed, and turned off onto Central Parkway, notorious for covering a partially-built subway system laid in the canal bed in 1928. Whereas a subway system could solve some of Cincinnati's current traffic problems, all that remains in the underground tunnel are the concrete passenger platforms and wooden sleepers for a rapid transit system that never ran.

Along the Central Parkway segment of the Miami Canal are still located a few of the 100 breweries, including The Bruckmann Brewery buildings, intact but occupied by other companies. The Christian Moerlein Brewery has only recently been torn down, although its signature beer is currently being produced by the Hudepohl-Schoenling Brewers. This company generously provided a table favor of a bottle of Christian Moerlein beer, complete with the stern visage of Christian himself on the label, for each person at the Saturday night banquet. Prost! Later, the very entertaining Jim Bruckmann of the Old Brewery family spoke on "Foam, Sweet Foam".

Continuing along Central Parkway, we entered the area of the city known as "Over-the-Rhine". In the early 1800s, the canal formed a boundary line to the area crowded with German immigrants and, when you crossed over the canal (symbolizing the Rhine River), you entered a German-speaking neighborhood—another country, so to speak. The tour left the canal to ascend one of the seven hills of Cincinnati upon which entertainment pavilions for the citizens once were located. At Bellevue Park, we were treated to an excellent view of the city with the Ohio River close by. With Cincinnati laid out at our feet, we could trace the canal, as it went through the city, and the sites of the inclines. The Bellevue Incline, one of five in the city at one time, used to bring revelers up the hill to listen to German bands and drink Cincinnati's famous beer.

Coming down the hill, we continued along Central Parkway, maintaining our vision of the canal beneath this structure. The canal (parkway) entered the heart of Cincinnati, past the Music Hall, turning at the Plum Street Bend and headed toward the courthouse and the site of the 10 locks that took the canal down to the river. At Lockport Street, we traveled down Eggleston Avenue, spotting little flags that a committee member had put out to mark the 10 lock sites. At the bottom of the flight is Bicentennial Commons City Park, the entrance being a structure designed as a facsimile of a lock, with a profile of the Miami & Erie Canal marked upon it. Above the entrance is a sculpture of Cincinnati's "mascots", flying pigs atop four riverboat smokestacks, and a Noah's Ark atop a pillar marking signifi
CANALS AND THE CIVIL WAR
by Bruce J. Russell, Contributing Editor

When the War between the States broke out in 1861, America was still in its Canal Era, although danger signs were clearly visible. The country possessed a railroad network which added hundreds of miles each year. Much of this trackage paralleled existing towpath canals which had been completed only 20 years earlier. But the process of transferring most freight from boats to trains wasn't finished, and the waterways were still considered important means of transport.

The Chesapeake and Ohio Canal, completed for its full 186 miles between Washington, D.C. and Cumberland, Maryland in 1850, followed the border between the Union and the Confederacy. Maryland, through which it ran, was nominally a part of the Union but many southern sympathizers lived there. When the Confederate armies led by General Robert E. Lee crossed from Virginia to Pennsylvania for the battles...
of Antietam and Gettysburg, in 1862 and 1863 respectively, they had to traverse a narrow strip of Maryland. This meant they had to encounter the C&O Canal, as well as the adjoining Baltimore & Ohio RR. The Rebels knew that both were means of moving materials from the west to the Union capital. Hence they were considered fair game for destruction.

Because the B&O possessed much greater carrying capacity, it suffered more than the waterway. Nevertheless, southern troops tried to put the canal out of use on several occasions. At Williamsport they shelled the 3-arch stone aqueduct, causing moderate damage to one end. In addition, they planted charges of black powder in an effort to blow it up. Amazingly the stones did not disintegrate but remained intact. Had the Rebels possessed TNT or dynamite, they could have done far more damage.

Ultimately the Confederates contented themselves with setting explosive charges along the banks of the C&O Canal. When they were detonated a hole was created. Water rapidly flowed out of the prism, and within a few hours wooden boats were sitting high and dry up and down the waterway. Emergency repairs had to be made. After a time, the canal workers became experts at performing this kind of job. Hence they contributed to the ultimate Union victory.

