From the President
By David G. Barber

Last fall, I attended a meeting of the Delaware & Hudson Canal site managers at which the recent construction of a federal prison at Fairview, PA was discussed. Despite the farm buildings of the former state hospital and the grade of the post-gravity railroad steam railroad being on the National Historical Register, the Bureau of Prisons obliterated them with only two small booklets in mitigation.

A few years ago, reconstruction of the junction of interstate highways in Scranton, PA, destroyed a couple of the historic inclined planes of the Pennsylvania Coal Company gravity railroad. Then also, mitigation resulted in a historical book. Is our objective to be a library of what was or preservation of the actual items?

In Zip Zimmerman’s new book on the Delaware Division Canal, he discusses a proposed apartment house in Yardley, PA. It was to be built on a land-locked site that would have required a new bridge over the watered canal for access. Necessary authorizing legislation flew through the state legislature with sponsorship of the organized building trades. Fortunately, because of local opposition, the high rise has not yet been built.

In all of these cases, when the question was jobs on the one hand and history and parks on the other, jobs won. I believe that it will continue to be so as long as the choice is jobs or history.

At Levittown, PA, a piece of the Delaware Division Canal was culverted and covered by a shopping center parking lot in the early 1950s. My understanding is that the original developer agreed to restore the canal after 50 years.

Today, the shopping center is being replaced, but the redeveloper doesn’t want the canal replaced. He is concerned about the visibility of his new stores from the highway. If the question is just another several thousand feet of old canal, then culverting the canal might seem the solution. If the question is through navigation, then a siphon culvert for the drainage becomes the only choice.

To counteract this lack of vision, we need to change the discussion. Excavating and rebuilding buried locks, canals, and basins involves construction jobs. Building new lock gates takes carpenters. Steelworkers and concrete workers build new bridges. Boat building and marinas involve other trades and create the opportunity for small, family businesses that provide new jobs.

Once a canal is restored, jobs are involved in its operation and business will increase in neighboring stores and restaurants. Tourism is a major industry and we need to make it work for canal restoration.

Since the construction trades can get the votes in the legislatures, shouldn’t we work to get them on board our campaign? Isn’t the local chamber of commerce interested in promoting local business. Who else can you suggest who has an economic reason to help?
American Canals

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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.

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THE WALHONDING FEEDER
by Terry K. Woods

The original plan for introducing water into the Ohio & Erie Canal south of the Sugar Creek Crossing, below Dover, was to tap the slack water crossing of the Walhonding River above a dam near the village of Roscoe. The Walhonding at that point, just above its junction with the Tuscarawas where it formed the Muskingum, however, is one of Ohio’s more volatile streams and drains an extremely large area. That river was known to rise more than 20 feet in just a few hours when heavy rains inundated the upper drainage basin.

It was therefore decided to have the canal cross the Walhonding on a five-span aqueduct. The engineers would then construct a dam across the river at some point upstream and dig a separate feeder from the dam to the canal.¹

Contracts for the Walhonding Feeder were let in two sections of approximately ½ mile each. On the 15th of May, 1827, Alfred Kelly, Acting Canal Commissioner, entered into a contract with Quintas F. Atkins, Joel Rossiter, and Erastus Torrey, for the construction of Section No. 2 of the Walhonding Feeder of the Ohio Canal. This job included a dam across the river, a guard lock, excavation, embankment, and clearing.² The valley of the Walhonding and its tributaries, the Killbuck and the Kokosing (Vernan), was a rich wheat growing area. Busy river traffic had grown up along these streams to transport wheat to downstream markets. The State’s canal commissioners wished to direct a portion of that traffic to the Ohio Canal, thus the requirement for a guard lock at the head of the feeder and for making of the feeder channel navigable.

Soon after the letting of the contract, two of the participants dropped out and it was reassigned to Erastus Torrey, as the sole contractor. The design of the dam as outlined in the contract was one of “Sills and Rafters”,³ but the Commissioner reserved for himself the right to change the plan of work at any time by reimbursing the contractor for any additional expenses.

Torrey got the job going immediately. He soon had most of the clearing done in the dam area and much of the required timber for the structure “gotten out.” That was when the Commissioner changed the plan.

The new design for the dam required that seven rows of pilings, ten feet apart, be driven across the bed of the river. The two upper rows of pilings were to be driven closely together. The entire area of pilings was to be filled with sand and gravel and covered with a wooden apron.⁴

The same Canal Commissioner’s Report that described the dam and feeder on the Walhonding ‘expected’ to have the feeder completed by September of 1827. The change to a more complex design, of course, negated that. The Canal Commissioner’s Report issued in January of 1828, ‘hoped’ it would be completed by the ‘business season’ (March or April) of 1829.⁵

In actuality, the project was experiencing difficulties. A heavy freshet in January of 1828 washed away about 7,000 yards of embankment and much of the timber that was on site. Then, in July of 1829, with only a few more months of work required to complete the project, Torrey became very ill and was forced to leave the job site. Before leaving, he requested that the Commissioner place a competent engineer in charge of the work. Then, on or about the 14th of November 1829, when the final examination of the work was about to be made in favor of the contractor, a large portion of the pilings was undercut by river action and nearly 50 feet of the dam structure was swept away.⁶
The damage was repaired and the canal was finally opened to Roscoe on July 30, 1830.7

Even before the dam and feeder were completed, though, the complex was under scrutiny by the local river men and the State Legislature. The river men were used to free access of the waterways. They didn’t want to be forced into using a canal if they didn’t want to. The commissioners appealed to the State Legislature, and on February 8, 1828, the General Assembly passed an act requiring that a lock be placed in the Walhonding Feeder Dam to allow free access to the rivers below.

