

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 81

Editorial Address—Rural Route 1, Box 87T, Savannah, TN 38372

MAY 1992

PRESIDENT'S MESSAGE

By now you should all have received a copy of Bill Dzombak's Twenty-year Index to both *American Canals* and *The Best from American Canals*—in celebration of our 20th anniversary. Extra copies are available from Keith Kroon, of our A.C.S. Sales Committee, and you can get it on computer disk along with Bill's indexes to the Indiana, Ohio, Pennsylvania, and Virginia canal society publications. Bill's format makes these indexes especially suited for keyword searches using a word processor. So, when a canal buff, professor, or high school student asks you for canal information, you can now tell him or her to get hold of the index, a set of Bill Shank's *The Best from American Canals* (for all the major articles), and any needed back issues of *American Canals* (for the rest), and do his or her own original research. All five volumes of *Best* and most of our back issues are still available from Keith Kroon. Let's put *American Canals* and the state canal society publications to work as a research tool.

In March, I met some southern canal buffs and learned something about dealing with sunken canal boats, at a "Waterlogged Wood Workshop" at the North Carolina Maritime Museum in Beaufort. The primary take-away message was to study a boat (or a wooden lock) where it is, then leave it in place and cover it back up for posterity, if at all possible. It is an extremely expensive major operation properly to preserve a boat "forever," and just putting it in a farm pond to keep it wet will probably make it deteriorate very rapidly. So, what do you do with a canal boat or lock which will be destroyed by the weather, or an eroding river bank, or construction machinery? There is no simple solution. Sometimes old wood can be safely dried out slowly; sometimes it needs a lengthy treatment with polyethylene glycol (PEG),

(Concluded on Page Two)

SECRETARY'S REPORT

ACS Secretary Charlie Derr reports that Harry Valley of Cleveland, Ohio, a long-time member of ACS, has just become a LIFE MEMBER. Thanks, Harry! Charlie also reports that a number of ACS members have still not paid their 1992 dues. Normally we remove delinquents from the mailing list prior to the May Issue. However, with so much going on in canal circles this month and the next, we felt we should keep them on for one more issue. Please, any members who have not sent \$14 to Charlie Derr (117 Main Street, Freemansburg PA 18017) do so at once, and we will not destroy your mailing label.

MEMPHIS TO NEW ORLEANS ON THE MISSISSIPPI QUEEN



When we returned from our tour of Natchez, Mississippi we found the "Delta Queen", sister steamboat to the "Mississippi Queen", tied up alongside us. They were headed north, while we were headed south.



The "Delta Queen" as viewed from the upper deck of the "Mississippi Queen" at Natchez.

By Bill Shank

Thanks to my sister, Betty Post of Houston, I realized one of my long-time ambitions—to ride the "Mississippi Queen" on a week-long voyage (April 3–10, 1992) along the lower Mississippi.

I traveled with a group of some twenty people, mostly retired, from the Memorial Drive Presbyterian Church of Houston, Texas, led by the Rev. Harry Adamson, all of whom I met in Memphis. Unfortunately, my sister developed a severe arm infection at the last minute and had to stay home.

Our trip on the "Queen" included stops at Vicksburg, Natchez, St. Francisville, Baton-Rouge, and finally—New Orleans. We were favored with excellent weather for the entire trip. The "M.-Q.", built in 1975, is one of two steamboats operated by the company, the other being the "Delta-Queen" built in 1927. The M.S. is the larger of the two and is the biggest all-steam-powered luxury vessel in the world. She carries 416 passengers, plus crew of 156.

The service on board is comparable to the finest hotels in the country. The entire ship's crew, officer personnel, room and table attendants make you feel at home from the moment you step on board until you disembark at your destination.

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American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

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AMERICAN CANALS is issued quarterly by the American Canal Society, Inc. Objectives of the society are to encourage the preservation, restoration, interpretation, and use of the historic navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

Annual subscription to AMERICAN CANALS is automatic with A.C.S. membership. Send dues payment (\$14 minimum) to Sec'y/Treas. Charles W. Derr, 117 Main St., Freemansburg, PA 18017. Single copies may be purchased at \$3.00 from the publisher.

Manuscripts on subjects consistent with the objectives of the A.C.S. are welcome. They should be sent to the editor.

ERRATA

William Dzombak has asked us to note the following points in reference to his article, "Land Acquired for Canal Park," on page 6 of the February 1992 issue:

1. The canal tunnel at Bow Ridge was built in 1828, not 1838.
2. The photo shows the 1864 railroad tunnel, not the canal tunnel.
3. The actual aqueduct did not resemble the artist's conception depicted.

Edwin D. LeRoy, of Chatham Borough, New Jersey, died at the age of 88 on the 14th of February, 1992. He was the author of two books on the Delaware and Hudson Canal, both published by the Wayne County (Pennsylvania) Historical Society, as well as of several articles on the same subject. He was noted throughout the tri-state area of New York, New Jersey, and Pennsylvania for his lectures and slide shows, and for his wood carvings of canal-related subjects. Survivors include his wife, Grace, two daughters, and three grandchildren.

QUIMBY'S 1992 CRUISING GUIDE NOW AVAILABLE

This 8-1/2" x 11", 200-page, spiral-bound book contains everything that the small boat owner needs to know in traveling the waterways of Eastern United States. Marinas (with phone numbers); locking offices (with phone numbers); overnight camps, motels and restaurants (with phone numbers); complete river charts, showing lock locations. Much historical and descriptive text material on each waterway adjacent to the Mississippi and East. Our new ACS Editor, David Ross, has supplied much of the text and many navigation charts for river sections that he is particularly familiar with.

The book is broken down into the following major sections: the Upper Mississippi; the Lower Mississippi, including the Arkansas Inland Route and the Gulf Coastal Route east of New Orleans; the Illinois Waterway; the Ohio River, including the Muskingum River, the Allegheny and Monongahela Rivers, as well as the Kanawa and Kentucky; the Cumberland River; the Tennessee River; the Tenn-Tom Waterway, including the Black Warrior River, the Alabama River, and Mobile Bay; and the Apalachicola-Chattahoochee-Flint River System.

The 1992 Edition is published by *The Waterways Journal*, 319 North Fourth Street, Suite 666, St. Louis, MO 63102. Ask for *QUIMBY'S CRUISING GUIDE*, which sells for \$12.45, shipping included. "Don't leave home without it".

(Bill Shank)

PRESIDENT'S MESSAGE

(Concluded from Page One)

white sugar, or rosin; then it takes constant care indefinitely, preferably under controlled humidity and temperature. The moral is, first work with the conservator for your museum or state historic landmarks department, who should consult with specialists experimenting with waterlogged wood, such as the Nautical Archaeology Program at Texas A&M University. While you're at it, ask your museum if they will sponsor a "Canalboat Preservation Workshop"!

For those of us who are trying to convince local officials of the value of canal preservation in the middle of cities, here's a quotation about San Antonio's famous canal, the "River Walk," from a national magazine:

"The River Walk is the city's principal tourist-attracting, money making artery, a Chamber of Commerce dream, a path of gold, the stage on which the city acts out its fiestas and its fantasies. It wasn't always so . . . in the 1930s, it was little more than a public sewer." (From "Where the River Bends," by Charles N. Barnard, *Modern Maturity*, April 1992, p. 22. Your city council ought to like the "path of gold" idea. It certainly works in San Antonio!)

"Canal to participate in two international expositions," says a headline in a recent issue of the *Panama Canal Spillway*, the canal employees' newsletter. Now, this is a refreshing way to look at a canal! In the Canal Zone, Miraflores Locks also participated in a performance by the International Rope Skipping Organization, and the Industrial Division dry dock participated in a swimming, canoeing, and inner-tubing event. Has your local canal participated in anything recently? When it's ten o'clock, do you know where your canal is?

—Bill Trout

Walter Meseck reports a new Canadian boat trip between Burlington, Vermont and Montreal, Quebec, via the Richelieu River and the Chambly Canal. One way trip by boat, either north or south, with a bus to return passengers to their starting point. For further information write: McBride Group Tours, Inc., P.O. Box 188, South Hero, Vermont 05486.



Did you spot the Trent Canal? Santa Claus, in the form of Canadian cartoonist Lynn Johnston, gave us canal buffs a Christmas present when this strip of "For Better or For Worse" came out on December 26th. This popular strip is enjoyed by millions in Canada and the United States, but I'll bet that only a handful of readers noticed the *History of the Trent Canal* among the Christmas presents. Perhaps it takes a brain honed over the years to spot the word "canal" wherever it appears. Many thanks, Lynn Johnston! Does this mean that John (the dentist) will take the family on a visit to Ontario's Trent Canal, also known as the Trent-Severn Waterway? (Copyright Lynn Johnston Productions, Inc., reprinted with permission.)

—W.E. Trout III

[Editor's note. The last time American Canals published a comic strip ("The Wizard of Id," August 1991) it also involved a dentist. We're tempted to ask what it all means, but perhaps it's best not to look a gift horse in the mouth.]

BOOK REVIEW

Lorle Porter, *Roscoe: Generations-Regeneration* (Coshocton, Ohio: Roscoe Village Foundation, 1991).

