

AMERICAN CANALS

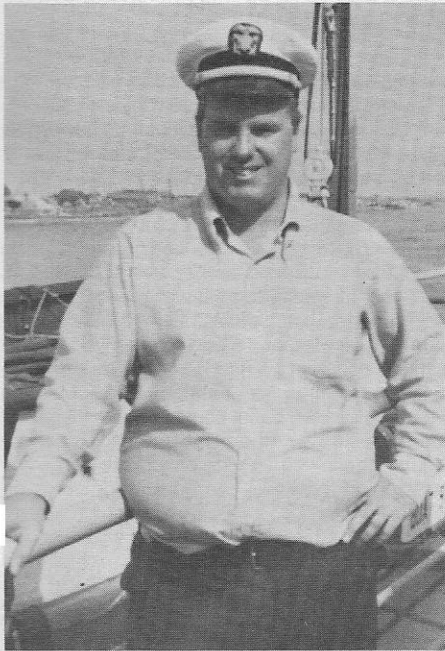
BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 63

Editorial Address—809 Rathton Road, York, Pa. 17403

NOVEMBER 1987

BRUCE RUSSELL



Contributing Editor

The gentleman described below has become such a heavy editorial contributor to AMERICAN CANALS that we feel it is about time we give him a title. We thought you might also like to see what he looks like, so we asked him for a photo. (Editor)

Bruce J. Russell is active in the Canal Society of New Jersey as well as the National Railway Historical Society, where he holds the office of President of the New York Chapter. He is also CONTRIBUTING EDITOR of Tri-State Chapter's publication THE BLOCK LINE. Professionally he is employed by the NEW JERSEY STATE PAROLE DEPT./DEPT. of CORRECTIONS. Some of his other interests are travel in general, architecture, photography (which he combines with his writing), steamboats, and gourmet restaurants featuring exotic cuisine from around the world. His eventual ambition is to visit China and travel behind coal burning steam locomotives while observing maritime traffic on the Grand Canal and Yellow River. Bruce has this to say about himself:

"For many years I have been interested in canal and inland waterway navigation systems, both at home as well as abroad. The fascination began quite by accident. In 1973 I was with a group of railway enthusiasts who were tracing out the abandoned right of way of the New York, Ontario, and Western RR in New York State. While examining remains and artifacts of that long gone carrier I stumbled upon several lock chambers of the

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PRESIDENT'S MESSAGE

I was delighted to see some of you at the Society for Industrial Archeology field trip in New Jersey, where we saw (amongst many other IA curiosities) canals used to carry bog iron to iron furnaces in the Pine Barrens, and the original and a replica of one of the boats, at Batsto. Afterwards I visited the Delaware and Raritan Canal tide lock in Bordentown, one of my favorite wooden locks, which has been preserved by the water yet is magnificently exposed at low tide. I hope the new Interstate-295 won't damage it.

I also made a pilgrimage to New Hope, where you can dine by the Delaware Canal and take a boat ride, but can find hardly anything on canals in the shops; to the Chesapeake & Delaware Canal and the Corps of Engineers' excellent museum in Chesapeake City across from Schaeffer's Canal House restaurant, which deserves special mention because a map of the canal is on their menu; to the C&D lock in Delaware City, which has been preserved but desperately needs lock gates, landscaping and perhaps more drastic measures to make it presentable; and to the Susquehanna & Tidewater tidelock at Havre de Grace, which has a museum in the lockhouse, open on Sundays.

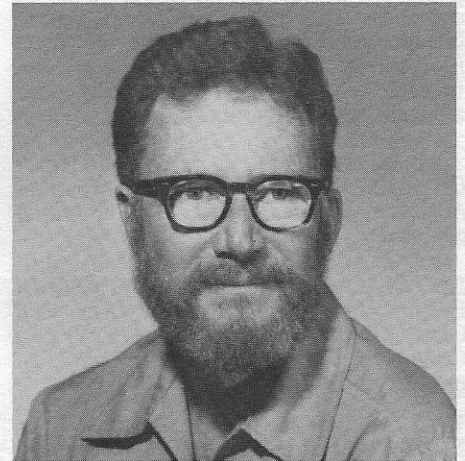
I have been reminded that our ACS-CCS international meeting on May 15-17 occurred exactly two centuries after another famous international canal event: Thomas Jefferson's voyage along the Canal du Midi, on May 13-21, 1787, while he was ambassador to France! It's amazing how history repeats itself!

History has also been repeating itself down here on the rivers of Virginia. During the James River Batteau Festival the batteau MAIDENS ADVENTURE II wrecked and broke in half on Wreck Island Falls, and on the pioneering descent of the Appomattox River, two crew members on the LORD CHESTERFIELD had bad luck at the mouth of Bad Luck Creek. Fortunately, nothing terrible happened during a batteau rally on the Roanoke River, which the Indians called the "River of Death!"

David Ross's Navigable Canals Committee is working with *Quimby's Harbor Guide* to add more details of interest to canal buffs and to add more canals, particularly the Muskingum Navigation. We'll let you know how this turns out. We'd like to see more canals and canal information in cruising guides, and could use your help. The Navigable Canals Committee was also featured in an article in the October newsletter of BARGE (Bi-Recreational Association for the Restoration of the Great Erie), concerning BARGE's work to prepare a cruising guide for the Erie Canal.

I was about to express my concern that America had no proper canal ghost when I read in *The Locktender*, the newsletter of Hugh Moore Historical Park & Museums in Easton, that at least into the 1930s a ghostly shawl-wrapped woman

DAVID ROSS



Contributing Editor

Our members will be pleased to know that David F. Ross, PhD, of Lexington, Kentucky has responded to our call for help with the AMERICAN CANALS Bulletin, perhaps not immediately, but in a few years, as he approaches retirement. All of us have enjoyed his well-written and well-researched descriptions of navigation on the rivers of central USA (including his current article on the Muskingum.) We will start him off with the title *Contributing Editor*, and perhaps expand his responsibilities as time goes on. In any event we are happy to "have him on board."

In addition to the accompanying photo, Dave has also sent us the following, brief resume of his activities: He was born November 27, 1925 at Ann Arbor, Michigan. He is a veteran of World War II, European Theatre, where he served with the 325th Combat Engineering Battalion. He has been variously employed in Puerto Rico, Florida, West Virginia, Liberia, Malaysia, and since 1967 has been teaching American Economic History and Economic Development at the University of Kentucky. He is a graduate of Harvard University — A.B. 1950; M.A. 1951 and PhD 1956. He is an M.O.S. motorboat operator and has cruised many of the inland waterways of the USA. He is married and has two children and five grandchildren.

walked at night along the Lehigh Canal towpath. The English have canal ghosts, of course, notably Kit Crewbucket, a headless spirit who frequents a canal tunnel. The English are always ahead of us in this sort of thing. Now my question is, whether the shawl-wrapped woman still makes regular appearances on the Lehigh, because I have a small problem believing in ghosts, even canal ones. Has anyone checked recently? Do we have any other American canal ghosts?

And speaking of spirits, have a safe and happy holiday season!

Bill Trout

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

**"DEDICATED TO HISTORIC CANAL
RESEARCH, PRESERVATION
AND PARKS"**

AMERICAN CANALS is issued quarterly by the American Canal Society, Incorporated. 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.