The canal commissioners demurred; they hadn’t been informed of the act until the dam complex was well along in its construction. And, they objected, the dam abutments would be well beyond the normal navigable channel. Any lock to pass the structure would require a separate, expensive channel around the dam or be completely useless. The canal commissioners requested that the Act of February 1828 be modified or repealed. The General Assembly, on February 11, 1829, modified the 1828 act by authorizing the canal commissioners to construct a lock from the Ohio Canal into the Muskingum River at or near the town of Coshocton (on the opposite bank of the Muskingum River).

The river men, for the moment, appeared to have been forgotten in favor of the citizens of Coshocton, the area’s county seat, which had been bypassed by the canal. The canal commissioners demurred. They were not in session when the modification to the act was passed. And they objected that due to the difference in elevation at that point, two locks would be required and any passage across the river between the canal and Coshocton could be extremely dangerous. The canal commissioners recommended that a bridge across the Muskingum from Coshocton to Roscoe be built to answer the problem.8

A bridge across the Muskingum at the foot of White Woman Street in Roscoe quieted the citizens of Coshocton and the river men were thrown a bone on March 12, 1831, by an act that “authorizes all flat bottomed or Orleans Boats descending the Walhonding River for the purpose of passing down the Muskingum below Dresden to pass through the Walhonding Feeder and through that section of the canal which is between the mouth of said feeder and the outlet of the Muskingum Sidecut at Dresden free from the payment of tolls.”9

During the 1834 legislative session, Mr. Hallock, from the Committee on Canals, brought up the resolution authorizing the canal commissioners to build a lock in the Muskingum opposite the town of Coshocton. Mr. Leonard proposed that the words “be required” be substituted for “authorized”; this was decided in the negative - Yeas 11, Nays 20. The committee reported the resolution back without amendment and recommended that it be indefinitely postponed.10

The 11th Annual Report of the Canal Commissioners, (for the year 1832), January 22, 1833, page 14, gives an excellent description of the dam and feeder complex:

“The feeder, which is one mile thirty chains in length, is navigable, having the same breadth & depth as the main trunk of the canal. A guard lock erected at the head of the feeder regulates the introduction of water from the river, prevents the influx of floods and permits the passage of boats between the river and the canal. A dam 300 feet in length, seven feet above the surface of low water, -- raises the water of the river to the elevation of the canal and diverts the requisite quantity into the feeder. The feeder flourishes at all seasons, an abundance of water to meet the demands of navigation and extensive hydraulic works. It is also the channel by which a considerable amount of produce, brought down the river from the country from which it
flows, is introduced on the canal for the purpose of being transported to the Lake or to the Ohio River. Cost of the Walhonding feeder, Dam and Lock = $32,931.66.”

The year 1836 brought a rash of new canal building by the State. One of these was the Walhonding & Mohican that was to leave the Ohio Canal at the Roscoe Basin and proceed up the valleys of the Walhonding and Mohican rivers to Loudinville. Branches were also to be built to Mount Vernon, on the Vernon, and Millersburg, on the Killbuck. The Walhonding Canal crossed the river at a point six miles above Roscoe.

The crossing was also above the junction of the Killbuck and Walhonding rivers. The first 23 miles of canal ended 3 1/4 miles up the Mohican and was to be “completed (on to Loundenville) at an early date.” The lower section of canal was opened in July of 1841. It technically ended any requirement for the separate Walhonding Feeder, as it provided both a water source to the Ohio & Erie Canal and access to the canal for traffic from the Mohican and Vernon rivers. But, it did not provide access for Killbuck River traffic.

A national financial panic delayed the completion and extensions of the Walhonding Canal until railroad competition made them impractical. Whatever prospective canal traffic came down the Killbuck River, therefore, had to use the Walhonding Feeder.11

During the 1850s, the feeder dam was “graved” yearly to “tighten it up.” By late summer of 1857, the Walhonding Feeder had been operational for more than twenty-seven years and was beginning to show its age. The state engineers, after inspecting the dam at low water during late summer, determined that it was so undermined that “the supply from that feeder amounts to nothing, we will manage to keep the levels up at all events, even if we have to draw slightly from the Walhonding Canal.”12

An additional crib, or coffer dam, was recommended to be built in front of the original dam, so that the entire structure acted as a double dam, thus “tightening up” the dam without the expense of erecting an entirely new structure. The contractor, William Nugen, began work on the new crib in early September. He took sick and was away from the job a portion of the time, but nature was kind to the project. Though the nearby Tuscarawas River rose considerably during the late summer, the water level in the Walhonding stayed at a low level and the new crib was in place and doing its job before the end of the 1857 boating season. Two scow boats, each with a capacity of 95 cubic yards of stone, were employed bringing stone to pack into the new crib and the space between the old and new dams. The entire structure was then tied together by permanent stone abutments. The total cost to repair the feeder dam in this manner was $7,922.66.13

Up until this time, the various state reports were definitive in separating the Ohio & Erie Feeder Dam from the Walhonding canal dams on the Walhonding River and its tributary. This changed rather abruptly in the 1860s. We can assume that whatever river traffic was diverted into the Ohio Canal through the Walhonding Feeder was taken over by the railroads that entered the area about this time.14

The feeder dam was damaged by spring floods in 1870. In that year’s report, however, the
feeder dam is referred to as the “Two Mile Dam,” as if it were part of the Walhonding Canal, and not a feeder to the Ohio & Erie. It is also interesting to note that the breaks in the two Walhonding Canal feeder dams were quickly repaired, while “the one in the levee of the two mile dam was not repaired until in the fall,” thus indicating the feeder dam no longer was playing an important role for the Ohio & Erie Canal.