The North assigned various units of troops to guard the C&O Canal to minimize attacks on it, not only by the forces under Robert E. Lee, but also by Col. Moseby and his cavalry raiders, who struck from Virginia's Shenandoah Valley. At Williamsport, Maryland, the 27th Indiana Infantry performed this vital task. The men pitched their tents adjacent to the waterway and the basin where many boats moored to pass the night. Sharpshooters were likewise positioned on the aqueduct across the Conococheague Creek. This was one of 11 beautiful stone aqueducts across tributaries of the Potomac between Washington and Cumberland. The longest and most famous of these is the one over the Monocacy River, with seven arches. It was also a target of the Confederates during the Civil War. Luckily, it wasn't damaged.

On August 26, 2000, in Williamsburg, MD, an annual celebration known as Canal Days was held. One of the activities was the erection of a Union Army guard post adjacent to the C&O Canal and the Conococheague aqueduct. Dressed in historically authentic uniforms, the reenactors went through the motions of making certain that the area was secure from attacks by rebel forces coming north from Virginia. As I walked about their camp, I was told how the enemy had tried to put the aqueduct out of commission by shelling it and planting charges. The purpose of the 27th Indiana Infantry was to prevent any repetition of these activities.

One reenactor, Corporal John Freelund, showed me exactly where the Conococheague aqueduct had been damaged, and where it had been repaired so that boat traffic could resume. The repairs were very obvious, since they were made using lower quality stone than that on the original structure. The replacement stones were not as
well formed as the ones that had been supplied in 1833-34 when the three arches were erected. However, these temporary blocks were never removed and replaced with better ones once the Civil War was over, although the waterway continued in use until 1924. It's possible that the quarry that furnished the original stones was depleted. Worked-out quarries exist at several locations along the C&O Canal.

Several years before the canal ceased operating, the Conococheague Aqueduct suffered severe damage when a boat crashed through its north wall. Obviously the stones were weakened, and simply gave way. Repairs were made of wood, perhaps because it was felt that the C&O was at the end of its life and to use stone would be unjustifiably expensive. At this point the waterway was owned by the parallel B&O Railroad. After the canal was abandoned the wooden section simply rotted away. This is why the aqueduct is now missing one side.

Canal boats were used to transport soldiers during the Civil War. The histories of many units tell of how the men were carried on canal vessels to reach one or another destination. Whether they traveled on the C&O is not known by this author. Since a railroad paralleled the waterway for its entire distance, it's possible that the C&O Canal wasn't utilized for troop movement. However, in Virginia, the James River & Kanawha Canal was used not only to carry soldiers, but also to evacuate civilians at times when Union forces were besieging Richmond.

**Biking the C & O Canal**

**A FROST VALLEY ELDERHOSTEL ADVENTURE TOUR**

_by Linda J. Barth_

"Look, Bob! A hand-operated ferry!" And so it was. We watched a group of hikers pull themselves across the Potomac to Sycamore Island. The island and the rope-pulled ferry are owned by the Montgomery Sycamore Island Club, an association of 155 families which dates back to 1885.

My husband and I were on the towpath of the Chesapeake & Ohio Canal, biking between Locks 6 & 7, as a warm-up for our Elderhostel/Frost Valley Adventure Tour – "The C & O Canal by Bike."

On Sunday evening, June 25, 2000, our group of 12 bikers gathered for dinner and orientation at a hotel in Rockville, Maryland. Our tour leaders, Claire Dallat and Kate-lyn O'Keefe, explained the itinerary and procedures for the next five days. The participants included couples from Minnesota, Connecticut, and western Pennsylvania, a retired pediatrician from eastern Pennsylvania, a gentleman from southern New Jersey, and a grandfather/ grandson also from our home state of New Jersey.

**Day One**

The next morning the bikes were loaded onto an ingeniously-designed trailer which locked twelve bikes in an upright position. The trailer was towed by a 15-passenger van in which we all rode to the Great Falls Tavern Visitor Center. A storm the night before had knocked out the power and, consequently, the introductory video (an "On the Road with Charles Kuralt" segment), but Bob and I had seen it on a previous trip to Great Falls. The mule-pulled boat ride is closed on Mondays and Tuesdays in summer, so we substituted a walk to the scenic overlook of the Great Falls of the Potomac. Seeing the water cascade wildly over gigantic boulders immediately impresses upon visitors the need for a canal to safely transport cargo.