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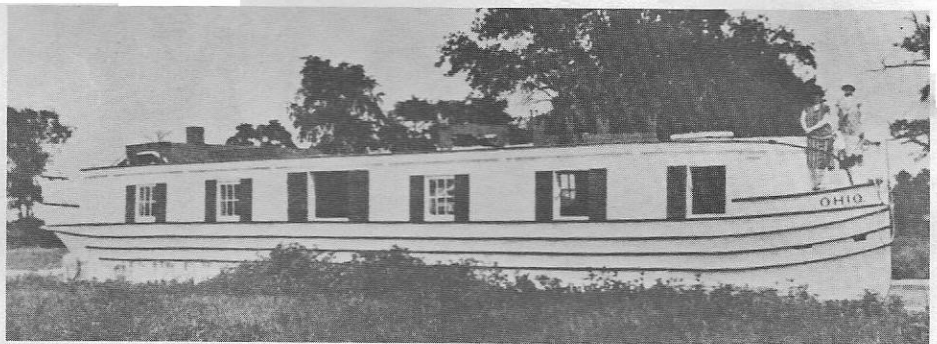
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"STATE OF OHIO"



Replica of the "State of Ohio," thought to be Ohio's first canal boat, as reconstructed for the State's Centennial celebration in 1925. (Akron Beacon-Journal)

by Terry K. Woods

Ceremonies officially opening the first navigable portion of the Ohio & Erie canal, that 38 mile section between Akron and Cleveland, took place in Cleveland near Lock #41 (Five Mile lock) near the foot of Harvard Ave. on July 4th, 1827. Newspapers of the day mention the names of three boats that participated by bringing dignitaries down the waterway to the festivities. These were, the ALLEN TRIMBLE, brought over from New York's Erie canal and renamed for the Ohio Governor; the PIONEER, constructed in Peninsula; and the STATE OF OHIO, generally considered to be Ohio's first canal boat.

The STATE OF OHIO was constructed on the east bank of the lower basin in Akron, just below Lock #1, by Alexander and Edward Wheeler, two Easterners experienced in boat building. The OHIO was launched on June 23rd. (some accounts say the 27th.) and her furniture and a few other finishing touches installed. She was described as, "a large and elegant boat, being about 14 feet in width and 70 feet long, carrying a burthen of between 40 and 50 tons." The craft, whose passengers included the Governor and representatives of the Canal Commissioners and Canal Fund, departed Akron on July 3rd., to the cheering of a huge throng, for its two day, 38 mile trip to Cleveland. The Captain on that maiden voyage was Henry Richards, from the Erie canal.

Throughout the remainder of 1827, the STATE OF OHIO trundled between Akron and Cleveland carrying flour, tobacco, merchandise, lumber, butter, salt, passengers and sundries. Later that year, John Blair initiated the FARMER'S LINE with the HENRY CLAY, brought over from the Erie. The side of his craft was emblazoned with the logo, "FARMER'S LINE — NIGHT AND DAY." By the

beginning of the 1828 boating season, the Farmer's Line consisted of three boats; the STATE OF OHIO, commanded by Captain Wheeler; the SUN, launched on Sept. 25, 1827 and commanded by Captain Munson; and the CANTON, launched on April 17, 1828 and commanded by Captain Bremigan.

The STATE OF OHIO, again with Captain Richards in command, left Cleveland at 7:00 A.M. on August 25, 1828 loaded with passengers, salt and sundries. It and the ALLEN TRIMBLE, of the firm of Merwins and Giddings, arrived almost simultaneously in the new port of Massillon, some 64 miles south of Cleveland, at 4:00 P.M. They were the first two canal boats to arrive there and were greeted by "the firing of a cannon and a hearty cheer from a vast concourse of people assembled to witness the novel and interesting sight."

Before the 1829 boating season was over, the STATE OF OHIO was for sale. It isn't clear if the boat changed hands or, if it did, who the new owner was. Maybe it didn't matter. The Cleveland Herald for October 1, 1829 stated that, "the STATE OF OHIO, loaded with stoneware, sank the day before yesterday (Sept. 29) about nine miles from this place."

Remains Discovered

It isn't known how badly the OHIO was damaged, or if she was raised and continued her career. The next mention of the historic vessel is on page 40 of Samuel A Lane's, "FIFTY YEARS AND OVER OF AKRON AND SUMMIT COUNTY, published in 1892. After describing the OHIO's maiden voyage, he writes, "... the hulk of the ancient craft now lying in the mud of a small cove in the berme bank of the canal near the residence of the late James Robinson of Coventry."

In 1896, a James T. Black of Akron saw an old hulk in the mud of the canal's Portage Summit and heard it identified by several of the old boatmen as the STATE OF OHIO. Years later, in 1930, Black saw a newspaper advertisement by an old canal boat Captain who said he had parts of the State's oldest canal boat for sale.

Black went with the old Captain to the canal at 27th. St. in the present Kenmore district of Akron. There, a portion of the bank had caved in, revealing the hull of a long sunken, almost buried canal boat. Through the use of a Windlass, Black was able to pull the center section of the boat out of the mud. The bow and stern sections were left.

Mr. Black stored the timbers at his home and occasionally displayed them outside for the curious. The timbers were donated to the Western Reserve Historical Society and now reside, as in-



Old timbers, thought to be remnants of the "State of Ohio" displayed by James T. Black in 1930. (Photo by the Akron Beacon-Journal.)

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BRUCE RUSSELL

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Delaware & Hudson Canal which roughly paralleled the train tracks. Dr. Raymond Wood, a close friend familiar with the area, recommended I obtain and read MANVILLE WAKEFIELD'S superb canal narrative COAL BOATS TO TIDEWATER. It chronicles the long life and slow death of the D & H Canal which in days of yore carried anthracite coal from the mines of eastern Pennsylvania to tidewater on the Hudson River. I subsequently met and established a firm friendship with Capt. Bill McKelvey who always had an answer to any question I might have concerning the subject of canals. Since then I have pursued this interest, which compliments my major hobby of railroading. Because the canal was a form of transportation which preceded the railroad by about 20 years in this country I have been able to visualize the total panorama of mobility in the nation. In recent years my canal activities have included trips on the Erie Canal and on the canals of England, plus numerous hikes along the rights of way of abandoned waterways. Writing about my canal as well as railway adventures gives me the satisfaction of letting others know that there are things to do and sights to see, and that no man should ever succumb to boredom, apathy, alcoholism or depression. Life has much to offer."

CANAL T-SHIRT

This yellow cotton blend T SHIRT is printed with a historic picture of Lock House #44 of the Lehigh Canal in Freemansburg. The logo SAVE THE LOCK HOUSE completes the print. Price includes shirt and mailing costs. Send \$7.50 to Old Freemansburg Assoc., 117 Main St., Freemansburg 18017. Adult sizes only S M L XL available.

"STATE OF OHIO"

(Concluded from Page Two)

dividual boards, in the rear of a barn at the Society's Hale Farm & Village in Summit County.

Questions abound. Is that handful of timbers at the Hale Farm the remains of Ohio's most historic canal boat? How did a craft sunk nine miles from Cleveland end up some 30 miles further south? And if the OHIO was raised after its 1829 sinking, what were its adventures in the intervening 60-odd years? These questions, and many others, will probably never be answered.