Reviewed by Ronald E. Shaw

Roscoe, Ohio, was a canal town on the Ohio and Erie Canal, situated at the junction with the Walhonding Canal, which went 25 miles northwest toward central Ohio. The Ohio and Erie Canal brought cargoes south from Cleveland and Akron to Roscoe, the first cargo arriving in 1830. The canal was completed to Portsmouth on the Ohio River in 1832, and the Walhonding Canal opened in 1841. Triple locks brought the Walhonding Canal down to Roscoe's lower basin, from which double locks led into an aqueduct on the Ohio and Erie Canal crossing the Walhonding River. The Ohio and Erie Canal paralleled Whitewoman Street, and behind it on the western side was Roscoe Village.

Readers of *American Canals* will most likely be attracted to this book for its account of Roscoe as a canal town, now partially restored along with a watered section of the Ohio and Erie Canal. A canal boat has operated on a short section of this waterway since 1971.

The scope of this volume, however, is broader than Roscoe's canal years. Lorle Porter begins her history of Roscoe with its first settlement in 1816 at the junction of the Walhonding and Tuscarawas rivers, where they join to form the Muskingum River. She follows local and national events through the changes that came with the railroads, the Civil War, and the 20th century. The first two chapters describe Roscoe as a canal town, and canal life appears only intermittently in the later chapters. Roscoe declined after the Civil War, and it lost out to Coshocton, on the other side of the Muskingum River. However, it is in the period from the 1880s to 1913 that "Captain" Pearl R. Nye ran his canal boat from Roscoe and became celebrated as a canal historian and collector of canal songs.

The focus here is on the inner life of a canal town rather than on the two canals which stimulated Roscoe's growth. One must search here for information on the short Walhonding Canal. The author has given personal detail on Roscoe families such as the Medberys and the LeRetteils and their daily activities. But the relationship between local and national events is especially notable here. Porter's style is informal, and she has drawn from family records, local archives, newspapers, and secondary sources for her material.

The rebirth of Roscoe Village as a restored canal town is the final subject of the book, taking one-third of the text. The restoration movement originated in Coshocton, and was led by Edward E. and Frances Montgomery, Jay Shaw, and Seward Schooler. It was largely their efforts that produced the restored village which attracted 210,000 visitors in 1988. Their efforts were channeled through the Coshocton Foundation and the Montgomery Foundation, and they drew on Colonial Williamsburg for a model. Since 1980, the Roscoe Village Foundation has managed the restored Roscoe buildings and operations, and this foundation published the present volume. Thus, this account of Roscoe's history is also a discussion of the issues of historical preservation and the operation of a successful historical enterprise.

This book is more than a handbook to accompany a visit to a restored canal. It offers a longer perspective on the life, decline, and revival of a canal town. The book can be ordered from the Roscoe Village Foundation, 381 Hill St., Coshocton OH 43812, for \$18.95 plus \$3.50 for shipping.

LIFE ON THE PANAMA CANAL

[Editor's note. There has been a rash of articles in boating magazines recently about the problems involved in keeping pets on board. Mention has been made, for example, of loading a pair of weimaraners into a dingy and rowing them ashore for routine calls of nature. On the other hand, life aboard can be desolate without the companionship of other living things. One denizen of the Panama Canal may have found the ideal solution. This report, written by Suzanne Dempsey, was brought to our attention by alert reader William E. Trout III. It is reproduced through the generosity of The Panama Canal Spillway.]



Capt. Karl Marohl gives his pet tarantula, Clancy, a friendly tickle on the belly.

Life can be lonely at times, especially when your office is tucked away beneath the cold stark shadows of a giant crane that is usually moored off the Dredging Division in remote Gamboa. Yet, Cap. Karl Marohl, chief of crane operations, is spared the sting of true isolation because he shares his desk with a furry, although not exactly cuddly, pet—a tarantula by the name of Clancy. The Spillway recently ventured aboard the *Hercules* to find out about the three-inch-long spider in an exclusive interview with its owner. The results are reproduced below:

Spillway: How did you and Clancy first meet?

Marohl: Shortly after my scorpion companion of many years passed away, some of the *Hercules* crew members were working on an island in the Chagres where there were a lot of tarantulas. Seeking to appease my grief and solitude, one of them, Clarcencio Buckley, caught the best-looking one and brought him back for me.

Spillway: How would you describe Clancy's temperament?

Marohl: Normally he's very docile, but every now and then, especially after his bath, he gets in a bad mood and starts jumping up and down, rearing up on his hind legs and scaring any visitors who may be in the office. He doesn't like his bath at all.

Spillway: What kind of cuisine does Clancy enjoy?

Marohl: He thinks grasshoppers are okay, though he prefers cockroaches. But his favorite delicacy is water bugs, the kind that live in the lock fenders.

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William H. Shank, editor and publisher. *American Canal Guides*,

William E. Trout III, editor and publisher.

Spillway: How does Clancy react when the *Hercules* is on a job?

Marohl: He seems to enjoy it. He knows that when we're on the move we're usually going to the locks. And that means water bugs for lunch.

Spillway: Does Clancy have any hobbies or interests?

Marohl: Just scaring visitors and occasionally shedding his skin.

Spillway: What would you say you and Clancy have in common?

Marohl: Nothing really, it's more a case of opposites attracting. I'm very sociable and I like to go out to the beach, ride my motorbike, that kind of thing. Clancy, on the other hand, keeps pretty much to himself. He tends to stay home a lot.

ON THE MISSISSIPPI QUEEN



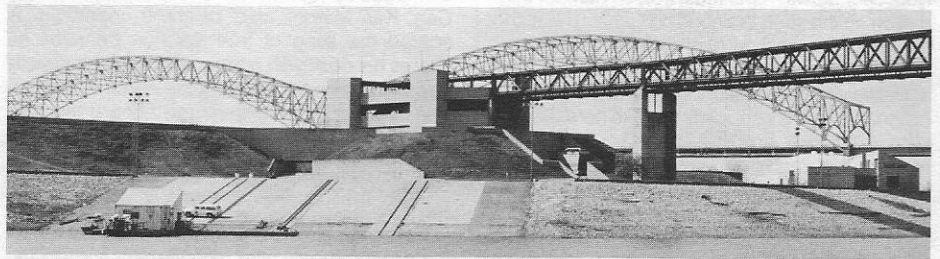
The Captain's Dinner Party guests pose on the elegant stairway leading to the grand saloon and restaurant. Front row, left are Captain Keeton and his wife. Directly behind Mrs. Keeton is Bill Shank, who was her dinner-companion.

(Concluded from Page One)

The huge paddlewheel (36-feet wide by 22-feet in diameter) at the stern of the boat provides adequate power, upstream and down, to drive the 382-foot long by 68-foot wide steamboat, and in- and out of each port-of-call along the river. At Baton-Rouge we tied up at a floating dock, with gangplank, but elsewhere we used the ship's own gangplank suspended from a crane at the bow.



As we left every port-of-call, day or night, the Callope on the stern of the "Mississippi Queen" tuned up for a concert to the local citizens. The operator can be seen at the console of the steam organ in the lower right foreground.



Mud Island Museum at Memphis, from the deck of the "Mississippi Queen". (See Issue No. 77 of A.C.)



A view of the "Mississippi Queen" tied up at Vicksburg, Mississippi taken by your correspondent (stern view). Some idea of the tremendous size of this ship can be gained from this view. The vessel draws only eight feet of water, ideal for the sometime shallow channel of the river.

At each major shore stop we were offered bus tours, which were well organized and educational. I had no idea of the importance of the Battle and siege of Vicksburg, where the Confederate garrison held out for 47 days against the onslaught of Yankee forces, from both upstream and down.

The Vicksburg battlefield is almost as large and well documented as the Gettysburg battlefield. The day Vicksburg surrendered was the same day as the disastrous Pickett's Charge at Gettysburg! Below the battlefield we found the well-preserved remnants of a Yankee "Ironclad" which had been blasted and sunk in the river by the Confederate guns and dug up again just a few year ago.

Natchez is a beautiful city with many ante-bellum homes there in the style of "Gone With the Wind" mansions. At Baton-Rouge our memory of the colorful careers of the late Huey Long and his brother, Earl Long, were brought back to life for us by well-informed tour guides. The State Capitol is an imposing building, with a statue of "The Kingfish" dominating its near-by gardens.

At New Orleans, I ignored the new and elegant trolley-car running along the harbour-front in favor of the nearly century-old St. Charles Street trolley car line, which, with its many operational cars, looks, feels, sounds and rides like the many old cars I remember riding in Pennsylvania as a young boy. Talk about nostalgia—you have it here in large doses; I rode to the end of the line, and it only costs a dollar one way!

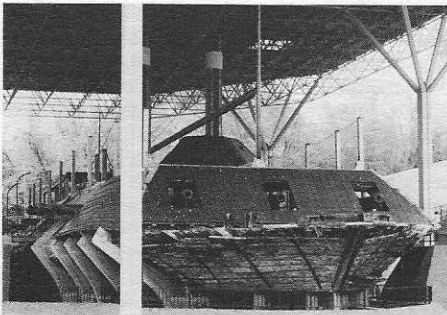
I think I made a lot of friends for the American Canal Society on board the M.S. I was even invited to the Captain's reception and dinner one of the last nights on board, as was also Harry Adamson. I left much canal propaganda with the executive officer for the ship's library. I recommend this trip highly for any canal or river buffs who want to see any part of the Mississippi and its tributaries, from the deck of a steamboat. Write Delta Queen Steamboat Company, Robin Street Wharf, New Orleans, LA 70130. Allow plenty of "lead time"; the Captain's wife told me most of their trips are sold out two year's ahead.!