After a safety check of all the bikes, we set off upstream at about 11:00 a.m., from Mile 14.4 at Lock 20. At Mile 15.9 we saw the pumping station that provides 5-8 million gallons of water per day to the city of Rockville. Soon we passed Lock 21 (Swains Lock, Mile 16.7); the lockhouse is still occupied by the Swain family, which operates a boat and refreshment concession stand here. At the larger pumping station at Mile 17.5, several plaques provide information about the Potomac River and valley. We stopped for lunch at Lock 22 (Pennyfield Lock, Mile 19.6). As on the next four days, one tour leader drove the van ahead to set up lunch before our arrival; the second leader was the "sweep," following the bikers to tend to any problems. The van also met us at other intersections and tour participants were welcome to ride in the van if they did not wish to bike any more that day. The afternoon's ride took us past the cliffs of Blockhouse Point (Mile 21), site of a Union outpost during the Civil War, Lock 23 (Violettes Lock), and the guard lock for Dam 2 (Mile 22). At Lock 24 (Riley's Lock) we crossed the beautiful red sandstone Seneca Aqueduct (Mile 22.7). In his book, _The C & O Canal Companion_, Mike High points out that this "is the only place along the canal where an aqueduct and a lock were built as a single structure." At Mile 27.2, at the McKee Beshers Wildlife Management Area, we left the towpath. Those who wished to bike farther were invited to continue for five more miles over hilly terrain on local roads; this proved to be a long, tiring adventure with temperatures in the 90s. The hotel pool was a welcome treat before our dinner at a Gaithersburg buffet restaurant.

**Day Two**

Having moved our cars to a motel in Harper's Ferry this morning, we set out on a new stretch of the towpath. Summer storms had left mud puddles at frequent intervals along the way. Having heard of still muddier conditions ahead, the tour leaders opted (sensibly, I thought) to skip an eight-mile stretch and begin at White's Ferry (Mile 35.5), the only Potomac car ferry still operating. I enjoyed watching the General Jubal Early, which operates year-round, make its five-minute crossing to the Virginia shore.

Lock 26 or Woods Lock (Mile 39.4) is another lovely red sandstone structure. Next came the Dickerson Power Plant (Mile 40.6); its discharge channel doubles as a kayak course. After passing Lock 27 (Mile 41.5), we crossed the 560-foot Monocacy Aqueduct (Mile 42.2), the pink quartzite jewel of the C & O. With its seven arches spanning the Monocacy Creek, this endangered structure is now held together with steel beams, awaiting its restoration. Lunch at Norland's Ferry (Mile 44.6) was a pleasant respite, with the chance to chat with other hikers and bikers. An important afternoon stop was Point of Rocks, once the focus of a court battle between the canal company and the B & O Railroad for the right to use this narrow right-of-way bounded by cliffs and the Potomac.

The day's biking ended at the Brunswick Recreation Area (Mile 53.8); from there we took the van to the Brunswick Railroad Museum, which
combines a beautifully-designed C & O Canal exhibit with artifacts from the town's rail heritage. The third floor houses a fabulous layout, showing the entire route of the B & O from Washington's Union Station to Cumberland; the layout also shows the canal, whose route paralleled the railroad in many places. Our dinner this night was served at Harpers Ferry's historic 1888 Hilltop House, which offers stunning views of the Potomac and the Shenandoah.

Day Three
We began the day with a visit to Harpers Ferry. Participants were free to visit the National Park Service buildings, walk along the Shenandoah Canal, or just enjoy the magnificent views at the confluence of the Shenandoah and Potomac rivers.

To reach the C & O towpath, we walked our bikes across a pedestrian walkway attached to the railroad bridge over the Potomac; the Appalachian Trail crosses here, too. We immediately met two large trucks on the towpath; they were involved with the restoration of Lock 33 (Mile 60.7). After 4.2 miles of scenic travel we met the "lunch wagon" at Dargan's Bend Recreation Area. After lunch we continued another 4.5 miles to the lovely Antietam Creek Aqueduct (Mile 69.4), a three-arch structure made of blue-gray limestone. Here, some of the bikers took the van and others biked the four miles to the Antietam Battlefield National Historic Site.