Understandably there are no photographs of this 1820's craft, nor do any drawings exist. Her length and breadth is the only description that has survived. A "Replica," based upon these meager details, the types of cargos she carried and her relatively small capacity when compared with later Ohio canal boats, was built in 1925 to take a place in Akron's Centennial Parade.

The surviving boat pieces are about the right size. The joints used to connect the timbers of the flat bottom to those of the sides are natural "knees," certainly an antique building technique. The nails are square, tapered, iron cut-type, another evidence of extreme age. So the boat pieces at Hale Farm seem right, but are they the STATE OF OHIO?

Does the STATE OF OHIO still exist, if only in pieces? Perhaps the answer lies somewhere in a dusty old diary, a crumbling boat registration book, or a yellowed fragment of newspaper.

"TRIALS AND TRIBULATIONS"

The following court case is summarized in the records of the Supreme Court of Pennsylvania at Philadelphia, April 14th, 1836, as clipped by ACS Vice President Bill McKelvey. It is entitled "The Union Canal Against Young and Others":

In 1792, an act of the legislature was passed, to incorporate a company for opening a canal between the rivers Delaware and Schuylkill, which authorized the corporation to purchase, take, and hold all such real estate as should be necessary for them in the prosecution of their works: in pursuance of which they proceeded to lay out the canal, part of which passed through the land of A., who was a stockholder in the Company. In 1793 a parol agreement was made between the Company and A. for the price of that part of his land taken for the canal; which agreement was recognized by a bill or memorandum in writing made by A. in 1798. About the year 1793, the canal was actually dug through the land of A.; but the communication between the two rivers was never completed; and after the year 1795, nothing further was done in opening the communication by this Company; but the strip remained within the fences of A. and with the remainder of his land, was at one time let to a tenant for years, who used part of it, with the other ground, for the purpose of raising grain. In 1811 an act was passed, authorizing a junction of the Delaware and Schuylkill Canal Co. with the Schuylkill and Sus-

quehanna Navigation Co. under the name of the Union Canal Co., by virtue of which all the estates, rights and privileges of the two companies were vested in the new corporation. In 1819 another act of the legislature required the Union Canal Co. to confine their operations to the completion of the communication between the Schuylkill and the Susquehanna. In 1821 A. accepted certificates for 10 shares of stock of the Union Canal Co. in lieu of his stock in the old Delaware and Schuylkill Canal Co. In June, 1833, part of the land of A., which being in the immediate vicinity of Philadelphia, had, in the mean time, greatly appreciated in value, was sold for building lots to B. and C. who gave mortgages for the purchase money. In an ejectment instituted to Dec. term, 1833, by the Union Canal Co. against the heirs of A., and the purchasers under them, it was held, (1st.) That the plaintiffs acquired a right to the soil, occupied or taken for the canal, and not merely an easement therein. (2d.) That the possession of A. was not to be considered as adverse to the plaintiffs, so as to give effect to the statute of limitations. (3d.) That the abandonment of the canal, and the dissolution of the old company in 1811, did not raise any equity, which would avail the defendants as a defence, or authorise them to treat the contract as rescinded (4th.) That supposing B. and C. to be purchasers without notice, they were not entitled to protection further than as they had actually paid the purchase money: the mortgages not being considered as payment.

DAMAGE TO THE C. & D. CANAL

The following item, clipped from the New York Times for August 24, 1873, was contributed by ACS Vice President Bill McKelvey. It concerns the damage to the C. & D. Canal (which then had a high-level section) resulting from two weeks of unusually heavy rainfall. (Editor)

WILMINGTON, Del., Aug. 23.—The damage to vessels and canal-barges in the Chesapeake and Delaware Canal includes eleven schooners and eighteen barges hopelessly wrecked, while twenty-eight schooners and thirty-seven barges, two tugs, and one propeller steamer are stranded, and most of them more or less injured. Among the schooners which are very badly injured are the Jane C. McShane, of Philadelphia, total loss; Lavenia Hopkins, Yorktown, Va., hole stove in side; Mary Washington, of Baltimore, split through the stern; Panama, Baltimore, on her beam ends, her bulwarks torn off and otherwise injured, and the Speed, of Baltimore, badly wrecked generally. The last vessel is the one which was carried furthest up into the fields. She now lies 400 yards from the canal. All the craft east of St. George's escaped serious injury. The canal authorities hope to get them out in ten days or a fortnight. Those at St. George's, not carried out of the canal, may be released in a month's time. Many of the schooners and most of the barges were loaded with bituminous coal, consigned to New York, principally for the New-York Central and Hudson River Railroad.

It is now improbable that passenger-trains can make regular trips over the Delaware Railroad before Monday or, possibly, Tuesday.

Peaches are being carried to the towns on the Chesapeake and Delaware Bays, and shipped thence by water. Many will thus be marketed.

The Chesapeake and Delaware Canal is the only inland water communication between the Chesapeake and Delaware Bays, and is about fourteen miles in length and consists of two levels,

with a lock at St. George's and one at each end, viz., Chesapeake City and Delaware City, the level between St. George's and Delaware City being called the lower level. About ten days ago the guard bank broke on the lower level, and let most of the water out of that portion of the canal. Consequently, a greater number of vessels were in the canal at the time of the last accident than otherwise would have been, they having accumulated for a week past on the upper level at St. George's waiting to look through. The ground being thoroughly saturated with water by the constant rain during the last two weeks could absorb no more, and the recent heavy rain drained into the canal, which rose rapidly, until, about 9 o'clock P.M., a breach occurred in the towpath and bank on the upper level at St. George's. In a very few minutes the breach was fifty yards long, and then the vessels were washed through and tumbled about over the cornfields adjoining. About ninety boats, mostly schooners and canal barges, were washed through the breach, and are now high and dry in a field back of the town. The water rose high enough to carry five or six schooners half a mile from the canal, and they are now lying there. Several of the canal barges are entirely broken up, with their cargoes scattered about. One schooner struck the stable of the hotel and carried it away, drowning a pair of fine horses belonging to Dr. Vallandigham. Several out-houses and stables were washed away.

NEW LIFE MEMBER

The ERIE CANAL MUSEUM, Syracuse, New York has just become the sixty-first LIFE MEMBER of the American Canal Society. The full roster of Life Members is printed separately in this issue.

MEMORIES OF THE MORRIS CANAL, Part 3 (Conclusion)



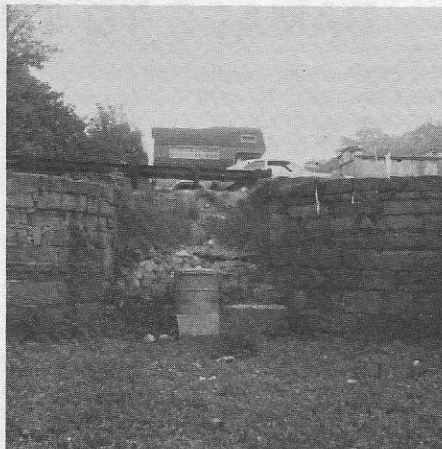
A view made over "the hump" of Inclined Plane Nine West. Note the old twisted wire cable from the plane in the foreground. Jim Lee's home (a former lock-keepers house) can be seen, downhill, at the center of the picture. (Photo by Bill Shank.)