TRIALS AND TRIBULATIONS

(This is another in our series of reports on legal cases involving canals, contributed by A.C.S. Vice President McKelvey. This one was heard in the New York Supreme Court in 1869.)

CORNELIUS D. HICKS VS. ROBERT C. DORN, SUPERINTENDENT OF CANAL REPAIRS

On the 19th of May, 1865, the defendant was superintendent of canal repairs, in charge of section two of the Erie canal, including the portions thereof hereafter mentioned, under instructions from the canal commissioners to act promptly whenever a break occurred, and restore the canal to a navigable condition as speedily as practicable, at all hazards. At Visscher's Ferry the canal runs nearly east and west. On the northerly side of the canal was a basin, forming part of the canal itself, covering about half an acre. At the northerly point of the basin were two lock-gates, belonging to the State, separating the basin of the canal from a dry dock, covering about a quarter of an acre, the private property of one Alexander Sherman, into which boats were taken from the canal for repairs. These lock-gates opened southerly into the canal. On the easterly side of Sherman's dry dock he had a waste-weir for letting off surplus water. A short distance west of the dry dock was a culvert, under



A Union "Iron-Clad" Warship, sunk by Confederate canons at Vicksburg, and recently raised from the mud of the river bottom. Now on display at the Vicksburg Battlefield.



"End of the line" for the St. Charles Street Trolley Cars, on the outskirts of New Orleans. Several dozen of these cars have been running constantly since the early 1900's, bringing commuters into the city.

the canal, the property of the State, through which, from the north, a creek, called Stony creek, ran into the Mohawk river, southerly of the canal. The lock-gates owned by the State were used as a waste-weir to let off the water from the canal, which passed into the dry dock, and out of that through the gates thereof belonging to its owner, into a ravine, through which it ran into Stony creek, above the culvert. The creek was of considerable size, and above the culvert fell rapidly. The State kept no one in charge of the lock-gates, but they were opened by Sherman and those in his employ, to let boats from the basin into the dry dock, they immediately thereafter closing them again. On the 18th of May there was a severe spring rain, which raised the water in the river, creek and canal, creating a freshet, filling the canal so that the water ran over its banks. This was the condition of the river, the creek and the canal, on the 19th of May. Two or three days previous to the 19th, the plaintiff's canal boat, the "G.W. Ganung," had been thus run from the canal into this dry dock for repairs. On the 19th of May the canal was in a navigable condition the whole length thereof, and a large number of boats were navigating it. On that day, when the canal, the creek and the river were in such a swollen condition, the canal lock-gates were opened by Sherman's men in charge of the dry dock, and the captain and crew of the plaintiff's boat commenced running her, stern foremost, into the canal. When she was nearly half way through the gates the waste-weir and gates of Sherman's dry dock suddenly gave way, creating a large breach in the bank thereof, in consequence of which the water ran rapidly out of the dry dock, and of that—a three mile level of the canal. This left the boat between the open gates of the canal resting upon the miter sill. She was about 95 feet long; about 45 feet lay in the basin of the canal and the remainder of the dry dock. The lock-gates of the canal could not be closed and navigation thus resumed until the boat was removed. The defendant was notified of the break, and arrived on the ground about nine o'clock in the morning. He examined and deliberated upon the situation, and upon the several modes of restoring the navigation of the canal. Four methods were possible: 1. To dam up the culvert under the canal, so

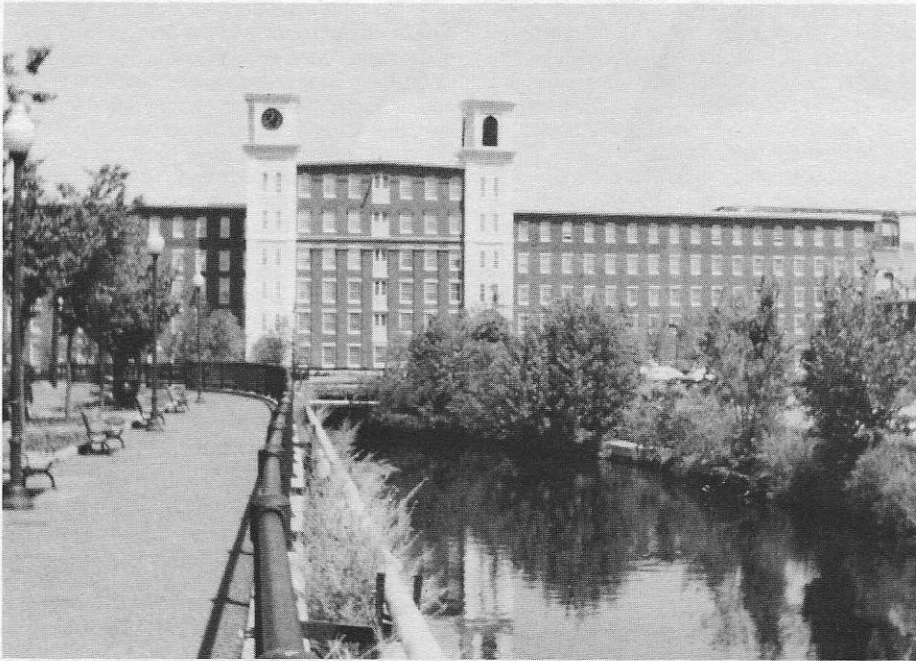
as to raise the water above it high enough to set it back up the ravine into the drydock and level of the canal, deep enough to float the boat. This would have been only an experiment, and, if successful, would have been fraught with danger to the canal. 2. By repairing the banks of Sherman's dry dock, which might have been done in two days, so as to have permitted sufficient water to have been let into the canal and dry dock to float the boat out of the gates, so they could be closed, and navigation resumed. 3. By building a coffer-dam in the basin of the canal, around the stern of the boat, which could have been done in two or three days, at a cost of \$900, and \$250 to \$350 for removal. 4. By cutting out of the plaintiff's boat a piece thereof of sufficient length to enable him to close the gates between the canal and the drydock, and let the water into the level, which could be done in about twelve hours. This involved the destruction of property, the value of which did not much exceed the expense of restoring navigation in either of the other ways. The defendant, in good faith, exercised his judgment and discretion in the premises, and in good faith determined that the best method of restoring navigation was to cut out of the plaintiff's boat a piece large enough to enable him to close the gates of the lock. He ordered it done, and it was done, without any want of care in the act of severing the boat; the pieces cut out being just long enough to allow the gates to be closed. The injury done to the boat was no greater than the act necessarily involved. Every day's delay in restoring navigation caused great damage to the State and to persons navigating the canal. The plaintiff's boat grounded in the gates of the lock, without any fault or negligence on the part of the plaintiff or his servants or agents; and he was not notified to remove the boat, and no time or opportunity was given him to do so. No evidence was given on the trial that at or prior to the time the defendant commenced cutting up the boat the plaintiff, or his servants or agents, had commenced removing it from between the lock-gates, or had taken any steps to do so, or that when the defendant commenced removing it they designed to or would do so The referee assessed the plaintiff's damages at \$1500, and interest from the time of cutting up the boat. As a conclusion of law he held the defendant liable, to which he excepted, and on the entry of judgment appealed therefrom to this court. [The court upheld the decision of the referee.]

LETTER TO THE EDITOR

In September 1989, I published, in the *Indiana Magazine of History*, "Through Indiana by Stagecoach and Canal Boat: The 1843 Travel Journal of Charles H. Titus" (vol. 85, no. 3, pp. 193-235). I cited William H. Shank's very helpful *The Amazing Pennsylvania Canals* (York, Pa.: American Canal and Transportation Center, 1960, 1973) among my sources.

As a new member of the American Canal Society, I have just noticed Shank's "Publisher's Comment" in no. 79 of *American Canals*, regarding Bill Dzombak's learned analysis of the physics of the towing process. In journal material that I am now editing for book publication, Titus offers support for Shank's guess that captains "would look for point 'X' on their particular boat to attach the towline." He says, among other details, that the lines were attached 12 or more feet from the bows in order to keep the boats straight as they were pulled along. George P. Clark, 7507 Colson Drive, Louisville, Ky. 40220

LOWELL, MASSACHUSETTS: RESTORING A CITY OF CANALS



The restored Suffolk Mill building, originally built in the 1850s. Power canal in foreground runs into it and turns turbines.

by Bruce J. Russell, Contributing Editor

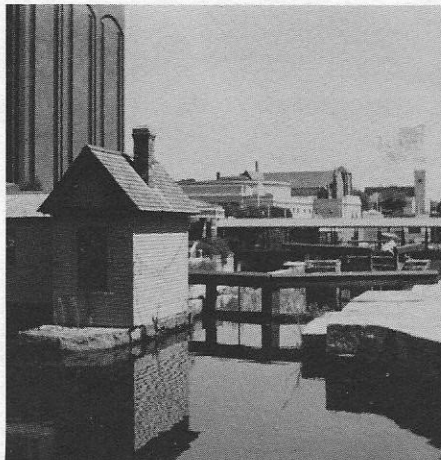
Situated 30 miles northwest of Boston, on the Merrimack River, Lowell was once one of America's foremost industrial cities. Textiles were its mainstay, and during the Civil War, uniforms for the Union army were produced by the hundreds of thousands. Enormous multistory brick buildings dotted the landscape, and the sound of countless looms and knitting machines could be heard from 6:00 a.m. until dusk. Laborers toiled at their looms 12 or more hours a day, and the sight of minor children working alongside their parents was a common one.