In the visitor center we saw a new film depicting Lincoln's visit to Antietam a few weeks after the battle. A ranger gave a talk on the life of the Civil War soldier. In the van again, we followed an audio tour of the battlefield before heading back to Harper's Ferry. After a delicious dinner at the Anvil Restaurant, we hit the hay early in preparation for the longest day of biking.

Day Four
We shuttled cars to the motel in Williamsport, the start of today's ride. At Cushwa's Basin (Mile 99.6), the NPS has a visitor center featuring three videos, books, maps, mugs, and other canal-related items. One-half mile east of the basin, NPS is restoring Lock 44; the master plan for this section includes a future boat ride.

At the basin we crossed the Conococheague Creek Aqueduct; a portion of the northern parapet was knocked out by a canal boat in 1920. [See pictures, pp. 5-6 above.] According to Mike High, "the water in the aqueduct poured through the hole, carrying the boat with it. (The captain's son, walking with the mules, was able to cut the towline just in time to keep the mules from being dragged along with the boat.) The boat lay in the creek long after the canal had closed, until it was finally carried away in the great flood of 1936."

In this stretch we passed locks 45-50 (Miles 107-109). During lunch at McCoy's Ferry (Mile 110.2), we met Stuart Poltrock, a videographer from Michigan, who is creating a video about the canal. Several tour members were interviewed. Continuing upstream, we passed Fort Frederick (Mile 112.1), built during the French and Indian War; bikers had the option of stopping for a visit. Big Pool, a natural basin for turning the canal boats, begins here and ends at Mile 113.7. Soon we crossed over the Licking Creek Aqueduct (Mile 116.1), a single-arch limestone structure. Then we had the choice of continuing to Hancock on the towpath or taking a new, paved Maryland Rail Trail. Both routes passed the Little Pool and Locks 51 (Mile 122.7) and 52 (Mile 122.9). We entered Hancock (Mile 124.1) over an iron truss bridge across the canal.

Day Five
Our Elderhostel ended with a morning ride of 16.7 miles from Hancock, past Lock 53 (Mile 130) and Cacapon Junction (Mile 133.7), to the Fifteenmile Creek Aqueduct (Mile 141). The van returned us to the C & O Canal Visitors Center in Hancock, where we enjoyed our last lunch together and said our good-byes. Having biked almost half of the canal's 184.5 miles, we returned home happy and with a great sense of accomplishment. For canal fans, this is a wonderful way to spend a vacation and see the canal up close!

Material submitted to AMERICAN CANALS for publication should be double-spaced and on one side of the paper only.

PROGRESS ON THE GOWANUS CANAL
by James E. Held

A cruise up the murky Gowanus Canal is a journey into the heart of darkest Brooklyn. These sell-out excursions focus not on romance, fine dining or savoring the Manhattan skyline. Instead, throngs lining the boat railings observe rust-belt factories along the waterway, forming a forbidden jungle. One shocked passenger described the scene as "post-apocalyptic." Rusting bridges span overhead. Junkyard dogs snarl and bark from littered banks. Only the presence of dead rats and trash break the colorful sheen of oil on water that prompted the local sobriquet, "Lavender Lake."

Those murky depths conceal more than the remains of vanished mobsters. Mercury, lead, PCBs and other contaminants lurk below. The tour boat turns back at Butler Street to reveal the waterway's inherent design flaw; a single inlet dead-ending against concrete embankments bars New York Harbor's strong tides and their fresh diurnal doses of oxygenated water in the 1.8 mile channel. Still, hopes are high that restarting an 88-year-old flushing tunnel may be the first significant step in restoring what once was a lovely tidal creek that meandered through salt marshes.

To demonstrate the water "quality," Abu Mouta-Ali, Neighborhood Environmental Program Coordinator at the Brooklyn Center for Urban Environment, draws a measure of eau de Gowanus. Passengers cluster around his on-board testing lab. The results? Oxygen: 1.5 parts per million, well below the minimal five per million to sustain life. The opaque Gowanus obstructs sunlight to one third of the six feet needed for aquatic plant growth. Rising gas bubbles betray the decomposition of sewage sludge that overwhelms the oil factories on warm summer days and creates an oxygen-starved biological desert.