By Bruce Russell

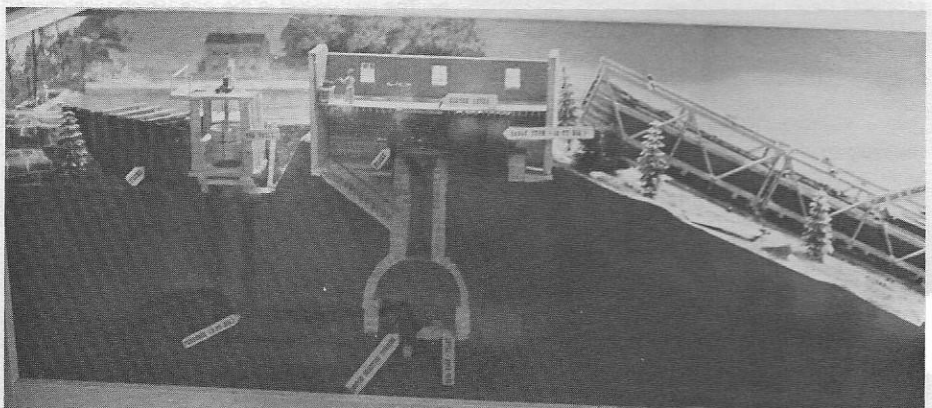
The final stretch of the Morris Canal, from Wharton to Phillipsburg is better preserved than any other portion because the area through which it passes is still heavily rural. Thus when the waterway was abandoned in 1924 the old towpath and prism remained undisturbed, the only deterioration being the effects of rain, wind, and soil erosion. Many of the lock chambers were filled in to eliminate an obvious safety hazard, and movable bridges were dismantled and their place taken by fixed spans. Nevertheless most of what was the canal still survives and can be easily traced. In many locales roads run parallel to the prism, and all that's required for the interested observer is to park and take a look. As development continues some of this will undoubtedly change, but for now the Morris Canal in the western part of the Garden State is like a creature in hibernation—awaiting the day when it might spring back to life.

As I walked along the towpath, still discernable after six decades of idleness, I reflected upon the trip I had just completed to the British Isles. Canals no larger than the Morris, and using boats of 7 foot width, are still very much a part of the English and Welsh country scene. Recreational boating on these waterways is a growing leisure time activity, and the rehabilitation of 18th Century lock chambers has been perfected to the point of being a science. Sadly the Morris is now derelict while the canals across the Atlantic are still very much alive.

Near Stewartville, New Jersey, is the home of James Lee, Morris Canal hisotrian PAR EXCELLANCE and author of at least four books and several scholarly articles on the waterway. "Jimmy" as he is affectionately called by his friends and associates, has spent virtually all of his adult life gathering data and writing about the Morris Canal. But rather than be content to sit on his laurels and sign autographed copies of his books, he has lived up to his reputation as a CAN DO



A view of one of the locks on the western portion of the abandoned Morris Canal. Note that part of the chamber has been filled in. (Photo by Bruce Russell.)



Model of a Morris Canal Inclined Plane, with water-turbine driving mechanism, on display in the Canal Museum, Waterloo Village, New Jersey. Maintained by the Canal Society of New Jersey. (Photo by Bill Shank.)

man. Many years ago it was pointed out to him that one of the inclined planes of the Morris Canal was on a piece of property about to be sold. An immediate inspection of the acreage revealed that the original lock tender's cottage was still in use as a private residence, and that much of the machinery used to operate the plane was buried in rubble—yet still accessible. It didn't take but a few days for Jim Lee to get a down payment together and acquire the property, and soon he and his wife were living in the old lock keeper's home, while literally sitting on top of the remains of Plane 9 West. Lock tenders' homes were built by the Morris Canal Company in the 1830s according to a rather standard design, and as long as the occupant was employed by the firm he could live there rent free. Following closure in 1924 the lock tenders often elected to remain in their canalside dwellings and arrangements were made to permit them to do so. Over the years they died and their families moved away, and other people took up residence, some probably not the slightest bit aware of the historical significance of their place of domicile.

Not so Jim Lee. He developed an obsession with the idea of restoring his inclined plane to its original condition. While he was a realist and knew that he couldn't rebuild everything, he was still aware that a great deal was feasible. Since the words "I can't" or "it's too difficult" are not in Jim Lee's vocabulary, he decided to start digging out the buried turbines and water tunnel on his piece of land. Several years of backbreaking labor were required to undo what had been done by those who destroyed the planes after their regular usage ceased. Tons of mud, rock, and debris had to be scooped out, but in time the original turbine was uncovered. Additional work resulted in the outflow tunnel being cleared so that the entire water turbine mechanism, at least that portion of it below ground, was free of unwanted material and could be viewed by interested observers. After some rust chipping and painting it looked quite impressive, and served as a living example of one method of obtaining power in the days before electric motors.

The turbine on Jim Lee's property is a Scotch turbine, and it was set up in such a way that water from the canal could fall down a large pipe called a penstock and turn the blades. After passing through the turbine it exited the turbine chamber and rejoined the canal. The turning of the turbines activated the cables of the inclined plane and thus lifted the Morris Canal boats. It was an ingenious system of using water power to its greatest advantage, and proves that "where there is a will there is a way." The Scotch turbines and their

associated water tunnels replaced waterwheels which had been installed when the Morris Canal had first been built.

What is truly remarkable about Jim Lee's restoration is what he did it all by himself, without government money or assistance. Lee's "true grit" was responsible for the unearthing of a significant part of this nation's industrial and engineering heritage. While one can always read about the remarkable inclined planes of the Morris Canal in history books, it's not the same as actually seeing one. Jim also rearranged his home in such a manner that it appears like a lock tender's cottage of the 1830s. Inside the house, besides a voluminous quantity of canal memorabilia, is a 6 foot long working model of Plane #9 West showing just how the boats were moved up and down the incline on railway carriages. Activation of the model, which took several years to build, illustrates the entire sequence of a canal boat's arrival at the



View through the archway on the Delaware River at Phillipsburg, New Jersey where the westernmost Plane on the Morris Canal picked up Lehigh Canal Boats from Easton, Pa. across the river. The City of Easton can be seen through the arch. (Photo by Bill Shank.)

lower end of the plane, placing it on the railway car, turning of the turbine by the fall of water from the canal, and the actual pulling of the loaded car up the slope.

A tour of the turbine and its associated water tunnels is facilitated by lights which Lee has installed inside the dark and dank passageways. Had the Morris Canal not been built using inclined planes it would have had to rely upon many more locks in order to gain the required elevations between Newark and Phillipsburg. It is also possible that without the technology to build inclined planes powered by either waterwheels or turbines there might have been no Morris Canal. During our tour all questions were answered by Jim Lee, a man whose personality is both pleasant and engaging.