Labor was also provided by young women who had been raised on nearby farms and were sent to the mills to earn income for their families. Their lot was not an enviable one. After they had finished their long day of work, the women, some less than 16 years of age, retired to company-owned dormitories and boarding houses where conditions were more akin to reform schools than places of domicile. This was the "Lowell System," and represented the darker side of America's emergence as an industrial power. By the middle of the 19th century, feminist notions had begun to develop among the intellectuals of New England. Opposition to the idea of subjecting young Yankee maidens to such degrading conditions took root, and fewer and fewer applied for work in the mills.

Nevertheless, the need for labor continued, and the firms began to look overseas. Waves of immigrants came to work in Lowell for wages that allowed a bare bones existence. In the 1850s they originated in Wales and Scotland, but a decade later a majority were impoverished Irish peasants. Still later in the 19th century, eastern and southern Europeans streamed into Lowell to labor in the textile mills. Prosperity for the owners lasted until the end of World War I, after which the manufacture of clothing, shoes and hats began to shift to the Carolinas and farther south, primarily to avoid the wage demands of increasingly unionized New England workers.

Throughout the 1920s, closures occurred, and the once-busy mills became deserted. People left Lowell, and parts of the city began to take on the appearance of a ghost town. Many of the grandiose mansions of the "textile barons" were sold and subsequently converted into rooming houses. What had earlier happened to New England whaling centers, as petroleum replaced sperm oil, began to occur throughout the Massachusetts textile region. The Great Depression began in Lowell years prior to its appearance in the rest of the nation. By 1930, over two thirds of the multistory brick mill structures were permanently boarded up, with the sign "NO WORK" posted outside. Economic stagnation continues today, with many poor people inhabiting once-prosperous neighborhoods.

Lowell industries continued to rely on water power for decades after the development of the steam engine. The city's location on the swift-moving Merrimack River allowed the digging of



One of the gatehouses, containing mechanism for controlling water, and adjacent lock chamber to permit vessels to descend to lower levels. Restored during the 1980s from old plans and diagrams.

power canals which brought water directly to the sites where mills were constructed. Water wheels and eventually turbines were placed where canals ran through basements of the factory buildings; gears and belts carried the rotary power to the machines on each of the four or five floors above. The Pawtucket Canal, dug in the 1830s and subsequently enlarged, drew water from the Merrimack and fed it to the multitude of power canals through an intricate system of guard locks and sluice gates. In addition, the Pawtucket Canal, unlike its tributaries, was a navigable waterway. Raw materials could be transported into the city and finished products removed aboard barges.

All the water diverted from the Merrimack was returned to it after being used for manufacturing and transportation. The system exhausted no natural resources and caused no pollution. Only when electric power became an economically feasible alternative did the canals and turbines begin to be abandoned. Electricity had the great advantage of flexibility, with each machine being independently powered. In addition, the system of fast-turning shafts moving thick leather belts was inherently dangerous. Many workers were killed or maimed after becoming entangled. It was impossible to stop a machine except by disengaging a belt or shutting down the entire factory. However, even after the introduction of electric motors, many of the mills retained their turbines and some belt-driven looms well into the 20th century. If power outages occurred, turbines could be reactivated and limited production continued.

Lowell's last mill went out of business after World War II, and the city languished through the 1950s, 60s, and 70s. Hispanics replaced earlier European immigrants, and poverty replaced affluence. A scheme to dynamite most of the remaining mills and create vast open spaces was proposed during the 1970s by the Commonwealth of Massachusetts as a means of doing away with an eyesore standing in the way of possible urban renewal. However, a number of people interested in industrial archaeology began to organize a coalition to prevent this from happening. They were aware that Lowell, with its unique canal system, symbolized Yankee ingenuity at its best, and believed that what was left should be retained and restored, if possible. Their argument was simple: a story exists in this old mill town, and future generations need to hear it told through actual contact with all of its elements. What better way to do this than to make Lowell a living museum of mid-19th century New England and American industrial life and technology? To them, Lowell was a city run by water power transmitted through man-made canals—there was none other like it in the United States. Ultimately, they convinced both the Massachusetts and the federal government that it would be reckless and irresponsible to demolish all this simply to create downtown parking spaces and fast-food restaurants.

The canals were weed-grown and filled with garbage, the mills were deteriorating firetraps, and the turbines were rusted hulks, but if enough dollars were spent, they could be restored. In effect, the scheme was to turn a poor city into an urban park, where the story of New England textile manufacturing could be told through interpretive exhibits and rebuilt structures including canals, locks, sluice gates, turbines, and other kinds of machinery. Eventually, the Governor of Massachusetts and enough legislators saw the wisdom of revitalizing Lowell, and all plans for demolition were shelved in favor of an ongoing restoration in the heart of the mill district and the major navigational and power canals connected

to it. Initial efforts were aimed at stabilization, to prevent further deterioration; following that, a complete master plan could be formulated. The ultimate goal was a recreation of Lowell's core as it was in the 1860s, when water rather than steam or electricity kept the wheels of its machines turning. In addition, the entire story of textiles would be told as well as that of immigrant and child labor. There would be exhibits on dyeing fabric and stitching it into shirts, pants, and other items. Looms of various types would be described as well as the design of various kinds of water-powered turbines and gears. Belt drives and bobbins were likewise to be explained, so a visitor might gain a complete knowledge of what went on in Lowell over a century ago. Industrial archaeologists from the Smithsonian Institution provided valuable expertise, sometimes furnishing rare photographs and blueprints from their extensive collections. The ultimate goal was historical accuracy rather than a "theme park" type of setting.

By 1980, the Lowell National Historical Park and the Lowell Heritage State Park had been created, the former under federal auspices and latter administered by Massachusetts. Funding from both federal and state levels was therefore assured. Since this time, the National Park Service has been responsible for the actual running of the park, and uniformed rangers conduct a number of informative tours. Initially, there wasn't much to see, since Lowell was a virtual shambles after decades of neglect, but during the past 12 years a great deal has been accomplished. Guard locks, gatehouses, canal walls, and other features of 19th century Lowell are again in working condition. The Suffolk, Boott, and Market multistory mill buildings are fully or partially rehabilitated. Furthermore, at least one power canal and its turbine can be seen, and ultimately it will be set up actually to run several looms. Enormous research, including locating original plans, made these restorations possible. Much more needs to be done, but an excellent start has occurred. Lowell each year attracts many visitors, and is included in the itineraries of



Mechanism for controlling flow of water on one of Lowell's canals.

specialized tours of 19th century industrial America. The guest register at the visitors' center shows names and addresses from all over the world.

A boat ride is offered on the Pawtucket Canal, which takes visitors past old mill buildings, both restored and awaiting refurbishment as funding becomes available. A trip through a working lock is also featured. The park ranger explains how a lock functions as well as what the rôle of a gatehouse was. Diagrams given to the passengers show the layout of Lowell's canals, and how the water was diverted to each mill. In addition, visitors to the "Spindle City," (as Lowell was called,) can take a trip on a replica 1903 streetcar, which also passes historic sites. This line is at present being extended. A visitors' center is situated in the partially restored Market Mill complex, and here one can see films and view displays of life in old-time Lowell. A book store offers a wide range of titles

relating to canals, industrial archaeology, and the textile industry. An award-winning slide show, "Lowell: The Industrial Revolution," can also be seen. At the restored Boott Mill, there is now a room filled with 90 operating looms which were powered by water. In the mid-19th century, all of this was considered high tech.

The canal enthusiast will enjoy a trip to Lowell, including a ride on the Pawtucket Canal. Cruises operate in July and August. The two-hour Sunset Cruise is especially recommended.

LETTER TO THE EDITOR

I agree with Bill Shank's comments on mule-towed boats. [See William Dzombak, "Mule Power Force Analysis," and the following "Publisher's Comment," in the November 1991 issue (no. 79) of this bulletin.] As per Captain Frank H. Godfrey, *The Godfrey Letters* (Syracuse: Canal Society of New York State, 1973), tow ropes were 225 feet long and 5/8" in diameter. This would have greatly reduced "towline torque" by reducing the angle to the bank. The mule towline (towpath line) was frequently attached to a deck cleat 1/4 to 1/3 of the length of the boat back from the bow. This is evident in the view at the top of page 50 in Harry L. Rinker, *The Old Raging Erie . . . There Have Been Several Changes* (Berkeley Heights, N.J.: Canal Captain's Press, 1984), on page 87 in Thomas F. Hahn, *Chesapeake and Ohio Canal Old Picture Album* (Shepherdstown, W.Va.: The American Canal & Transportation Center, 1976), and on page 30 in Thomas F. Hahn, *The C. & O. Boatmen, 1892-1924* (Shepherdstown, W.Va.: The American Canal & Transportation Center, 1980). On both the Morris and the Delaware/Lehigh canals, a towing post about 4' high, about 8 to 10' back from the bow, and offset from the centerline of the boat, was commonly used.

— Bill McKelvey

HELP WANTED! CANAL EXPERTS PLEASE APPLY

Readers of this journal have long been aware of the endangered status of Wisconsin's historic water route between Lake Michigan and the Mississippi via the Fox River, Portage Canal, and Wisconsin River. An item on page 2 of our May 1991 issue (no. 77), for example, informed readers that the Corps of Engineers was in the process of extricating itself from an agreement to rehabilitate the Wisconsin River lock on the Portage Canal as part of a flood control plan for the city of Portage.