Then, in 1875, all three dams in the Walhonding and its tributary were again severely damaged by flood waters. The Board of Public Works report for that year states that, “two of them (the upper ones) repaired thoroughly, while the other (lower one) has not been repaired on account of its entire uselessness, having been altogether superseded as a feeder dam, and the Board are advised that the landowners above it not only do not desire its maintenance, but protest against it.” Obviously no river traffic had been using the feeder for quite some time.

Considering how close it was to the restored canal town of Roscoe, the original Walhonding Feeder quickly disappeared from people’s minds. Few seemed to realize it had ever existed. Surprisingly, a good portion of the feeder channel was discernable up until the summer of 2001, when a slowly advancing gravel quarry finally took it over. A large portion of the stone dam abutment on the right (south) bank of the river survives today (2003), on private property behind a private residence.

1. Sixth Annual Report of the Canal Commissioners, January, 1827 (for the year 1826) Kilbourne, Pg. 33.
3. A “Sills and Rafters” form of dam calls for timber “Sills” to be laid across and embedded in the bed of the river, filled with stone, then an apron of “rafters,” planked, laid over it. A fast moving, forceful stream could easily ‘uproot’ this type of dam.
6. Senate Journal, Vol. 42, Dec 4, 1853, pg. 623. $600.00 of money was withheld from the contractor who instituted suit against the State. In an interesting aside, the case was “held” over for to the next session to have the legislature “investigate”. We have not yet found the document to discover if Torrey ever obtained his $600.00 or not.
8. OHIO CANAL DOCUMENTS; Report of the Board of Canal Commissioners Relative to the Walhonding Dam, January 24, 1832. Pgs. 16 - 18.

The Leicester Ring,
Part II
by David G. Barber

(continued from the spring issue)

The next morning, we continued on alone as the other boat planned to stop at Loughborough for shopping. We managed to operate the wide locks by ourselves and pushed a little to reach Trent Junction in the late afternoon. That put us an entire day ahead of schedule. The last two locks on the Soar are interesting, as the river channel elevation has been changed to reduce flooding. As a result, an older, filled in chamber complete with gates is beside each of the current locks.

Trent Junction is a busy place as the Soar Navigation comes in from the south, while the Trent Navigation goes east and west and the Erewash Canal locks up to the north. The river is dammed just to the east and the pool is used by all
sorts of power craft. After walking around the area, we moved the boat a little east into the mouth of the Cranfleet Cut to escape the waves and boat wakes.

The next day was Saturday and we used it to cruise eastward into Nottingham. The route into the city is made up of canal cuts and sections of controlled river. Entering the city itself, the route goes back into a canal cut after passing through Beeston Lock. This lock is a deep lock in lift and has extra high walls for flood protection. While preparing to leave the lock, we tried to flick the mooring rope off the bollard, but instead caught one of the magnet clips holding the guidebook on the roof and flipped the guide into the water where it promptly sank.

So, sans guide, we continued into the heart of the city. The final entrance into the city is on the Nottingham Canal itself, the only part of that canal that isn't filled in. Locking down once more at Castle Lock, we passed into a very urban area with the courthouse on the right and several open air pubs on the left. After passing under another bridge, the canal becomes lined with factories. It then turns sharp right through more factories and returns to the river. We explored this section, but had planned to turn around before reaching Meadow Lane Lock down to the river. But without the guide, we missed the last turning point and were too long to turn just before the lock. We, therefore, had to lock down to the river, turn in the wide waters below, and then lock back up to the canal.

Returning towards the center of town, I wanted to stop at a large office supply store and buy replacement magnets. But there was no access from the towpath to the road above. So we continued back to the center of town. There, we tied up at the public mooring and went to one of the pubs for a late lunch. After lunch, we tried to visit the canal museum, but it seemed to be out of business. We also wanted to walk about some more, but without the guide, didn't have enough information. I was also nervous about leaving the boat where it was, despite the security cameras. So, we returned to the boat and prepared to leave the downtown Nottingham area.

To leave, we had first to lock up at Castle Lock. So, I walked ahead to set the lock. There, I found a down-bound boat in the lock and waited for it to depart. Once that had occurred, I was waiting for my wife to drive the boat into the lock when two early twenties males who had had too much to drink decided to strip naked and jump off the bridge into the canal right in front of the boat. Real smart! My wife had to reverse quickly to keep from running over them. After they climbed out, we locked up and proceeded out to Castle Marina where things were more civilized. There, we had easy access to a supermarket and restaurants.

In the morning, we cruised west back to Trent Junction, where we stopped for water and lunch. We then continued west, soon coming to Sawley Locks. Here, there are two, double width chambers side by side; they are fully automated and operated by locktenders. As we approached, we were signaled into the right hand chamber along with another boat. Once we had ropes around the bollards, the gates closed and the lock filled, all done automatically.