One of the topics discussed was whether or not a full scale replica of a Morris Canal inclined plane could ever be built. The answer is "yes." All that's



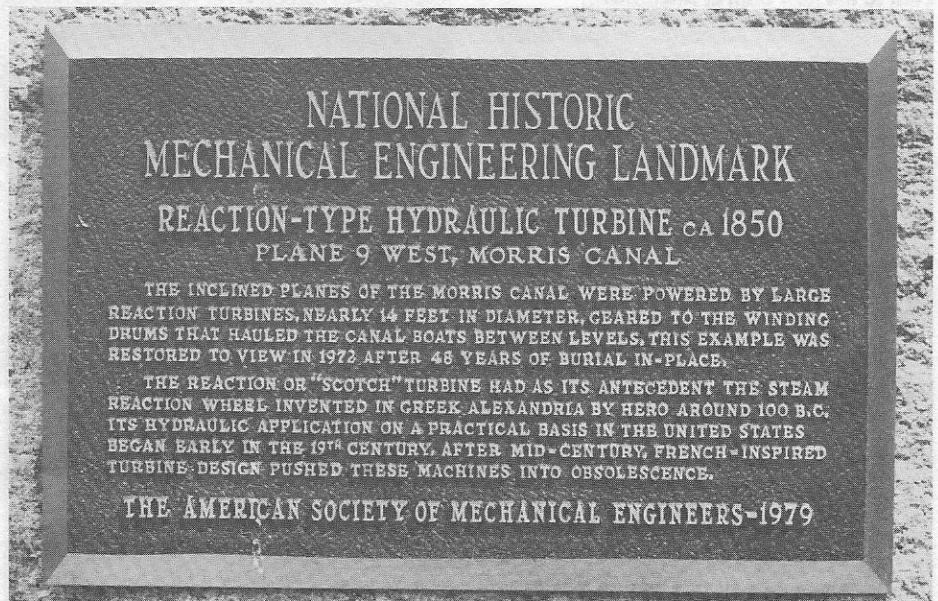
A watered section of the Morris Canal at Waterloo Village. On the hill to the right are the remnants of one of the Inclined Planes. (Photo by Bill Shank.)

required is money. Where would it be located? Probably in Waterloo Village where a state park is presently situated. A watered section of Morris Canal complete with a ride up a plane would create a major attraction. Conservatively the cost would be in the range of two million dollars. But it could be done. Obtaining government grants for this purpose might pose a problem.

Leaving the Lee residence, we traced the bed of the Morris Canal all the way to Phillipsburg on the Delaware River. Some of the masonry structures are still in place. At Phillipsburg loaded coal boats were floated across the river from the Lehigh Canal and were then taken into the Morris. The basic source of coal was the anthracite fields above Mauch Chunk. The Lehigh Canal brought the coal boats to Easton. From there it went in two directions: to the Philadelphia area via the Pennsylvania State Canal System's DELAWARE DIVISION, or to New York City via the Morris Canal. Generally speaking it took about five days for a loaded coal boat to get from Phillipsburg to the Hudson River in Jersey City.

Our exploration of the entire Morris Canal was very stimulating, and all four of us learned and saw a great deal. We were sorry more of that waterway wasn't still around, but what we did see was worthwhile. The future is an unknown, and much of what we looked upon may in time be obliterated, or it might be restored for future generation's benefit. The ultimate goal of a watered section of the Morris Canal plus a fully operable inclined plane may appear to be unrealizable in 1987, but always remember, Jim Lee, acting as a private citizen literally moved a mountain of rubble to restore his turbine. Just think what could be done if people decided to restore to working order a representative slice of this very intriguing piece of American transportation history.

For a full description of the workings of the Scotch Turbines on the Morris Canal, please refer to pages 16, 20 and 21 of the BEST FROM AMERICAN CANALS, Number II.



Plaque erected by the American Society of Mechanical Engineers at James Lee's Plane Number 9 West on the Morris Canal, 1979. (Photo by Bill Shank.)

LEHIGH CANAL FIELD TRIP



The PCS group inspects a section of the rewatered Lehigh Canal near Walnutport.



The control weir on the Canal Feeder adjacent to the new Dam at Allentown.

Fifty members of the Pennsylvania Canal Society assembled October 2 and 3, 1987 at the Hotel Easton, Pa. for what proved to be a rather soggy week-end tour of the lower Lehigh Canal between Mauch Chunk (Jim Thorpe) and Easton.

After registration Friday evening, the group moved to the Canal Museum at the Hugh Moore Park nearby where we enjoyed a movie showing Mauch Chunk during a flood and featuring the old "Switch Back" Railroad while it was still in operation.

Saturday morning we boarded a bus which ran directly to Mauch Chunk. A light precipitation did not dampen the spirits of the group, who were enlivened by a running commentary by Lance Metz on the historic points of interest along the way.

We proceeded first to Lock Number One just above Mauch Chunk, and then to downtown Mauch Chunk, where Lance took us on a walking tour of the old downtown. The balance of the morning was consumed at various Lehigh Canal

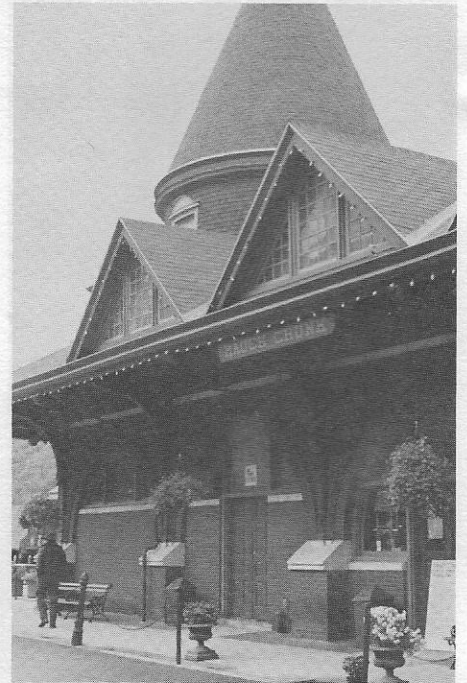
ruins and restored sections of the canal near Walnutport. A most adequate lunch was served at The Terrace Restaurant in Walnutport, where we met several local members of a former Lehigh Canal boat repair yard. Later we visited Three-Mile Dam, near Hunt's Lockhouse and the past site of Loury's Boat Yard, where one of our guides had worked.

At Allentown we visited the recently rebuilt Hamilton Street Crib Dam, which, since the 1830s has been supplying water to the Lehigh Canal through the City of Bethlehem and Freemansburg. A feature of the new dam is a fish-ladder, second in the State of Pennsylvania, to permit migration of Shad upstream on the Lehigh River.

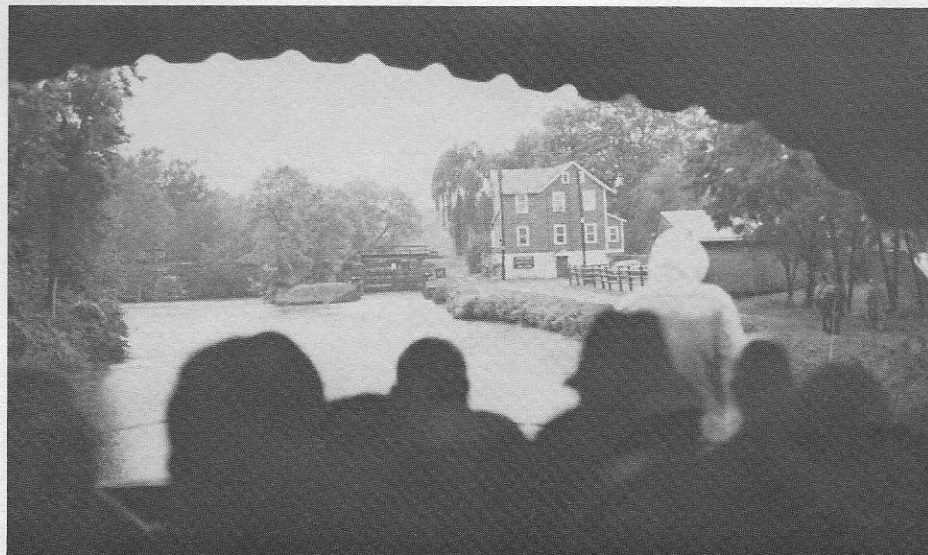
At Freemansburg we inspected the rewatered canal there and visited the old Lock House which is now being restored as a town historical project. We then rode the "Josiah White" along part of the 3-mile restored Lehigh Canal west of Easton.