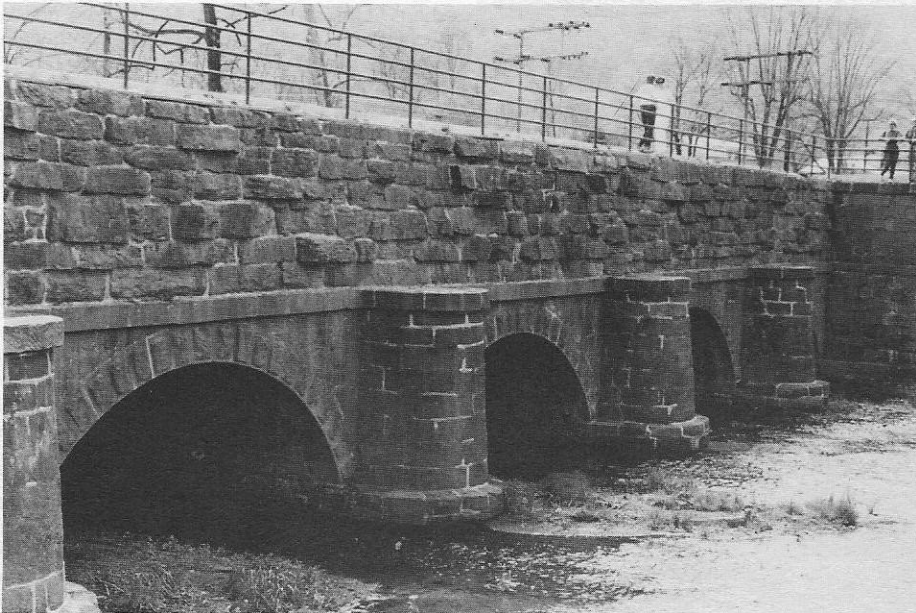
Plans have now reached the stage where two structures are under consideration for placement at the confluence of the canal and the river. One is a "LARGE BOX CULVERT." The proposal states that "Placement is to minimize the negative visual impact of having landlocked the canal." The other is a "NARROW GATED STRUCTURE," whose placement is "to minimize intrusion into residential sector as well as visual impingement on the historical context of the lock . . ."

The Portage Canal Society is unsure how to respond to these proposals. Has any reader had experience with these types of structures? What was the impact on the area? Favorable? Unfavorable? Give details. Please respond to Frederica Kleist, executive secretary and vice president of the Portage Canal Society, 528 West Cook St., Portage WI 53901, or to *American Canals*.



Restored lock chamber and gates in Lowell.

TOURING THE UNION & SCHUYLKILL WATERWAYS



Restored Allegheny Creek Aqueduct at Gibraltar, below Reading.

By Bill Shank

Forty-one members of the Pennsylvania Canal Society from five states convened May 1-2, 1992 at the Riveredge Motel in Reading, Pennsylvania for their regular Spring Meeting and a tour of the eastern section of the Union Canal and the central section of the Schuylkill Navigation.

One of the high spots of the tour was a visit to the new Howard Hiester Canal Museum, near the Reading Airport, which included a professionally assembled and documented canal collection acquired over many years by Howard Hiester, plus a restored covered bridge, two partially restored locks on the Union Canal, a simulated canal boat and a restored wagon works.

Most of our time was spent on the Schuylkill north and south of Reading. The Schuylkill was primarily a slackwater navigation with a series of dams and locks creating a series of pools deep enough for the many canal boats bringing coal from the coal region near Pottsville to Philadelphia. Here and there short canals connected these navigation pools in the river, each having its own name and identity. Many of the dams on both the canals and the slackwater portions are still capable of holding back water. Therefore many miles of the river are still navigable for small boats and canoes, and as a source of water for municipal use.

Our tour included the restored (and rewatersed) Aqueduct across Allegheny Creek; a restored Lockhouse adjacent to doublelocks 36 and 37 at Leesport; Felix's Dam and Lock #42; and the flight of Locks (Numbers 52 and 53) at the Laurel Lock Farm near Pottstown.

At the Friday evening session Tour Director Robert Keintz ran a slide show of points of interest on our Saturday tour. Saturday evening, after a satisfying banquet, PCS President Jim Oliver presided over the meeting and told of future plans for the Society.

Bill Shank, First Secretary of PCS, gave a short talk on the events leading to the formation of the Pennsylvania Canal Society in the summer of 1965. Doris Roberts then presented a slide review of a recent tour of the English Canals in which a number of PCS members had participated.

The Union Canal had the distinction of being

the first canal route ever surveyed in America. The approximate route for the Union Canal was first conceived by William Penn. Having laid out Philadelphia in 1682, which became the country's first great seaport, Penn issued proposals for another city in 1690 as follows:

"It is now my purpose to make another settlement upon the river Susquehanagh . . . which will not be hard to do by water by benefit of the river Scoullkill, for a branch of that river (Tulpehocken Creek) lies near a branch that runs in the Susquehanagh River (Swatara Creek)."

In 1762 David Rittenhouse, the astronomer, and Dr. William Smith, provost of the University of Pennsylvania, made surveys over Penn's route from Reading to Middletown.

In 1792 two companies were chartered by the State of Pennsylvania to build a navigable waterway between the Schuylkill and Susquehanna, improve the Schuylkill, and build a canal from the Delaware to Norristown. By 1794, the companies

had completed 15 miles of work, and had spent \$440,000, which exhausted their funds, and the work ground to a stop.

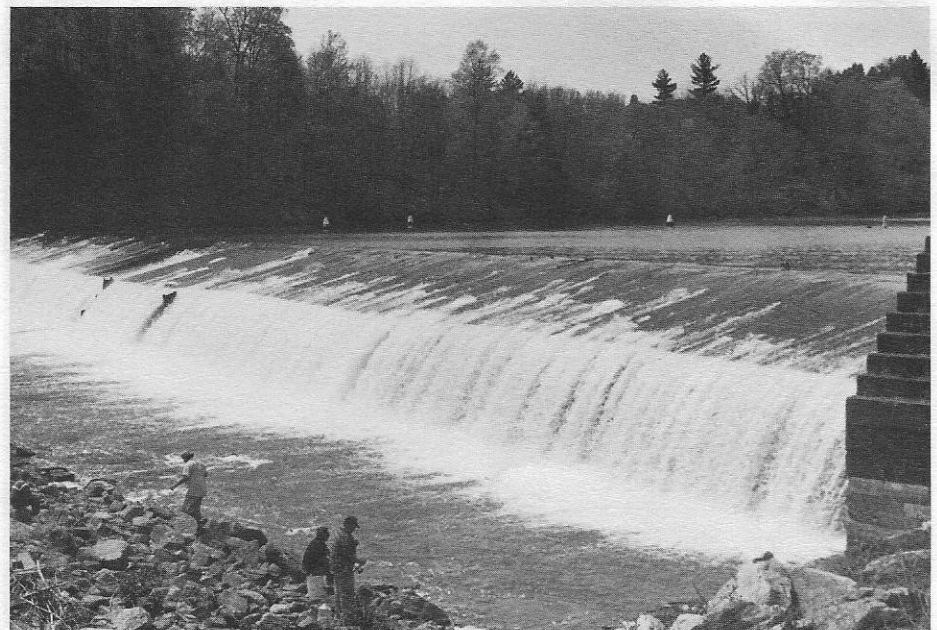
In 1815 by act of the Pennsylvania legislature, the "Schuylkill Navigation Company," was chartered to complete the work on the Schuylkill River. The portion of the Schuylkill which was made navigable extended from Port Carbon to Philadelphia, a distance of 108 miles. Of this route, 62 miles were by canal, and 46 miles by so-called "slack water navigation pools" in the river itself, formed by a series of dams passed in each case by locks. Between Port Carbon and Philadelphia there were 92 lift locks to overcome a 588-foot difference in elevation.

The Schuylkill Navigation Company continued to operate from 1825 until 1870 when it was sold to the Philadelphia and Reading Railroad Company, one of its largest customers. Under the new management the system continued operations until 1931.

In the meantime the Union Canal Company, whose responsibility had now been narrowed to the route between Reading and Middletown, was offered financial aid by the state of Pennsylvania. The Union Canal was pushed through to completion between 1821 and 1828.



The restored canal channel, running across the Allegheny Creek Aqueduct at Gibraltar.



Felix's Dam on the Schuylkill, still maintaining a deep-water pool above Lock Number 42.



Restored Lockhouse, just south of the flight of Locks, Numbers 52 and 53, at Leesport.

Unfortunately, the designers of the Union Canal had made both the channel and the locks of the canal so narrow that the heavy freight boats and large passenger packet boats, on most of the eastern inland waterways, could not use the canal. Special boats able to carry a load of only 25 to 28 tons were constructed for the Union Canal. The canal proprietors secured permission from the state legislature to widen their channel in 1841 but the enlargement was not actually completed until 1856. The Union Canal was then able to handle boats of from 75 to 80 tons capacity, but the company never recovered from this enormous additional expenditure (\$6,000,000.) and it was finally abandoned in 1885.

BOOK REVIEW

Shi Nianhai, *The Canals of China* (Shaanxi People's Publishing Co. [ISBN 7-224-00060-4], 1988).