The group's intent with these tours is not to feed morbid New Yorkers' fascination for things dead and dying, although executive director John Muir
says that they're "the single-most dramatic factor in increasing interest" in the abused waterway. The challenges of reviving both the river and the neighborhood are daunting.

Dutch colonists in New Amsterdam had shipped barrels of Gowanus oysters to Europe. Dams and landfill, however, had already altered the ecology before 1840, when the straightened and walled channel grew into Brooklyn's industrial center. Dusty stone yards, flour mills, cement works, tanneries, paint, ink and soap factories emitted water and airborne pollutants. Stone, lumber and brick that arrived by boat built the handsome row houses in nearby Carroll Gardens, Cobble Hill and Park Slope. These neighborhoods expressed gratitude by flushing their toilets into the Gowanus.

After World War I, six million annual tons of cargo made this canal the nation's busiest commercial canal and arguably the most polluted. The 1951 opening of the elevated Gowanus Expressway over the waterway gave easy access to trucks, but no apparent economic advantages. By the 1960s, a commercial exodus left 50 percent of industrial spaces empty while 150,000 vehicles passing overhead each day deposited toxic lead fumes. Boat traffic has plummeted, and with Bayside Fuel being the only canal-side business using the waterway, the last dredging occurred in 1975. Even the $230 million Red Hook Water Pollution Control Plant, completed in 1987, cannot keep up with the combined sewage overflows.

In 1911, more than 300 civic dignitaries applauded as a Brooklyn belle tossed a bouquet of red carnations into the water that a steam engine and churning propeller were supposed to transform. But the flushing tunnel's attempts to draw dirty water out of the canal through the brick-lined 1.2-mile tunnel below Butler Street never performed well. The last in a long series of snafus occurred in the 1960s, when a city worker dropping a manhole cover killed the pump.

The same dubious tradition continues to delay its reopening, which is currently scheduled for late spring. The latest holdups stem from pump repairs and dredging of a clogged outlet pipe. Still, the injection of 300 million gallons a day wouldn't be met with just flowers and applause, but also some skepticism.

Just below that mucky bottom lie sordid pollutants. Dredging before the tunnel's activation would be the most ecologically-sound approach, but with no funding, those contaminants will remain right there until the artificial current discharges them into Gowanus Bay and the Bay Ridge Channel. The city's Department of Environmental Protection claims hydraulic studies done by the engineering firm Hazen and Sawyer prove the sediments will not be disturbed. Muir counters that the city has never publicly produced the studies. "Hazen and Sawyer know more than anyone about the canal," he says, pronouncing himself satisfied with the hydraulic studies. "If we had clean water here," says Scotto, "this would go from the least-desirable area to live to the most desirable almost overnight. We'd have a real prospect of getting a revitalization project going down here: a promenade, bike routes, coffeehouses, restaurants and housing above all the shops.

In New York, Soho and Northside Williamsburg have proven the viability of rehabilitated industrial sites, and with burgeoning brownstone neighborhoods surrounding the Gowanus valley, an avalanche of development could descend. An abandoned post office building nearby will become the $65 million Brooklyn Commons project and create a canal-side family destination of a 22-screen cineplex and 260,000 square feet of retail and recreation space.

Still, urban restoration often involves a complicated system of checks and balances. Older residents and businesses are wary that encroaching gentrification from Park Slope and Carroll Gardens could escalate their low rents. Scotto, however, sees abandoned buildings as a waste in a city of chronic housing shortages. Bette Stoltz, head of the South Brooklyn Local Development Corporation, wants to preserve and expand the Gowanus' 7,500 blue collar jobs, while the Brooklyn Center for Urban Environment makes environmental clean-up and open spaces its priority. For the Gowanus, a revived neighborhood is still in the distant future, but Muir believes the key to a local renaissance lies in just cleaning it up.

A follow-up investigation only a few months later revealed reason for buoyant hopes. The dose of East River water combined with a dry summer of no sewage overloads had brought a dramatic revival. The canal water's oxygen content had reached 5 parts per million, attracting small fry and blue crabs in numbers not seen in a century. Herons, egrets, cormorants, and ducks were not far behind. Safe swimming by humans in the Gowanus remains somewhere in the distant future. Still, the presence of any life in this abused waterway is very encouraging to the people and organizations championing its cleanup. They feel the momentum for restoration now flows with the current.