Our evening banquet and meeting was held at the Pomfret Club in Easton. In the absence of PCS President Bob Keintz, Vice President Charles Derr was in charge. Lance Metz did an excellent job on his talk "The Lehigh Canal as a Cradle of the American Industrial Revolution." The evening concluded with a long operating movie made on the Lehigh and Delaware Canals during their final days of commercial operation in the 1920s—a real "treasure chest!"

(Photos by Bill Shank)



The Mauch Chunk Railroad Station, from which historic rail tours begin. The building is now part-museum, part gift shop.



View from under the canopy of the "Josiah White" as we approach the upper lock and lockhouse on the restored Lehigh Canal, Hugh Moore Park, Easton.

LEHIGH CANAL CALENDAR

The Bethlehem Globe Times 1988 calendar this year has a picture of the Lehigh Canal Park in Bethlehem. Copies are available from the Old Freemansburg Assoc., 117 Main St., Freemansburg 18017. Please send \$1.00 to cover mailing costs.

LIFE MEMBERS of the American Canal Society

John D. Anderson - Champaign IL
David G. Barber, P.E. - Hopedale MA
John Barratt - Stafford, England
David W. Beach - West Lebanon ME
David J. Bohla - Lakeview OH

Dr. Arnold P. Borsetti - Vienna VA
Anthony Carriero - Flushing NY
Peter C. Challinor - Wilmette IL
L.M. Clark - Ottawa Canada
MSGT William H. Culin - New Florence PA

Richard A. Davis - Lexington VA
Charles W. Derr - Freemansburg PA
David N. Edwards, Jr. - Durham NC
William J. Ellenberger - Washington DC
Grace Elliott - New Paltz NY

John A. English - Troy NY
Erie Canal Museum - Syracuse NY
Dennis S. Furbush - Jackson Heights NY
William E. Gerber, Jr. - Chelmsford MA
Philip H. Goldman - Santa Barara CA
Warren Greatbatch - Clarence NY

Capt. Thomas F. Hahn - Shepherdstown WV
Michael A. Handford - Hincley England
Leonard H. Harmon - Woburn MA
Desmond Ward Harris - Vancouver Canada
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Irving M. Johnson - Hadley MA
Robert N. Kamp, P.E. - Albany NY
Franz Katz - Somers NY
Karl T. Kettlehut - Gulf Breeze FL

Karl H. Kosinski - Dowagiac MI
Keith W. Kroon - Rochester NY
Dr. Brian W. Kutner - Millville NJ
Alan M. Laufman - Harrisville NH
Jonathan Leiby - Woods Hole MA

Capt. John A. Lynch III - Onset MA
Robert Maurer - Chico CA
Eugene I. Majerowicz - Los Angeles CA
Robert S. Mayo, P.E. - Lancaster PA
Dennis K. McDaniel - Beaumont TX

William J. McKelvey, Jr. - Berkeley Heights NJ
Ralph S. Misener - St. Catharines Canada
Richard C. Osterhout - Bensalem PA
R. Arden Phair - St. Catharines Canada
Mary Alice Quigley - Trenton NJ

William S. Reid - York Harbor ME
Paul H. Reimer, Jr., P.E. - Allentown PA
Charles P. Reiss - Brooklyn NY
Paul John Rich - Qatar, Arabic Gulf
Robert L. Schuyler - Philadelphia PA

William H. Shank, P.E. - York PA
William A. Sigman - Indianapolis IN
Dr. Roger W. Squires - London England
Dr. William E. Trout III - Richmond VA
William G. Tumbridge - Fayetteville NY

Herbert F. Verity - Cincinnati OH
James C. Webster - Fairport NY
David J. Williams III - Columbia MD
Avery V. Wolrum, Jr. - Palatine IL
Eric Zellin - Ann Arbor MI



The recently rebuilt Lehigh River Dam at Allentown, which feeds water into the Lehigh Canal at this point. Some of the PCS members are shown standing on the downstream end of the Fish-Ladder.



This old photo, which was found in the files of Alvin F. Harlow, shows the section of the Lehigh Canal on which we made our boat trip during the PCS Tour, the way it looked about 1920. The old dam, which fed water into the three-mile section of the Lehigh from this point down to Easton, may be seen at the upper center. (Courtesy of Walter Meseck.)



The badly-breached Three-Mile Dam, near Hunt's Lock on the Lehigh, is inspected in the rain by our hardy PCS members.

GEORGE W. HIGGS, JR. 1905-1987

On November 12th we lost ACS member George W. Higgs, Jr., one of the organizers of the Virginia Canals & Navigations Society, and the leader of the campaigns to restore part of George Washington's Patowmack Canal at Great Falls, Virginia, and to publicize the role of the canal in the development of the American Constitution. The June *National Geographic* article is a memorial to him, and someday, we hope, a properly restored Patowmack Canal.

FOX RIVER IN THE STATE OF WISCONSIN



A photo of De Pere Lock on the lower Fox River, taken by ACS Life Member David G. Barber.

By Frederica Kleist

Little is known about the Fox-Wisconsin Waterway in Wisconsin by others outside the State. To acquaint you with some of the more important facts, I will describe some of the most important events in the history of this waterway.

A million years ago, what was to become the Fox River Valley was at the bottom of a giant, shallow, inland sea. After the ocean receded, huge glaciers moved in, chewed into the shale and limestone to produce the Fox River, which is often compared to a trail of a serpent.

The Upper Fox begins in a marsh in southwestern corner of Marquette County, continues flowing in a northeasterly direction in Columbia County, to Green Bay in Brown County.

The first entrance into the Fox was at Green Bay. For about 150 years, the Fox-Wisconsin Waterway was Wisconsin's only traveling highway from east to west, which accounts for the many cities and the development of industries in this area. The first industry was fur trading. Now, many of these cities have paper mills, the Fox offering an abundance of water power. The first modes of travel were: canoes, fur traders bateaux, Durham boats and finally the large steamboats.

After the journey of Marquette and Joliet, who arrived at the "portage" June 14, 1673 they wrote a description of the "portage" between the Fox and Wisconsin Rivers, which was used by early native Americans, French explorers and fur trappers.

A "portage" is the act of transporting boats and supplies from one waterway to another, known as a route for transportation. The "portage" in the area was unique, as it is part of a natural watershed, or, is called a "continental divide." The Fox flows from south to north, emptying into the St. Lawrence and the Wisconsin flows from north to south emptying into the Mississippi and the Gulf of Mexico. The Indians called the "portage" Wau Wau o nah, known now as Wauona, which means

"the place where one takes up his canoe and carries it on his back."