Reviewed by Lawrence C. Wei

[*Ex cathedra note.* A.C.S. would like to thank Professor Yang Zhi, until recently the vice director of the Institute for the History of Ancient Civilizations, Northeast Normal University, Changchun 130024, People's Republic of China, for sending us a copy of this book. The contents were a complete mystery until V.C. & N.S. member Mrs. F.B. McIntosh put us in touch with Lawrence C. Wei of the Voice of America. Mr. Wei kindly offered to write this review so that people interested in the history of Chinese canals would know what is available. A.C.S. members who want to use the book should write to me, but be warned that it is entirely in Chinese and there are no photographs. If you don't know Chinese, try instead Lyn Harrington's *The Grand Canal of China* (Chicago: Rand McNally, 1967) or Professor Joseph Needham's more scholarly coverage in vol. 4, part 3 of *Science and Civilization in China*. —Bill Trout]

The Grand Canal and the Great Wall of China are two monumental works built by human labor that have fascinated people of the world for centuries. Author Shi Nianhai's voluminous and scholarly Chinese-language book is heavily documented with footnotes and historical records, making it a good source book for academic research, but difficult reading. Mr. Shi states in his postscript that this is the revised edition of a book originally published in the 1930s. Since the book provides no biographical data, we have no way to know the author's background.

The author takes a historical-geographical approach to delineate, dynasty by dynasty and segment by segment, the beginning, the extension of the various smaller local canals, and the final completion and subsequent decline of the Grand Canal of China. The maps included are far from perfect. Harrington's book, illustrated with photographs and maps, is a much shorter work, but it conveys a concise and clear picture of the history and the recent condition of the Grand Canal.

CANAL CALENDAR

June 1-7. Canadian Nature Tour: Lakes, Loons, and Locks. A week on a houseboat in the Peterborough area with two naturalists. \$825 to Federation of Canadian Naturalists, 355 Lesmill Rd., Don Mills, Ontario M3B 2W8, Canada.

June 6. Dinner cruise on the Lehigh Canal on board the mule-drawn *Josiah White*. \$21. Information and reservations: 215 250 6700.

June 7. Historic Perspective Walk, 1:30 p.m., beginning at 705 Main St., Freemansburg PA. Free

June 9-30. U.S. Canal Tour of the British Inland Waterways Association (details in previous special mailing - May 1992.)

June 13-14. Canal Film Festival Weekend. Old Santee Canal State Park, 10 to 5 each day, Saturday and Sunday. No fee. At the Interpretive Center. 900 Stony Landing Rd., Moncks Corner SC 29461, phone 803 899 5200.

June 13-14. Canal Society of New Jersey will be host to the Inland Waterways Association tour group from England. Bill Shank will tell the group about the Pennsylvania Canals. The Lehigh, Delaware and Raritan, and Morris canals will be visited, among other activities. For information: Linda House, 214 N. Bridge St., Somerville NJ 08876.

June 13-20. Annual James River Batteau Festival, 140 miles from Lynchburg almost to Richmond, with festivals every evening at river towns. Write for flyer to J.R.B.F., P.O. Box 790, Columbia VA 23038.

June 20. Joint meeting of the (British) Inland Waterways Association, Canadian Canal Society, and American Canal Society, Radisson Hotel, 4345 Genessee St., Buffalo NY, 10 a.m. through dinner. Ample opportunities for informal discussions and an afternoon symposium.

June 20-21. Old Market Day festival of the Old Freemansburg Association. Banks of the Lehigh Canal near the lockhouse in Freemansburg, 9 to 5 each day. Arts and crafts, historical exhibits, demonstrations, refreshments, musical entertainment, and children's games.

June 26. The Erie Canal Museum and Mid-Lakes Navigation Company will sponsor a pig

roast to welcome the touring members of the Inland Waterways Association. 7:00 p.m. at the Canal Center at Cedar Bay Park, Dewitt NY.

June 27. Dinner cruise on the Lehigh Canal (see June 6 entry above for details).

July 1. 2nd \$500 installment due to Canal Society of New Jersey summer 1993 tour of canals of southern France. Send to Bill McKelvey, 103 Dogwood Lane, Berkeley Heights NJ 07922.

July 11. Canal Festival: arts, crafts, music, canal boatmen's reunion, live entertainment, boat rides, etc. 10 a.m. to 6 p.m., Hugh Moore Park, Easton PA.

July 11-19. Canal Society of New Jersey field trip of "The Canals and Navigations of Virginia." Estimated cost, \$600 to \$800. Deposit of \$300 to Linda House, 214 N. Bridge St., Somerville NJ 08876.

July 18. Dinner cruise on the Lehigh Canal (see June 6 entry above for details).

July 21. "Rails along the Delaware & Raritan Canal," lecture by Capt. Bill McKelvey at Liberty State Park in Jersey City NJ. For information: 201 915 3411.

August 1-2. Canal Days '92 at the Welland Canal Historical and Marine Museum, 280 King St., Port Colborne, Ontario. Arts and crafts, remote-control model boats, food, music, etc. 11 a.m. - 5 p.m.

August 15. Dinner cruise on the Lehigh Canal (see June 6 entry above for details).

August 16. History walk: Lehigh Navigation. 1:30 p.m., Hugh Moore Park, Easton PA.

September 19. Annual Batteau Day in Fennedale Park on the Upper Appomattox Canal, across from Matoaca near Petersburg, Virginia. Batteau trips for everyone. Petersburg Department of Tourism, 804 733 2402.

October 19-21. The Fifth International Conference on Historic Canals, Cliffside Inn, adjacent to Harpers Ferry National Historical Park, Harpers Ferry WV. Preregistration prior to June 15 is recommended, as participation is limited to 110: send name, address, work station, and phone number to the conference c/o C&O Canal National Historical Park, P.O. Box 4, Sharpsburg MD 21782. Persons interested in presenting papers should call park ranger Gordon Gay or John Frye at 301 739 4200.

The two books offer basically the same historical facts. The first segment of the canal, from Suzhou (Soochow) to Tai Hu (lake) was completed around 506 B.C. by King Ho Lu of the Wu State under the direction of Wu Zixu (Wu Tze-hsiü) to facilitate the attack against the Chu State along the Yangtze River. This was followed by the second segment, connecting Suzhou and the lakes around the Huai River northward for 35 miles.

Just as the first emperor Qin Shihuang connected the various segments of the Great Wall built by the rulers of the states during the warring period (475-221 B.C.), the extension and the connection of the canals into one Grand Canal began in the short-lived Sui dynasty (581-618), which reunified China at the end of more than 100 years of turmoil between the northern and southern dynasties.

During the short reign of the two-generation dynasty, two Sui emperors, father and son, restored the southern sectors of the canal and built the northern part to reach Tianjing. Loyang, the Sui capital, is connected with the Grand Canal by the Yellow River. Some five million men were forced to complete this project.

During the reign of Kublai Khan of the Yuan dynasty (1271-1368), the canal was rebuilt and the northern half was extended into the capital, Beijing. It was during Kublai Khan's reign that Marco Polo traveled on the canal.

During the Ming dynasty (1368-1644), the canal was deepened. In addition, 15 locks were installed to raise and lower the boats where the current was strong.

British envoy Lord Macartney arrived in China in 1793 and traveled on the canal. From the 1800s on, the canal suffered neglect and disrepair. Ocean transportation and the building of railroads by foreign powers further lessened the importance of the canal.

After the revolution of 1911 and the establishment of the republic, the country was plunged into civil war and no attention was given to the canal. Since the communist takeover in 1949, the government has made long-range plans to repair the canal. Mr. Shi mentions that he has visited many locations along the canal to observe the current situation and hopes the modernization program will eventually complete the restoration of the glorious Grand Canal.

A LONG STRETCH OF QUIET AND PEACE: JUSTICE DOUGLAS AND THE C&O CANAL



Justice Douglas being greeted by interior secretary Douglas McKay, on arrival at Lock #6, March 27th, 1954. Foreground, left to right: Merlo Pusey, writer of the *Post* editorial that started it all; Douglas; Edward J. Kelly, superintendent of National Capital Parks; McKay; Harry T. Thompson, assistant superintendent of National Capital Parks.

Photo courtesy of National Park Service

By Dave Johnson

"It is a refuge, a place of retreat, a long stretch of quiet and peace at the Capital's back door . . . a place not yet marred by the roar of wheels and the sound of horns." That was how Supreme Court Associate Justice William O. Douglas described the Chesapeake and Ohio Canal in January 1954. The C. & O. Canal has been called "the first national park ever walked into existence." Douglas's description was in a letter he wrote to the *Washington Post*, objecting to that paper's endorsement of a plan to build an automobile parkway on the canal right-of-way. The justice challenged the editorial writer to hike the canal with him. He predicted that if the editor did, he would change his mind and use the newspaper to fight for preservation of the canal. The *Post* accepted this challenge, and the national attention gained by the "Justice Douglas—Washington Post Hiking Trip" of March 1954 ultimately resulted in the creation of the C. & O. Canal National Historical Park.