**CRUISING THROUGH HISTORY ON BRITISH CANALS**

**by Jack Biesterfeld**

[This report is published here by permission of Copley News Service, which employs ACS member Biesterfeld as a travel writer.]

It was the height of the Industrial Revolution, and in Britain, hope and aspiration had no bounds. Anything could be accomplished, with a little imagination, English engineering skills and a stiff upper lip.

Mines were sunk far below the earth to provide the coal that fired the engines of industry. Huge factory complexes and machine shops churning out manufactured goods at an ever-accelerating pace. And marvelous magical machines were being invented that could accomplish almost any task better than humans could.

But there was a problem. How to get the coal and other raw materials to the factories, and how to get the finished goods to market.

Railroads hadn't been invented yet. And the roads were in terrible shape, many little more than cow paths.

The answer: Canals.

Rivers had been used for centuries to carry goods. But the water didn't go where it was
needed. So the British engineers made the water go where they wanted it to go.

As early as the 1650s, gangs of workmen with nothing more than picks and shovels began carving up the countryside. They ignited a national canal mania that was to last more than 200 years. More than 5,000 miles of hand-dug canals would crisscross England, Scotland and Wales, before the railroad would ring the death knell for this important part of world history.

Today more than 2,500 miles of these canals are still navigable, and considered a national historic treasure. They are also a national recreational bonanza, almost completely unknown in the United States.

Vacationers in Great Britain hop onto canal boats as their American counterparts would hop into their motor homes.

This is Britain at a slower, more peaceful pace. The boats cruise at 4 miles per hour or less, giving you plenty of time to smell the roses . . . and stop for a pint at a canal side pub. Stop for a chat with the locals at the locks, steer clear of sheep drinking along the shore, duck under century-old bridges and explore cute canal side villages.

Mariners can sail across nearly all of the country, through big, bustling cities like London, Birmingham and Manchester with their wealth of industrial heritage. Or head for the countryside with its quaint little towns. Sail under the medieval town walls of Chester, tie up to visit Shakespeare’s birthplace in Stratford-upon-Avon or visit a castle at Warwick.

These narrow boats (none wider than 7 feet, the size of the ancient locks) hold a kitchen, dining area, sleeping areas and bathroom, a self-contained floating vacation cottage. They’re easy to drive, and you can’t get lost. You go where the canal takes you.

There are many hire-boat companies offering daily or weekly rentals for those who want to drive their own boat, or vacationers can book passage on one of the several hotel barges offering cruises along the canals, letting the captain and crew do all the work.

One of the most spectacular canals is the Llangollen Canal. This historic canal straddling the English-Welsh border has everything a canalier would want: grassy meadows, dramatic hillsides, limestone cliffs, deep tunnels, breathtaking aqueducts and, as a reward, the Welsh town of Llangollen at the end.

Here’s the log of our recent four-day journey.

Day 1: It’s a short taxi ride to the marina at Whittington, one of those quaint little English villages with a castle ruin in the town center. There, sitting quietly canalside, is Cadi, a trim little yellow and brown canal boat offered by Hoseason’s Welsh Lady Cruisers, one of several hire-boat firms along the canal.

In only takes a few minutes to learn all there is to running a canal boat. Steering is by a simple tiller at the stern. The motor has a throttle, starter and choke. And that’s it.

We’re not talking high-tech here.

At least we don’t have to feed the horse or adjust its harness the way boatmen of old had to do. In the early days of the canals, the boats were pulled by a horse or mule. That’s why you’ll see a tow path on one or the other side of the canal – that’s where the animal and a boatman walked.

Usually a young boy led the horse while the captain steered. Motors didn’t replace animals until the late 19th century.

The Llangollen Canal is one of the oldest. Construction was started in 1793 by men with picks and shovels. Originally called the Ellesmere Canal, it was part of a grand scheme to link two of Britain’s major rivers – the Mersey and the Severn, but things didn’t work out as planned. Still, it was a busy and profitable enterprise.

We pull out of the wharf and head up the canal, bouncing from one bank to the other (steering isn’t as simple as it seems). But soon we’re pros, ducking under quaint brick bridges, steering around curves and cruising through idyllic pasture land.