The "portage" was described by Capt. H. Whiting, 5th U.S. Infantry in 1819: "The road runs over a marshy prairie." The one and four-tenths mile trail through this marshy area was very difficult. It has been said that sometimes the water was so high that boats were used from one river to the other.

Morgan T. Martin was interested in a canal to join the Fox and Wisconsin Rivers. His idea first came into being in 1828, when the 5th Regiment of the U.S. Army came to Fort Howard at Green Bay on Durham boats from Jefferson Barracks below St. Louis. The baggage was loaded on the boats at that point, and, not unloaded until they reached Ft. Howard. The water at the "portage" was high that year and the boats went from one river to the other, the Wisconsin River being from 6 to 8 ft. higher than the Fox.

In 1829, Martin took the first step at a public meeting in Green Bay. An organization called the "Summit Portage Canal and Road Company" was incorporated by the Michigan Territorial Legislature, to cut a canal at the "portage" between the Fox and Wisconsin Rivers, build turn-pike roads along the canal and erect necessary improvements.

Martin was a member of the committee to revise the territorial laws. While in Washington, he pushed for legislation to obtain the land along the Fox to finance the Fox-Wisconsin project. Martin was a member of the Wisconsin Internal Committee, which was formed in 1835 by the Michigan Territorial Legislature.

March 1834, the formation of the Portage Canal Company was approved by the Legislative Council Territory of Michigan. It should be noted that the Summit Canal and Road Company's books were never opened and stock not taken; terms were unsatisfactory.

In 1837, a company was chartered under the name of the "Portage Canal Company" for the

purpose of constructing a canal connecting the Fox and Wisconsin Rivers.

In 1838, the digging of the canal was begun, parallel to Wauona Trail. \$10,000 was spent on the work and then it was abandoned.

The Fox River Improvement Company was chartered in 1842 by the Wisconsin Territorial Legislature.

Nothing was done for years. The General Government and the Secretary of War called attention to the value as a route for military communications and transportation, and urged funding for the construction of locks around the rapids and a canal to connect the two rivers.

In 1846, Congress passed an act granting the State of Wisconsin alternate sections of land, three miles on each side of the river.

In 1848, the State accepted the land and appointed a Board of Public Works to take charge. Their records were audited. Nothing was done about these records.

In June of 1849, a new route was chosen for the canal, which is the present one. Work progressed slowly, being delayed by misunderstandings between the contractor and state. The men worked without wages for weeks and months. So, the project was abandoned. The canal at that time was nothing but a ditch.

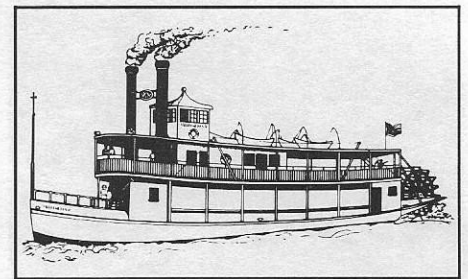
July of 1851, the Board of Public Works set aside land reserved for the canal right of way. Work was continued on the canal. A bad flood in September of 1851 did damage to the canal banks.

Little was done to the canal until 1853. The Fox and Wisconsin Improvement Company was formed to complete the canal in 3 years. They failed to do this. The Company went into bankruptcy.

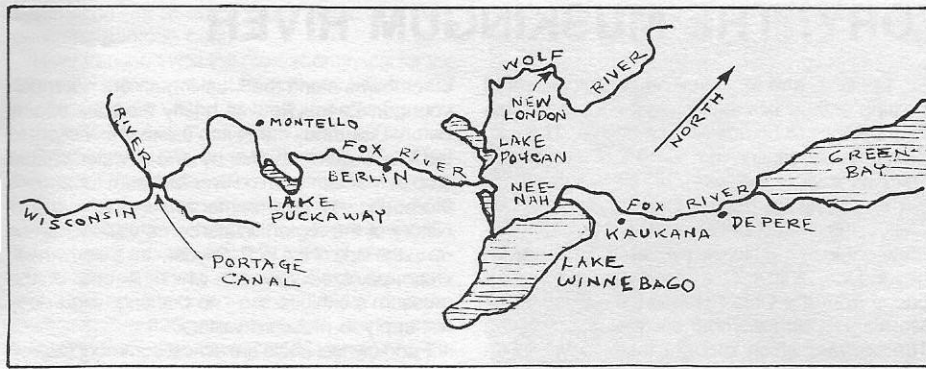
In 1866, the land, canals, dams, right of way and improvements were sold at a public sale in Appleton to the Green Bay and Mississippi Canal Company. The Green Bay and Mississippi Canal Company was only interested in the water power rights.

In the meantime, the Civil War was in progress. In 1863 and 1864 Memorials were passed favoring the enlargement of the Fox-Wisconsin Rivers improvement to admit passage of gunboats.

The Engineer Department of the United States issued instructions to make a survey of the Fox and Wisconsin Rivers. By an act of Congress, in 1870, the Secretary of War was directed to adopt a plan for the improvement of the Wisconsin River. A Board of Arbitration was authorized to ascertain how much should be paid the Green Bay and Mississippi Canal Company for the transfer of its property between the Portage Canal and Green Bay. In 1872, the Secretary of War elected to take



The "Valley Queen II," a replica of an old stern-wheeler which offers charter trips along the Fox River out of Oshkosh, Wisconsin. On the Wolf River, canal enthusiasts may ride the "Belle of Fremont" — a side-wheeler replica which features short trips and charter cruises out of Fremont, Wisconsin.



only the improvements. The Green Bay and Mississippi Canal Company delivered a deed to the United States and received \$145,000.

In 1874, the Army Corps of Engineers started the canal at the Fox River end, which was finished by June of 1876. The first boat through the canal was the Boscobel. The canal was 75 ft. wide, 7 ft. deep with a draw of 6 ft. Right of way on north bank was 40 ft. and the south bank, 75 ft.

Below are listed the canals, dams and locks on the Wisconsin River Lock (Lock No. 1), Lock No. 2 at Ft. Winnebago, etc.

1. Wisconsin River Lock constructed between 1850-1855, 1874-1876 reconstructed by Corps of Engineers, rebuilt in 1928, closed in 1951.
2. Fort Winebago Lock, completed in 1882, rebuilt in 1928, closed in 1951.
3. Governor Bend Lock, built in 1882, rebuilt in 1928, closed in 1951-now a dam.
4. Montello Lock and Dam, built in 1878, repaired 1885, rebuilt in 1901, closed in 1951.
5. Grand River Lock and Dam, built 1878, closed 1951.
6. Princeton Lock and Dam, 1878 built, closed 1951.
7. White River Lock and Dam, built 1878, closed 1951.
8. Berlin Lock, built 1878, closed 1951, 1951 boat overhaul on lock.
9. Eureka Lock and Dam, completed 1876, closed in 1951, boat overhaul 1958. 1977 reconstructed locks, open to boat traffic.
10. Neenah, built in 1848 wasn't completed until 1849.
11. Menasha Lock & Dam, 1848, 1987 100 slip Marina.
12. Appelton Lock and Dam, 4 locks.
13. Cedars Lock and Dam.
14. Little Chute Lock and Dam, guard lock and second lock.
15. Kaukauna Lock and Dam, built 1851, rebuilt 1880-1881, 5 locks.
16. Rapids Croche Lock and Dam, built 1850.
17. Little Kaukauna Lock and Dam.
18. DePere, first lock built 1850.