The C. & O. was born in 1828 during the great national canal-building boom that followed the opening of the Erie Canal. Although it was built and operated by a private corporation, most of the stock was subscribed with local, state, and federal government funds, and the State of Maryland soon became the majority stockholder. The company planned to go up the Potomac valley to Cumberland, Maryland, then cross the Appalachian Mountains into the Ohio River basin. Plagued by construction difficulties, labor short-

ages, cost growth, and legal obstacles, the canal did not reach Cumberland until 1850. Meanwhile, the Baltimore and Ohio Railroad had reached Cumberland eight years previously, and was now within two years of reaching the Ohio River. The canal company, its construction capital exhausted and in debt, suspended plans for westward expansion and settled down to transporting coal from western Maryland mines to tidewater. Following the Civil War, it experienced a brief period of prosperity. During the 1870s, nearly 600 boats delivered almost a million tons a year to the coal docks in Georgetown and Alexandria.

Financial crisis and devastating floods brought an end to the canal's "Golden Age." The flood of 1889 spelled bankruptcy for the company, and with the state unwilling to rescue it, the canal faced abandonment. Instead, it fell under the control of its old rival. The B. & O. Railroad underwrote its reconstruction and subsidized its operation as the most expedient means to keep the right-of-way from a competing railroad. Under B. & O. ownership, the canal continued to operate until flood damage in 1924 resulted in suspension of commerce.

During the depression winter of 1937-38, the B. & O. used its title to the canal as collateral for loans from the Reconstruction Finance Corporation. Then in April 1938, it offered to sell the entire canal to the government for \$2 million, the proceeds to be applied to the R.F.C. debt. The sale was completed in September 1938. The Civilian Conservation Corps then went to work on the restoration of the first 22 miles of the canal, between Georgetown and Seneca, creating a public

park to be administered as part of the National Capital Parks system. The reopened canal immediately became a favorite recreational resource, and mule-drawn barge rides were offered from Georgetown in 1941. World War II and the disestablishment of the C.C.C. ended restoration work in 1942. Following the war, new plans for development focused on the possible construction of a parkway along the entire route of the canal.

The Douglas challenge

On January 3, 1954, an editorial in the *Washington Post* urged the government to proceed with the parkway project. "By utilizing the old canal—no longer either a commercial or a scenic asset—it is estimated that the parkway could be built for \$100,000 a mile." In response, Justice Douglas stated his opposition "to making a highway out of this sanctuary." He went on to enumerate the canal's "fascinating and picturesque" qualities, and threw down his challenge: "I wish the man who wrote your editorial . . . would take time off and come with me. We would go with packs on our backs and walk the 185 miles to Cumberland. I feel that if your editor did, he would return a new man and use the power of your great editorial page to help keep this sanctuary untouched."

Two days later, an editorial headed "We Accept" replied. "We are pleased to accept Justice Douglas' invitation to walk the towpath of the old canal . . . We are sufficiently enthusiastic about it to wear some blisters on our feet, but we do not believe that this backyard wilderness so near to Washington should be kept closed to those who cannot hike for twenty miles a day."

Douglas's name quickly attracted leaders of major conservation organizations who wanted to join the expedition. Eventually, some three dozen were invited to participate. Logistic support was provided by the Potomac Appalachian Trail Club, and arrangements for overnight lodging were made with sportsmen's clubs along the route. The hikers' gear was transported by truck, so they would not be burdened by heavy packs. The National Park Service assigned the chief naturalist of National Capital Parks and park policeman to accompany the group. Meals were prepared by P.A.T.C. volunteers or by the host clubs. The overall coordinator of the hike was Jack Durham of the Wilderness Society.

The *Post* was represented by the author of the editorial, associate editor Merlo J. Pusey, who at 52 was only three years younger than Douglas, and Robert Estabrook, 35, editor of the editorial page. The regular outdoor reporters of the *Post* and the *Evening Star* sent back daily reports to Washington, and *Time* and *Life* magazines and the wire services provided national coverage.

Eight days that shook the capital

The party left Washington on Friday, March 19th, on a special car attached to the B. & O.'s Chicago Express, and arrived in Cumberland for a kick-off banquet hosted by Maryland Senator J. Glenn Beall. (Beall was a strong advocate of the parkway, as were most of the people in Cumberland.) The next morning, under threatening skies, the hike started at Lock 72, bypassing the first 10 miles of the canal. Following picture taking and interviews, 37 hikers started down down the towpath at about 8:30, and it is reported

that 34 reached the Cardinal Club near Town Creek, below Oldtown, the scheduled stopping point for the night.

The second day, Sunday, took the group another 21 miles, to below Little Orleans. The day started with heavy flurries and a stiff wind, and for the first two hours they walked in snow. "Scat" Eaton, the son of a former canal boatman, met them at Paw Paw with a lantern to lead them through the tunnel. They found that much of the original wooden towpath beyond the downstream portal had rotted away. In one place, only a single narrow plank supported by iron pins in the rock wall allowed them to avoid wading in freezing water two feet deep. Farther down, the Cumberland Outdoor Club invited the party in for ham sandwiches and beer. This was greatly appreciated, but since it was only 9:30 in the morning, the break disrupted the day's pace. Two dozen of the original starters checked into the famous Woodmont Rod and Gun Club late in the afternoon for a buffet dinner.

On Monday, the *Post* carried an editorial in which Estabrook and Pusey stated, "we are not at this point in the journey trying to draw final conclusions. We are, however, impressed by the general demand for better use of this natural playground and the obvious eagerness of many people to get away from the pressure, tensions and exactions of city life. Out here the first signs of spring seem far more important than the antics of self-inflated wild men or what Congress does with the tax bill At this point we are torn between a feeling of appreciation to Justice Douglas for luring us into this venture and irritation over the increasingly pathetic condition of our feet."

With weekend hikers back at their desks, a smaller group pushed on for 22 miles on Monday, reaching Fort Frederick. Much of the towpath in this area was heavily overgrown, in some places so much so that they had to walk in adjacent fields, and considerable old flood damage was found. That night the cooks prepared the evening meal over an open fire, and, in 20-degree temperature, they camped out for the first time. Only 15 remained who had walked all the way. Nine others were still with the group, but had hitched rides on the truck for parts of the trip. (This latter group included Estabrook and Pusey.)

The Fourth Day

The fourth day took the group to Falling Waters, below Williamsport, where Lee's army had retreated across the Potomac after Gettysburg. (One of the hikers renamed the location "Falling Arches.") During the day, they met 81-year-old Ezra Bangoff, who told Douglas that he had worked on the canal 66 years before, for 50¢ a day, first as a mule driver and then as a steersman. A school band played as the sore-footed troop passed through Williamsport. They spent the night indoors at the Potomac Fish and Game Club.

Ten hikers still had perfect records at the end of day five, with another 12 "duffers" still in the party, when they reached the Conococheague Sportsmen's Club, a couple of miles below Shepherdstown. Justice Douglas continued to maintain his rapid pace and was among the first three to arrive, after a 24-mile walk in eight and one-half hours. The leaders were reported to be Constant Southworth, 59, and George Frederick Miller, who at 73 was the oldest member of the party. (According to George Kennedy of the *Evening Star*, Douglas would have been ahead, but he had to stop to sign autographs at every road that reached the towpath.)

The next morning, in the rain, they started on what turned out to be the toughest leg of the hike. The 24-mile segment to Point of Rocks included a towpath break near Harpers Ferry, where the

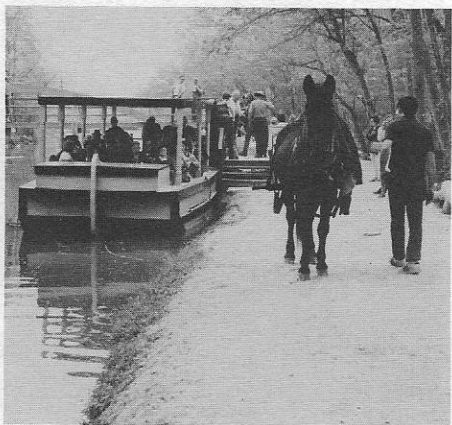


Justice Douglas in the lead on the towpath. (Photo courtesy of National Park Service)

rising river inundated the canal. To pass, they had to climb 150 feet up the steep side of the mountain and clamber along the exposed rock faces. Douglas, who in recent years had hiked 240 miles in the Himalayas, went up the mountainside using grape vines to ease his way for several hundred yards to the point where he could return to the towpath. Twenty-five hikers checked into Camp Kanawha for a steak dinner. Nine were still bona fide every-step-of-the-way hikers.

On Friday, the temperature climbed into the 70s, and, reinforced by weekend recruits, they added another 24 miles to arrive at Seneca in nine hours. They dined that night on buffalo steaks at the Izaak Walton League clubhouse near Poolesville.

That final night, the hikers formed an association to keep alive the friendships created by the experience. To continue the effort to influence development of the canal, they appointed a committee to summarize their conclusions and recommendations. Douglas was named chairman of the



A canal boat loads at Great Falls, circa 1970. (Photo by Bill Shank)

committee, which included Estabrook; Olaus Murie, president of the Wilderness Society and a noted biologist; Harvey Broome, attorney and vice president of the Wilderness Society; Bernard Frank, assistant chief of watershed management research for the U.S. Forest Service and chairman of the executive committee of the Wilderness Society; Howard Zahniser, Wilderness Society executive secretary and editor of its magazine, *The Living Wilderness*; Sigurd F. Olsen, president of the National Parks Association; Anthony Wayne Smith, assistant general counsel of the C.I.O. and member of the executive committee of the National Parks Association; Irston Barnes, president of the Audubon Society of D.C.; George Blackburn, president of the Potomac Appalachian Trail Club; Bill Davies of the U.S. Geological Survey; and Lewis Shollenberger of C.B.S. Radio news.