Then comes our first major challenge – The Locks!

These marvels of primitive engineering haven’t changed since they were built 200 years ago. They raise and lower boats to different levels of the canal.

They’re a cinch – once you figure out what you’re doing. You’ll be replaying an ancient ritual performed by boatmen millions of times over the centuries.

Ease the 7-foot wide boat into the 7-foot
At a lock near Whittington, Adam Biesterfeld does all the work while the author observes. Photo by Linda Biesterfeld.

2-inch wide stone lock chamber, hop out and head for the lower lock gate. It's simple to operate—just push. A huge oak beam is connected to the massive wood door, and a heavy heave-ho closes it.

Run to the other end of the lock and, with your windlass bar (a heavy metal tool) crank the ancient machinery to open the paddles that let water gush into the lock and raise your boat. Then with another heave-ho, the upper door opens and you're on your way.

Another hour and we pull over to the side of the canal, pound a couple of staves into the ground and moor for the night at the Poachers Pocket. Here is the epitome of English canalside pubs. It, and pubs like it, are warm and cozy, and have been serving up good food and drink to canallers for a century or more.

The next day, you enter Wales in a most spectacular way. To get the canal across the Ceinog River, they built a magnificent aqueduct 70 feet above the rushing waters. Ten graceful arches—throwbacks to the Roman aqueducts of two millennia earlier—carry an iron trough above the valley. It opened in 1801, an engineering marvel of the times.

Ironically, an even more impressive arched railroad bridge was built parallel to the canal 50 years later. Competition from railroads nearly killed off the country’s canals over the next century.

Before you even have time to catch your breath, the canal ducks into deep, dark Chirk Tunnel. (But first peek in the one-way tunnel... if you don’t see a headlight bearing down on you, it’s OK to proceed.)

It's eerily quiet inside, only the sputtering of the engine and dripping of water from the ceiling breaking the stillness. Mist rises from the water, and a moist breeze pushes through the darkness. Imagine working with pick and drill in this darkness as workmen did 200 years ago.

After almost 1,400 feet, the canal breaks out into the light. But only for an hour or two—there's another tunnel ahead. Whitehurst Tunnel is nearly as long, and just as spooky. You thought Chirk Aqueduct was impres-
If we had more time, we could have turned left, through the short Ellesmere Tunnel and headed down another 25 miles to Hurleston Junction where the Llangollen Canal joins with the Shropshire Union Canal which connects with the rest of the canals in England. Along the way there are several more quaint canal towns, more canalside pubs, serene scenery and 19 more locks.

Instead, time was short so we headed right, past the staircase locks at the head of the Montgomery Canal now undergoing restoration, and back to Whitton Marina. Now experienced canaliers, we know how boatmen of old felt when they steered their towhorse to homeport.

### MAPS ON THE INTERNET

Thanks to the Internet, it's now possible to get a list of all the canal place names in your state that are on the U.S. Geological Survey 1/2" topo maps.

Go to www.topozone.com. Click on the "Place Name Search" under "Get a Map." Enter the name ("canal"); click on the pertinent state; click on "contains the phrase entered" and then click on "search." This lists all places containing "canal" and the relevant topo map and county, so you can select the map you want to see. This is a little complicated, but any other way will only give you a place name, if there is any, called just "canal." Topozone is a good place to look at USGS maps and their Place Name Search will take you to any obscure place as long as it is shown on the topo, such as "Back Creek" or even "cem" (there are a lot of those).

For aerial photos of the whole country try http://terraserver.microsoft.com. This site also has topo maps but at present its place name search won't take you directly to aerials (or maps) at obscure places such as "Back Creek," only to larger towns. Once you see the general area on the screen you can work your way to the place you want and zoom in.

---

### CANAL BOAT PINAFORE

Tony Pastor's Canal Boat Pinafore was one of the burlesques of Gilbert and Sullivan's H.M.S. Pinafore during the "Pinafore mania" of the 1880s. It evidently takes place on an Erie Canal boat instead of the warship of the original. Has anyone seen a copy of the text or details about it? I have not been able to locate a copy so far.