Above the locks was a large basin, full of boats, many moving. An open flood lock, a spillway, and a section of river followed this. In a while, we came to a junction where the non-navigable River Derwent came in from the right and the River Trent came in from the left. Ahead, a narrow cut was signed as the Trent & Mersey Canal. Following the canal cut, we came to Derwent Mouth Lock where several boats were waiting. When our turn came, we locked up into a busy canal section with a large marina on the right. After this congested area, we reached Shardlow where the
canal snakes past several pubs and reaches another lock next to the famous Clock Warehouse. The village is an old canal and river port and has marinas on both the canal and the river. Here we decided to stop and tie up for the night.

On Monday, we continued up the Trent & Mersey Canal, occasionally locking up at the widely separated locks. At midday, we stopped at Stenson Lock to get a pump out and then tied up for lunch. The afternoon continued as the morning with occasional locks and rural canal. In the late afternoon, we passed through Dallow Lane Lock at Burton-on-Trent where the control paddles were padlocked to prevent vandalism, our only experience of these in three fortnights of boating. We finally tied up for the night at Branston where a pedestrian tunnel under the nearby motorway led to a small village with market and adjacent fish and chips shop. The shop didn’t have tables, so we brought our “take away” meal back to the boat.

Tuesday began with more rural canal and scattered locks, but by lunchtime we were busy with several close together, approaching Fradley Junction. Just after lunch, we reached the junction itself and turned left on to the Coventry Canal. Immediately, we passed through a hand operated, pedestrian swing bridge. Next we passed by a closed WW II airfield where many hangars were in evidence. A while later, we passed under a railroad bridge, then past Huddlesford Junction where the derelict Lichfield Canal once went to the right. This closed canal is under active restoration despite a vigorous fight with road builders. A fingerboard was already present at the junction with space reserved for a future sign.

We stopped at Whittington for supplies and observed what looked like a buried lock in a garden. The canal then contoured along a hillside with the towpath on the left and many signs warning of a military firing range in the woods on the right. After the wooded area, we came to Hopwas where we tied up for the night next to the Tame Otter Inn. Getting our usual start the next morning, we watered at Fazeley Junction and then continued on through the two Glasscote Locks. A long level and then the eleven Atherstone Locks followed. We had thought of stopping in the middle of this flight where there is good mooring, but elected to continue on beyond and stop at the Anchor Inn at Bridge 29.

This was where the day we had gained on the River Soar at Leicester came in handy. We now had time to cruise the rest of the Coventry Canal into Coventry Basin itself. First, we reached Hawkesbury Junction at lunchtime where we found the small canal store out of business. Continuing on, we noted all the artwork that has been installed along the five and a half-mile towpath into the city since our last visit six years ago. Cruising this part of the canal was somewhat daunting as we passed no other boats on the way and were unsure of how busy we would find the basin. We noted much floating weed in parts of the route.

The last bridge, Bridge 1, has no towpath and is only one boat wide. So naturally having seen no boats on the way, we had to dodge one at this bridge. On entering the basin, we found several boats tied up, but space for several more. The several shops at the basin were open. After ice cream, we went off to explore Coventry once more, ending at the Priory, the first of Coventry’s cathedrals. The remains of this one have only recently been excavated. It was destroyed during the dissolution under Henry VIII.

As we have found with most cities, the pubs cater to the more numerous lunch crowds, making it hard to figure out where to get supper. But we persisted, before returning to our boat at the basin.

Next morning, we motored back out to Hawkesbury Junction
and entered the Oxford Canal. At the stop lock, we had to wait for none other than the boat Rainbow of Rose Narrowboats. This was the boat on which we took our first cruise six years ago.

Continuing on the Oxford, we soon encountered massive duckweed of such thickness that the water looked like pea soup. This ended by the time we reached Stretton Stop, where we visited the canal shop for trinkets and ice cream. Resuming our journey, we passed through a cutting where the bank was sliding into the canal. After passing through Newbolt Tunnel, we tied up for the night. Having time at this last night stop before the pubs opened for supper, we searched for and found the churchyard next to which is the bricked up portal for the original Newbolt Tunnel. This tunnel was bypassed when the canal was straightened in the 1830s.

On our last morning, we got an earlier start so as to get the boat back to Rugby Basin on time. As a result, we arrived at Rugby Basin before the hire base management showed up and had plenty of time to turn the boat and get our stuff ashore. A taxi ride then took us to a train back to London and on to home.

**TOWPATH TIDBITS**

In March the trustees of the Canal Society of Ohio toured the Ohio & Erie Canal from Circleville to the town of Yellow Bud. (This canal town allegedly got its name because early residents were unable to spell *forsythia*) At a park established by the Pickaway County Historical Society at the Scioto River dam, several miles of canal have been re-watered.

An important link in the Ohio & Erie Canal Towpath Trail was added with the completion of a tunnel. It carries the trail under the roadbed of the Wheeling and Lake Erie Railway, connecting the canal towns of Navarre and Bolivar.

The Evansville (IN) Courier & Press reported that Vigo County received $400,000 to develop a park at the site of Lock 47 on the Wabash & Erie Canal at Riley, Indiana. The Indiana State University anthropology laboratory will plan and research the site, located ten miles south of Terre Haute. When completed, the Wabash & Erie Canal was 468-miles long -- the longest canal ever built in the U.S.

The Canal Society of Indiana has given another $8000 to the Carroll County Wabash & Erie Canal, Inc., making a total of $30,000 in donations. This gift, as well as CSI’s previous donations, will be used in the creation of the Canal Conference and Interpretive Center at Delphi, Indiana.