The next day, Saturday, March 27th, was the triumphant conclusion of the hike. Walking the 18 miles from Seneca, picking up followers along the way, they reached Lock 5 at Brookmont in mid-afternoon, to be greeted by Interior Secretary Douglas McKay. "Justice Douglas, I presume," smiled the secretary. "You've got some wonderful country up there," replied Douglas. "I'm going to write you a little letter." The party then boarded the Canal Clipper to cruise the rest of the way to Georgetown behind the mules Dick and Dinah. Traffic on Canal Road was jammed as the boat passed and a large delegation of citizens was on hand when it arrived at Lock 4. Several canoes followed the barge into Georgetown. One carried signs with the messages "Scratch the Parkway at the Post" and "May Justice Prevail." (Another sign, tacked to a tree, said "Jackasses have traveled this path before.") Douglas told interviewers, "I felt that anybody who'd walk this towpath and see its beauties in the raw would never want to turn it into a highway." He added that he was in favor of access roads and outdoor shelters along the canal to entice more people into the wilderness.

Nine members of the party had hiked all of the way, and became known in modern canal lore as the "nine immortals." These were Douglas, Murie, Broome, Southworth, Miller, Grant Conway, John Pearmain, Colin Ritter, and Al Farwell.

Reaping the harvest

Several days after the hike ended, the editorial page of the *Post* carried "A Report." "We retain the conviction that the valley ought to be opened up. We believe, however, that a compromise is possible which will preserve large areas . . . and still make possible a parkway along some beautiful parts of the valley We think it is possible to develop this resource so that it will serve as a boon to hikers as well as to those whose enjoyment of nature must be limited to a leisurely drive in an automobile."

The following month, Justice Douglas wrote to Secretary McKay, outlining the ideas of the committee assembled on the final night of the hike. The committee proposed that the canal be preserved as a recreational and historical entity within the national park system. As for the parkway, they recommended that it be developed following existing roads where practicable, perhaps at places parallel to, but never on, the canal, and wherever possible on high ground, safe from floods.

Secretary McKay replied, in May, with the significant remark that "I was delighted to find that the suggestions presented by your committee so closely parallel those of this Department in so many particulars. Indeed, it appears that there is complete agreement on the major objectives to be achieved."

(Concluded on Page Twelve)

DOUGLAS AND THE C&O CANAL

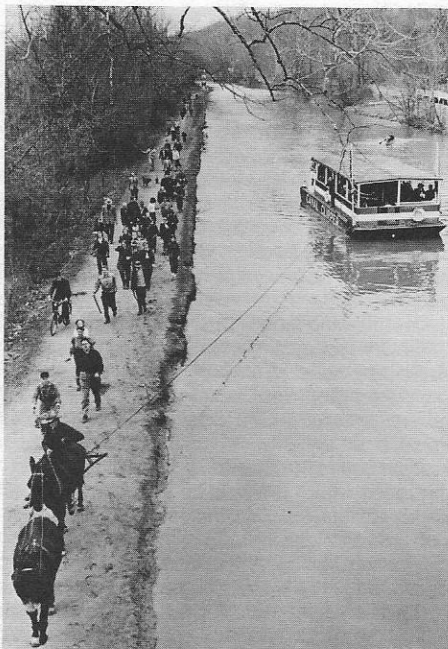
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In 1955, the Douglas hiking party held a reunion. About thirty of the original hikers camped below Paw Paw at the Cumberland Outdoor Club (scene of the previous year's mid-morning beer break), then hiked to Little Orleans, and wound up the weekend with a banquet in Hagerstown. Justice Douglas announced that he hoped to make the reunion hike an annual event, beginning a tradition that has continued to the present time. The following year, they formally organized the C. & O. Canal Association as an expansion of the committee formed on the 1954 hike. The association sponsored the annual reunions and spearheaded the efforts to bring about enactment of the national historical park bill. During the 1960s and 70s, the annual hikes grew into major media events, attracting hundreds of walkers, including senators, members of congress, and cabinet officers, to follow Douglas along a dozen or so miles of towpath each spring, and generating continued public interest and support for a canal park.

In 1956, Interior proposed creation of a national historical park, with a separate parkway away from the canal between Hancock and Cumberland. Legislation to establish the park was introduced that year by Senator Beall and Representative DeWitt Hyde of Maryland. Additional bills were introduced in every Congress through 1970. Most passed the Senate but died in committee in the House. Finally, a bill introduced by Maryland's Senator Charles Mathias and Congressman Gilbert Gude was passed by Congress in December 1970.

The 1971 hike, from Spring Gap to Cumberland, was a victory celebration, because President Nixon had signed the national park bill on January 8th. More than 600 people attended. Douglas, then 72 and with his heart regulated by a pacemaker, walked only about two miles. It was the first time he had not finished the scheduled walk.

For the 20th anniversary in 1974, the association held its first full-distance reenactment of the



Dick and Dinah, followed by a crowd of well-wishers, pulling the Canal Clipper into Georgetown with the hikers on board. (Photo courtesy of National Park Service)



Justice Douglas relaxes on the boat. Estabrook and Pusey of the *Washington Post* occupy the seat ahead of him. (Photo courtesy of National Park Service)

original hike. A complete hike has been held every five years since then. One major change has been the allocation of two weeks in lieu of the eight-day marathon that Douglas led in 1954. The traditional one-day hikes have continued annually, and in the 1980s a fall "heritage hike" was added to the association's program. In addition, the association sponsors many informal walks and other events throughout the year, and has an active Volunteers-in-Park group. Its Level Walker program assigns members to sections of the towpath which they serve as trail stewards. The association, with about 1,000 members, continues to work as an advocacy group to protect and defend the C. & O. Canal.

Justice Douglas continued to attend and lead the annual reunions as long as his health allowed. In 1977, Congress dedicated the park to him, and a small bust was placed next to the canal at Lock 3 in Georgetown. He died in 1980.

In 1971, Justice Douglas wrote, "When perplexed with legal problems, I have for years taken to the old towpath, hiked a spell, sat for awhile on a bluff overlooking the river, and, escaping from people, lost myself in reveries. Hiking or just sitting in the solitude of the woods and river has some magic. Why, I do not know. But exercise and the quiet of cliffs, woods, and river generate powerful subconscious forces, and before I get home the seemingly insoluble problem has been solved."

Today, the C. & O. Canal National Historical Park provides this "long stretch of quiet and peace at the Capital's back door" for millions of people, because of the dedication and perseverance of Justice Douglas and the little band of conservationists that carried the fight for so many years. The C. & O. Canal Association's Douglas Reunion Hike is held each year on the last Saturday of April. The association and the National Park Service are looking forward to hosting the 1992 International Conference on Historic Canals in October, at Harpers Ferry. For additional information on both these events, readers are invited to write to the association at P.O. Box 366, Glen Echo, Maryland 20812.

BOOK REVIEW

Linn Loomis, *Here and Now—Ohio's Canals: The Background of Ohio's Canal System* (Newcomerstown, Ohio: Linn Loomis, 1991).

Reviewed by Robert H. Mueller, Jr.

A first reaction to the title of this work might be "Oh! another canal book," but first impressions should not be allowed to mislead potential readers into passing over this one. It is worth the time.

The author has expended much time, energy, and resources, to travel around Ohio, converse with many people, and take many pictures, while exploring the canals, and then compiling all these data into book form. The book is organized into literary and pictorial sections, with the former explaining the whys and wherefores of the canals of Ohio. The latter section illustrates many remains of these canals.

A seasoned "canawler" can visualize the descriptions in the text, and also recognize many of the sites in the photographs. Other readers should find the text and the pictures interesting, until they tire of trying to follow the "hopscoching" in both sections, which are treated independently, with no continuity between them.

The hopscoching effect is created by skipping around to the various sites, to illustrate examples of canal and lock construction. The author might have done better to focus on either the Ohio and Erie or the Miami and Erie for the examples, since both were built in the same time period and to the same specifications. This would also apply to the branch canals, even though they were mostly built by private interests.

The text describes many features of not only canals, but also special parts of the locks and the channel sections, that can enrapture the reader with its details. What is confusing is the frequency with which references for a particular detail skip around to widely separated sites of the state-wide canal system.

The pictorial section consists of snapshots of the remains of the Ohio canal system, taken by the author between August 1977 and February 1991. What must be realized by the viewer is that what is shown in the pictures may be entirely different today, if it still exists at all, particularly in the older pictures. Too many of the photographs appear to be out of focus, which could be partly attributed to less-than-ideal conditions when the pictures were taken. The captions explain the subject matter, but here again the hopscoching effect is noticeable.

Sketches or, at the least, rough drawings, would have been an excellent supplement to both the text and the pictures. It is difficult enough to describe anything in words without overwhelming the reader. It is just as difficult to have all factors, many of them variable and uncontrolled, to cooperate when a picture is being taken. A sketch or drawing can go a long way to clarify or explain a point.

The "Bibliography of Canal Reference Materials," near the end of the book, gives the reader a wealth of additional material about not only Ohio's canals but also other canals as well. Local libraries should have most of this material for reference, if not for check-out. Following the bibliography are several pages of additional photographs, unsystematically arranged, perhaps included as fillers.

The book deserves a place in the library of anyone interested in canals. To find a particular picture, or part of the text, would be difficult unless the owner had indexed his copy. This reviewer found himself looking through and rereading the text on more than one occasion.