The Virginia Canals and Navigations Society plans to reprint a Lynchburg, Va. burlesque of Pinafore called J.R.C. Freight Boat Sarah Jane (J.R.C. is for James River Canal). If you know of other canal boat Pinafores, please notify me.

---

### GOOD NEWS

The Canal Society of New Jersey is establishing an endowment fund, with an initial goal of $100,000 principal, which will generate income toward supporting staff and a permanent office. The society has a membership of over 1,300 and the New Jersey Historic Preservation Office and professional engineering consultants frequently contact members for advice on how to best construct public projects while protecting, preserving or in some cases, restoring historic canal features. New Jersey is also engaged in an unprecedented movement to preserve one million acres of open space, recreation lands and connecting greenways. The society's Morris Canal Greenway project is a unique opportunity to save substantial portions of the Morris Canal right-of-way as part of this open space campaign.

A New York Times story (Oct. 16, 2000) describes a belated effort by Schenectady residents to pay homage to the Erie Canal. When the canal opened in 1825, Schenectady officials feared that it would detract from their riverfront business and refused to allow the customary cannon salutes or fireworks. Last fall, Union College sponsored a retrospective including survey and engineering drawings, paintings, models, lectures, symposiums and concerts. Canal boats carved out of maple sugar and aqueducts made from New York Cheddar Cheese added a contemporary note.

Inland Waterways News, based in Ireland, gives an enthusiastic review to a guide by American author Robert G. Gifford, Cruising Ireland's Shannon & Erne Waterways. The guide is called "immensely detailed, with everything from phone numbers for hackers to festivals, restaurants, B&Bs and bike rentals." Cost is $24.95 plus 6% tax and $3.20 s/h. Order from Robert G. Gifford, 229 Orchard Place, Ridgewood, New Jersey 07450.

“Our Canal Heritage,” a video sponsored by the Canal Fulton Heritage Society, won a Chris Bronze Plaque Award at the 48th annual Columbus International Film & Video Festival, in competition with National Geographic, ABC News, Dateline NBC, and Disney Educational Productions. The video was written and produced by Jack Gieck.

The four-year partnership of the City of Easton, Pa., The Crayola Factory at Two Rivers Landing and the National Canal Museum increased visitation at the museum 20 times, doubled attendance on the canal boat and resulted in a budget that tripled.

—Kate Mulligan

### BALLAD OF THE CANAL

[Ballad of the Canal] was brought to my attention through the Woman's History Web Page. It's from Poems and Parodies by Phoebe Cary, published by Ticknor, Reed and Fields, Boston, 1854, and is a parody of "Ballad of the Tempest" by James T. Fields, one of the partners in the publishing firm.

---

Ballad of the Canal
by Phoebe Cary, 1824-71

We were crowded in the cabin,
Not a soul had room to sleep;
It was midnight on the waters,
And the banks were very steep.

'Tis a fearful thing when sleeping
To be startled by the shock,
And to hear the rattling trumpet
Thunder, "Coming to a Lock!"

So we shuddered there in silence,
For the stoutest berth was shook,
While the wooden gates were opened
And the mate talked with the cook.

And as thus we lay in darkness,
Each one wishing we were there,
"We are through!" the captain shouted,
And he sat upon a chair.

And his little daughter whispered,
Thinking that he ought to know,
"Isn't traveling by canal-boats
Just as safe as it is slow?"

Then he kissed the little maiden,
And with better cheer we spoke,
And we tugged into Pittsburgh,
When the morn looked through the smoke.

---

Ballard of the Tempest
by James T. Fields, 1817-81

We were crowded in the cabin,
Not a soul would dare to sleep.
It was midnight on the waters,
And a storm was on the deep.

'Tis a fearful thing in winter
To be shattered by the blast,
And to hear the rattling trumpet
Thunder, "Cut away the mast!"

So we shuddered there in silence,
For the stoutest held his breath,
While the hungry sea was roaring
And the breakers talked with death.

As thus we sat in darkness
Each one busy with his prayers,
"We are lost!" the captain shouted,
As he staggered down the stairs.

But his little daughter whispered,
As she took his icy hand,
"Isn't God upon the ocean,
Just the same as on the land?"

Then we kissed the little maiden,
And we spake in better cheer,
And we anchored safe in harbor
When the morn was shining clear.