On June 15, the Chittenango Landing Canal Boat Museum dedicated its new Visitor/ Education Center. The center contains two spacious classrooms and features a new painting by Dr. Bob Hager. It depicts the first canal boat to travel on Clinton’s Ditch in October 1819.

In May of this year, our friends in the Australian Canal Society celebrated their organization’s 15th anniversary. You can visit them on the web at: [http://www.Staff.socs.uts.edu.au/~colville/acs/acs.htm](http://www.Staff.socs.uts.edu.au/~colville/acs/acs.htm).

**British Waterways** has issued its list of the 7 Wonders of the Waterways:
- **Anderton Boat Lift**
- **Bingley Five Rise Lock, Leeds & Liverpool Canal**
- **Caen Hill Flight, Kennet & Avon Canal**
- **The Falkirk Wheel**
- **Pontcysyllte Aqueduct, Llangollen Canal**
- **Sapperton Tunnel, Thames & Severn Canal**
- **Standedge Tunnel, Huddersfield Narrow Canal**
BOOK CORNER

PENNSYLVANIA'S DELAWARE DIVISION CANAL
Sixty Miles of Euphoria and Frustration
By Albright G. Zimmerman

Reviewed by David G. Barber

Zip Zimmerman has lived along the Delaware Division Canal for more than four decades and been very active in the efforts to protect it and restore it from the failings of the past. In this new book, Dr. Zimmerman details the history of the canal from the beginning. This includes description of the canal's origins, purpose, construction, operation, and difficulties. But, his story doesn't end with the canal's closing in 1931. Instead, Zip continues on with the story of the struggles as a state park up to the present. This later story is most valuable as the Delaware Canal is both the third most visited state park in Pennsylvania and the most restorable canal in America. I find this book to be excellent both for the history and the inspiration for future efforts.

Copies are available at $32.95 plus $5.75 S&H from the Canal History and Technology Press, National Canal Museum, 30 Centre Square, Easton, PA 18042-7743. Copies can also be ordered online through the museum website at www.canals.org.

THE MAUCH CHUNK SWITCHBACK
America's Pioneer Railroad
By Vincent Hydro, Jr.

Reviewed by David G. Barber

When the Lehigh Coal and Navigation Company improved the Lehigh River to transport coal to market, they needed a link between the river at Mauch Chunk and the mine at Summit Hill, nine miles inland. To span this distance, they built one of America's first railroads.

In this extensive work, Vince Hydro discusses the origins of this railroad, its construction and early operation, its evolution into a gravity railroad, its conversion into a tourist attraction, and its demise and legacy. Having explored and written about the route, I found the history fascinating and thorough. My only objection is that after showing how revolutionary was the building of the initial nine-mile, downhill railroad, the author repeats the observation that Josiah White's 46-mile Lehigh Canal was a folly. With the detail provided, I can see no way the remaining 100 plus miles to Philadelphia could have been built and operated as an animal powered railroad in 1827.

Copies are available at $39.95 plus $5.75 S&H from the Canal History and Technology Press, National Canal Museum, 30 Centre Square, Easton, PA 18042-7743. Copies can also be ordered online through the museum website, www.canals.org.

FOLLOW THE BLUE BLAZES, A GUIDE TO HIKING OHIO'S BUCKEYE TRAIL
By Robert J. Pond

This spring, Ohio University Press published Follow the Blue Blazes, a Guide to Hiking Ohio's Buckeye Trail. Written by Canal Society of Ohio member Robert J. Pond, the book provides walkers with detailed directions for following the 1200-mile Buckeye Trail, much of which is located on canal towpath.

The book is available from Amazon.com and from most bookstores. It can also be ordered from Ohio University Press (www.ohio.edu/oup).
2003 CANAL CALENDAR

**July 25** — Foster Brown as Digger Gallagher; the legacy of Ohio canal boats and their daily life, 3:00 pm, Lakewood (OH) Public Library; 216-226-8275.

**July 26** — Jazz, Blues and BBQ at Hugh Moore Park, Easton, PA; 2-hr. dinner cruise on board *Josiah White II*; 610-559-6613.

**August 6** — Sunset cruise on the Hackensack River, 5:30-7:30, Canal Society of NJ; 908-722-9556.

**August 8-11** — New River Gorge Bateau Festival begins near Sandstone, VA; 434-977-3733.

**August 16** — Annual Wading Trip, James River Assn, VA; be prepared to get wet; 1-888-727-8850.

**August 16** — Digging Butler’s Dutch Gap Canal Festival, Henricus Historical Park, VA; 804-706-1340.

**August 23** — Touch of Venice at Hugh Moore Park, Easton, PA; 2-hr. dinner cruise on board *Josiah White II*; 610-559-6613.

**August 23-24** — Canal Days, Williamsport, MD, C&O; 301-223-7010. 301-739-4200

**September 9-27** — Canal Society of NY State tour to England, Wales, Scotland; 585-387-0099.

**September 13** — Canawlers Day, D&H Canal Historical Society, 12-4 pm, High Falls, NY; 845-687-9311.

**September 13-20** — Elderhostel at Chittenango Landing (NY). Adventure on New York’s Erie Canal; 315-687-3801.

**September 19** — “The Morris Canal Greenway”; slide presentation, Canal Society of New Jersey; 908-722-9556.

**September 24-26** — World Canals Conference, Edinburgh, Scotland; www.worldcanalsconference.org.

**September 28** — Walk along the Lehigh Navigation with Director Charles Derr; at Hugh Moore Park, Easton, PA; 610-559-6613.

**October 3-5** — Penn. Canal Society trip to Pittsburgh; cruise the rivers and the Davis Island Lock and Dam; call Dave Wright, 724-746-2517.

**October 7-9** — Canal Society of Indiana cruise on the Erie Canal; 260-432-0279.

**October 8-13** — Through bike trip, C&O Canal, Georgetown-Cumberland; 301-223-7010.

**October 10-12** — ACS meeting in Lowell, MA. See story in the Winter issue for details; 508-478-4918.

**October 10-12** — Canal Society of New York State fall meeting: Reservoirs of the Adirondacks; 518-799-6137.

**October 12-17** — Elderhostel at Shepherd’s Spring, Sharpsburg, MD: The C&O Canal, a walking tour; 301-223-8193.

**October 17-19** — Canal Society of Ohio tour of Miami County, from Piqua south; 937-773-2522.

**October 19** — Walnutport (PA) Canal Festival, Lehigh Canal, noon-6 pm; 610-760-9906.

**October 25** — Life & Death on the C&O Canal; NPS; time TBA; 301-739-4200.

**November 21** — Canal Soc. of NJ’s tour to Germany & inclines of Poland; 908-722-9556.

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**A Delaware Canal Exploration**

By Dave Barber

I've long felt that the best way to learn the current condition and problems of our towpath canals is to hike them foot by foot. The sixty-mile-long Delaware Division Canal in Pennsylvania claims to be the best preserved of America's towpath canals, but it has been closed to navigation since 1931 and the lower ten miles has been negatively impacted at many places. Having heard a variety of horror stories, we decided to find out the reality.

One reality is that the problem of "official vandalism" affected this canal in the mid-twentieth century when there was an effort to eliminate the southern end and fill it in using the "death by a thousand cuts" approach.

Our group met at the Comfort Inn, located just north of where the canal crosses under both US Route 13 and the Pennsylvania Turnpike, and carpooled to the southern end at Bristol Basin. We were joined on our explorations by Ralph Ratcliffe, of the Lower Bucks Canal Conservation Committee, which has been fighting for the canal’s southern end for several decades.

When the canal closed in 1931, the town fathers of Bristol and the Corps of Engineers agreed to fill in the large terminal basin with dredgings from the Delaware River to create a parking area for the adjacent business district. In more recent times, history has gained in value and now the outline of the tide lock and the basin is marked with blue poles in the woods and grass and a concrete curb line in
the pavement. From these it is apparent that the tide channel, the tide lock, and a forty-foot wide channel west to Lock 1 could be excavated without affecting any parking at the east end and only a few spaces at the west end. The Borough of Bristol, which leases the last 0.7 mile of the canal, has recently installed information signposts.

At the west end of the basin area, the land rises at the site of Lock 1, the chamber of which is marked by cobblestones in the pavement at the side of a road. Immediately beyond Lock 1, the canal turned ninety degrees right to proceed northward.

Very soon, we came to a bridge that once carried the Pennsylvania Railroad over the canal. While there are active tracks of an industrial spur a little to the left, the railroad mainline was long ago shifted to the west. Today, this bridge with intact canal below is being redecked for local street use.

Quickly thereafter, a second bridge site was reached at Bath Street. Here the canal had been filled in for the crossing, but the route resumed beyond. After skirting a building containing a bike shop, we reached the site of Lock 2. The lock was filled in, but its shape was outlined in stone.

A little farther, we reached Lock 3. Here the towpath side capstones were visible and the rest of the site signed and marked with poles or lines of stone. Information signs and marker poles also showed where the several water channels in this area once were.

Just after Lock 3, the canal route enters the grounds of the Warren Snyder Elementary School. This school was built on both sides of the canal. An enclosed breezeway crossing the canal connects the two main parts of the school. This might seem to be a big obstacle for future restoration, but the school was built in the 1950s and has many portable classrooms and other temporary additions indicating its obsolescence. Since the property is state canal parkland, the replacement should be built on another site.

Skirting around the school, we reached and crossed Beaver Street. Beyond the street crossing, the canal route is preserved greenspace with the prism filled in. A former woolen mill is on the right of the towpath. After a block, the route crosses Washington Street and watered, intact prism begins. The towpath is along the right side of the canal and the former Grundy Mill with its elaborate clock tower is to the right of that.

Another block farther, we crossed culverted Jefferson Avenue beyond which is the rebuilt lagoon. Part of the lagoon once had an enclosed ice skating rink built on it. The rink burned down and the borough wisely decided to rebuild at a different location and restore the canal lagoon. Now, the lagoon has been rebuilt, landscaped, and rewatered. The rebuilding of the lagoon was done with volunteered and donated labor and equipment arranged for by the Lower Bucks Canal Conservation Committee. Help also came from many other partners, key among them being State Representative Thomas Corrigan, State Senator "Tommy" Tomlinson, the Delaware and Lehigh National Heritage Corridor, and Bristol Borough. The lagoon is kept watered by an artesian well.

At the far end of the lagoon, the canal passes under a railroad bridge for the Northeast Corridor. Here a dike across the canal keeps water in the lagoon despite water supply problems to the canal beyond, due largely to the many culverted roads between here and Morrisville.

After the railroad bridge, we entered a long section of intact, watered canal extending to Green Lane. The area was wooded and the canal in very good condition. Along the way, Ralph pointed out two places where former railroad spurs
across the canal had been removed. Green Lane was also culverted. Ralph said that the bridge that was formerly there was very ugly and collapsed under a crossing truck.

Quickly after Green Lane, the canal was crossed at grade by a branch railroad line and then passed under the next-to-western most span of the Pennsylvania Turnpike's Delaware River Bridge. Just after that, it crossed US Route 13 on a diagonal, at grade, and in a culvert. The highway surface was about three feet above towpath height. Apparently, the long term plan is to build a second parallel Delaware River Bridge. It appeared that with adjustments in canal and road alignments, sufficient clearances could be gained for both the canal and Route 13 without affecting the turnpike bridge. As the entrance to turnpike Interchange 29 is just to the south, there are several hotels at this location.

After US 13, the canal resumed its park-like appearance and curved to the right to cross Airport Road at grade and in culvert. To the right, the road led out to Rte. 13, passing the rear parking lots of a new Ramada Inn and the Comfort Inn. The well maintained canal continued the curve and soon reached Lock 4.

Lock 4 has been rebuilt in concrete with a stone facing on the walls. Wooden miter gates are installed at the lower end and a wooden barrier placed across the top end. No gate operating equipment has been installed. The berm side fill wicket at the upper end was raised, allowing water to flow into the chamber and past the lock. Ralph reported that operating hardware had not been fitted here because of the poor flow of water down the canal. He also reported that the upper gate was supposed to be replaced by miter gates, but it appeared to me that the lock was set up for a drop gate.

At this point, we returned to the Comfort Inn for lunch and then repositioned cars to hike south to here from the Levittown Shopping Center. At the shopping center, we examined the culvert which replaced the canal there in the early 1950s. It extends from just north of Levittown Parkway, southward under the road and then under what was the parking lot of the shopping center to the south edge. It appeared that the culvert was placed just to the west of the actual canal alignment and that its size was marginal. Water flow has always been a problem, and floating trash plugging up the trash rack further restricts it.

At our visit, much of the shopping center property was fenced off and all of the original buildings had been demolished. The foundations and much debris remained to be removed. Very recently, a new Home Depot, with its associated parking, has been opened at the southern end of the site. Although no further development will take place on the canal route because it is state property, there is much controversy about how to reclaim the route. In my opinion, the proper plan would be to rebuild the prism and towpath as they were and shorten the culvert to rewater it. That would reduce the affected part of the canal to two roadway crossings and set the stage for further improvements. Many in the canal and park communities support full restoration, but the redeveloper is concerned about having his shopping center visible across the canal from Rte. 13 if the canal is fully restored.

Leaving the shopping center site and proceeding southward, intact and watered canal begins immediately and runs south all the way to Lock 4 and beyond as mentioned above. Along the way to Lock 4, the canal is crossed at grade with culverts by Haines Road and Edgely Road. At each of these roads, a jug handle for turning traffic comes close to the towpath. Between the two roads, local youth have built two bridges across the shal-
low water using shopping carts. Looks like some one needs a scholarship to engineering school. It also looked like a pedestrian bridge might be useful to connect the towpath to the housing on the berm side.

The next morning, despite rainy weather, we positioned cars for a longer hike from the Calhoun Street Bridge, which crosses the Delaware River in Morrisville, south to the Home Depot. At the west end of the Calhoun Street Bridge, East Trenton Avenue crossed the canal and towpath on a nice concrete arch bridge.

Following the towpath south through Morrisville, we noted that the new red stone surface had been installed south to Bridge Street. In 2003, it's planned to extend this surfacing south to Bristol.

At North Pennsylvania Avenue, a concrete bridge spanned the canal with the towpath on a cantilevered shelf. The situation got more interesting at Bridge Street where the towpath runs smack into the side of the concrete bridge railing with a chain link fence on the left. A functional concrete bridge of good clearance spans the canal itself. Unfortunately, the situation is not planned for correction until the last year of the current five-year plan. Fortunately, it is possible to get from the towpath to the street by passing around the left side of a building that abuts the towpath just before the bridge.

On the far side of Bridge Street, there is a steep drop to the towpath, but then grassy towpath with watered canal continues south. Soon, a Holiday Inn Express is passed on the left and then the route passes under the US Rte. 1 bridge. Here another stupid work of the highway builders impacts the canal as several piers of the bridge are in the water and the south corner of the abutment fill blocks the canal. The small size of the culvert through this fill and incessant trash blockage are primary reasons why the water flow to the south is poor. The towpath is unaffected. A fix of the situation was designed by the Corps of Engineers in 2001 and was supposed to be built soon after, but remains undone.

Continuing south, the intact watered canal resumes and soon passes under a bridge carrying a branch railroad line of the Northeast Corridor. When we passed, a new span had recently been installed with a second track possibly pending. It was nice to see that such crossings are being maintained as bridges today.

A little farther south, we encountered another of the insults to the canal. When the Fairless Steel Works was built to the east after World War II, a railroad access line was constructed. At this point, it crossed the canal at high elevation and then, a few feet farther east, the four tracks of the Northeast Corridor and a local street. While the corridor tracks and the street were naturally spanned by bridges, the canal was blocked by a culverted fill. The culvert gets blocked by trash, further reducing water flow south. I suspect that this rail line was built by the state as encouragement for the construction of the steel mill. To continue, it was necessary to climb over the fill.

On the far side, intact, maintained, watered canal continued south, but was cut off from the people of Morrisville by the fill. The situation repeats itself about a mile farther south at Tyburn Road, which is the highway access to the steel plant. Here a fill carrying the four lanes of the roadway plus on and off ramps for Old Bristol Pike buries the towpath and prism. Interestingly, Tyburn Road bridges over the Northeast Corridor just to the east and over Old Bristol Pike just to the west. Only the canal and towpath lack a bridge. Both of these crossings are obvious examples of "official vandalism". The interesting fact is that the park and canal remain, while
the steel mill is closed.

After Tyburn Road, very nice towpath and watered canal resume for about a mile and a half with no crossings or incursions. The area to the left of the towpath was wooded, with the Northeast Corridor tracks beyond. A mobile home park with some nice yards extended along the berm to the right.

Eventually, the canal curved right to be crossed by Old Bristol Pike at towpath level with a twin pipe culvert, and then left to be crossed by Wheatsheaf Road also at grade. At each of these roads, adjacent property owners had posted their lands in such a way that the uninformed might think that access to the state-owned towpath was prohibited.

Continuing past Wheatsheaf Road for 0.4 mile brought us to the crossing of Martins Creek by culvert under the canal. Beyond this, a Falls Township park with good parking was along the berm side of the canal, but there wasn't any pedestrian bridge across the canal for access to the towpath. About 0.3 mile thereafter, Mill Creek Road crossed on grade with a culvert.

Beyond this cross road, good canal continued for more than a mile to where the two roadways of new US Rte. 13 crossed at grade, also with a culvert. In this section, those living in housing on the berm side might make more use of the towpath if there were a footbridge across the canal. A final 0.2 mile brought us to the crossing of Levittown Parkway.

In all of this approximately ten miles of canal, it is obvious that the government had done its best to destroy this historic resource. It continues to have low priority. It is also apparent that 90 - 95% has survived this attack and that there would be great benefit in recovering the rest. This is the part of the canal closest to population and the part least cared for.

Then it was off to follow the C&D (canal #5). Since our boat ride through the canal had been canceled, Bob had devised a route that would take the buses along the water’s edge, close enough to see the freighters and the shore birds. It was a thrill to be that close while David described the historic places we were passing. Peaceful, but without the noise a boat engine.

Arriving in Chesapeake City, we visited the fascinating Army Corps of Engineers Museum. The waterwheel and pumping engines remain in the original pumphouse (now the museum). These steam engines are the oldest of their type in America still on their original foundations. Other artifacts and exhibits in the museum detail and illustrate the canal's history.

In the delightful business district of Chesapeake City, Carol and Larry Wolle led walking tours and folks also had free time to shop. Much to everyone’s surprise, the Wolles had also arranged half-hour cruises aboard the Lady Clare. We motored past freighters and tugs in the harbor area and experienced the canal from a new vantage point.

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**CANAL SOCIETY OF NEW JERSEY SPRING TOUR - FIVE BOAT RIDES & NINE CANALS!**

by Linda Barth

For our final trip as CSNJ tour leaders, Bob and I wanted to include as many boat rides and canals as possible.

Taking a leisurely route south from central New Jersey to Fort Mott State Park, we passed four waterways: the Raritan Power Canal, the D&R Canal Feeder, the Trenton Water Power, and the Salem Canal. After a tour of the gun batteries at the fort, we crossed the Delaware River to Delaware City, the original terminus of the Chesapeake and Delaware Canal. Sitting near the old lock, we ate lunch as David Orr, a long-time resident and canal scholar, shared the history of this waterway.
point.

Chesapeake City is a town divided by the C&D Canal. Its low-level lift bridge had been struck by a freighter in 1942, so for seven years the residents were ferried between the north and south sides of town. Finally, a new high arched bridge was completed to carry Route 213 over the canal.

Using this span, we crossed to Schaefer’s Canal House for a sumptuous buffet. After dinner Marilyn Craine presented the tour leaders with farewell gifts as a thank you for fourteen years of leading CSNJ tours. The specially-made shirts feature a copy of a mosaic of a mule driver; the original is one of the many works of art in stations of the Newark City Subway. Each shirt has the words, “Thank you, Bob and Linda, for providing so many great trips—2003.” We were very touched by this thoughtful gesture.

Saturday’s early morning drizzle did not deter us from our visit to the Lock House of the Susquehanna Museum of Havre de Grace, Maryland. Bob Magee and his friendly staff, plus the cheery glow of the fireplaces, made us feel most welcome. They demonstrated their new pivot bridge as we explored this outlet lock of the Susquehanna and Tidewater Canal (canal #6).

Driving back to Delaware City, we boarded the Delafort for the short ride to Pea Patch Island in the Delaware River, site of the Civil War era Fort Delaware. During the war, over 18,000 Confederate prisoners had been housed here, making the island a virtual city. The firing of a cannon capped off our visit.

In Lewes, Delaware, we took a late afternoon cruise on the Lewes-Rehoboth Canal (#7), joining Rehoboth Bay with Delaware Bay. Then the tour participants were on their own to choose one of the many restaurants for a leisurely dinner. Lewes is a lovely, walkable town, with many shops and eateries.

On Sunday morning, both motorcoaches boarded the Cape May-Lewes ferry for the 75-minute ride across the Delaware Bay to New Jersey. The ferry docks in the Cape May Canal, the 8th canal of our tour. A drive up the coast took us to Clark’s Landing for a delicious luncheon buffet, overlooking the Manasquan River. The finale of our tour was a cruise aboard Miss Michelle through the Point Pleasant Canal (#9) from the Manasquan River to Barnegat Bay.