The first locks closed in 1951 were: Portage, Fort Winnebago, Governor Bend and Grand River. The second group was: Berlin, White River, Montello and Eureka. Eureka Locks were reopened in 1958. In 1977, The Berlin Boat Club rebuilt the gates. Berlin Boat Club leases from the Department of Natural Resources.

Other canals and locks in Wisconsin are: Yahara Lock at Madison, Sturgeon Bay Ship Canal and Milwaukee and Rock River Canal.

Waterways accessible are:

From Eureka to Green Bay - Canoes and boats.

Portage to Eureka - good canoeing with some "portages."

Fox River at Portage to Swan Lake - canoes. Baraboo River - canoes.

Portage to Wisconsin Dells - canoes and boats.

Portage to Lake Wisconsin and Prairie du Chien-boats and canoes, dam at Prairie du Sac.

In 1961, the State of Wisconsin received the Portage Canal and the upper Fox River to Eureka by QCD from the United States, Department of Army, without any provisions for funding or maintenance. In March of 1981 the Governor designated the Department of Natural Resources as the governing authority.

In 1983, the Portage Canal became part of the Downtown Revitalization. The Portage Canal Society and the City working together made plans for restoration of this historic site. To date the canal banks are cleaned up, as is much of the waterway, boat landings have been constructed, two bridges built, walkways along the first two downtown blocks of the canal, signage, flag pole, flower boxes on bridge, trees, shrubs and flowers planted. Another big plus is that the south bank of the canal will be part of the Ice Age trail.

On May 24, 1985, the Fox-Wisconsin Heritage Waterway Park Corporation was formed to promote a linear park from the Wisconsin River Locks to Green Bay.

Many of the cities along the Fox are taking a new look at the canals and locks. Friends of the Fox have formed a group to keep the lower Fox locks open.

The closed locks are waiting for some caring community to reopen them.

Berlin Boat Club — A Unique Organization

The Berlin Boat Club was formed and organized in 1950 in Berlin, Wisconsin by interested families, for safe river cruises and restoring Fox River Navigation.

From the year of 1950, many things took place on the Upper Fox River, to stop and hinder navigation on this beautiful river, such as: fixed type bridges in Berlin and Princeton areas. The closing of many of the opening type bridges from Omro to Princeton, and the BIG BLOW of the closing the locks from Portage to Omro, a total of eight.

This might have stopped even the most dedicated organization, but not the Berlin Boat Club. Under the leadership of great officers and dedicated members, and with the help of U.S. Congressman Melvin Laird and Governor Vernon Thompson, the Eureka Dam and lock were repaired. The Eureka Lock was reopened in 1958, under the lease and operation of the Berlin Boat Club. Since 1958, the club has leased, maintained and operated this lock. It is the only Private Boat Club known to do this without any State or Federal Funds.

In 1976, the Club took over one more big task. This was to completely rebuild the lock gates, sills and working parts of these gates. This was a project that many said could not be done by an individual club. But, with dedicated members, and the aid of interested boaters and other people in the area, this was accomplished. The Corps of Engineers estimated this as a \$80,000 plus pro-

PORTAGE CANAL

This item was sent us by Frederica Kleist to show what is being done to rejuvenate the historic Portage Canal. Frederica was honored as the recipient of the 1986 State Historical Preservation Achievement Award for her efforts in the preservation of the Portage Canal.

June 26, 1986: Here at Portage, Wisconsin. It has been a busy time with the canal project. The first block of the canal has retaining walls on both sides of the canal repaired. After the canoe races this weekend, will start on the second block. Both blocks will have a walkway along the canal. Then, the south bank of the canal will have a hiking trail, which will join the Marquette Boy Scout trail on the east end of the canal. The Heritage Trail Council is working to have the canal hiking trail included in the Ice Age Connecting Trail. Trees and flowers have been planted along the downtown portion of the canal. Historic signs have been placed at both canal bridges. A flag pole has been placed near the 51-16 bridge. An old fashioned lamp has been installed near the footbridge for the elderly. Historic Ways signs have been placed along the canal route. An observation platform has been placed along the east end of the canal, also, in that area a footbridge for foot traffic from one bank to the other. Three boat landings are now in place. Flower boxes have been placed on the 51-16 canal bridge. Much more landscaping is planned for next year. There hasn't been much canoeing on the canal this summer as the water had to be drawn down on account of construction. There has been a crew of nine Wisconsin Conservation Corps working on the canal. The Wisconsin National Guard stationed in Portage has helped get trees out of the canal. The Canal Society and Canal Task Force have taken an active part in the above mentioned projects, along with City, County and State funding.

ject. Again, this was done without State or Federal funds!

The Club not only operates the Eureka Locks but furnishes and installs navigation buoys from Berlin to Lake Butte de Morris.

The Club has promoted and helped pay for the river wall, boat slip, and mooring facilities in the Berlin Riverside Park.

To do this takes a lot of hard working members and a lot of hard earned money. The Club holds an annual Corn Roast each year to raise funds that it may continue to keep the Upper Fox open for navigation, at least to Berlin.

By the way, our gates are not hand operated. They are electrified — the only ones on the Fox River. Again no State or Federal Aid or Funds.

Most important is our Annual Corn Roast which was held August 16, 1987 with proceeds used to operate and maintain the Eureka Lock and locktender's house. The Club has also just had the boat slip in the Riverside Park at Berlin redredged at a cost of slightly over \$1,000.

The lock opened May 23rd and closed on September 27th for the 1987 boating season. Locktender and lock hours are 9:00 A.M. to 8:00 P.M. on Saturdays, Sundays and Holidays. Other times by appointment. The Eureka Lock phone number is 414-685-6369.

The information for this article was furnished by Mary Kirchhoff; sent us by Frederica Kleist.

LIVING HISTORY: THE MUSKINGUM RIVER



Only muscle power is used in the operation of Muskingum River locks.

Text by David F. Ross
Photographs by Mary C. Reyes

American canal enthusiasts generally feel fortunate to be able to preserve any artifacts at all from the golden age of inland waterways in this country. Those who have cruised the historic waterways of England and the European continent are especially aware that ours is a culture and economy of disposables. Old neighborhoods, old standards, old canals, old automobiles—they are merely junk to us, to be torn down, buried, rooted out, and if possible forgotten. Canal societies such as the A.C.S. are hard pressed to keep the few remaining relics of the time when the waterways were the nation's vital circulatory system. If we can persuade some public authority to create a park where a few miles of canal still remain, perhaps even with the skeleton of a lock in place, we celebrate a great victory for the preservation of the national heritage. At the same time, however, we lament that the best we can do in most cases is to save what A.C.S. member Bev Morant calls "canal cadavers," in contrast to our old-world cousins, whose obsolete commercial waterways are still in service for recreational navigation.

The good news is that we do still have in the United States at least one riverine canal that has remained essentially unchanged over a century and a half and that is still in operation. Ohio's Muskingum River was only one of the many feeders of the Ohio River which were canalized during the period between the completion of the Erie Canal (in 1825) and the financial crunch of 1842. On a few of them, commercial traffic has continued, with the result that the original locks and dams have been replaced by a more efficient system, with higher lifts and fewer but larger locks. On most of the others, the original navigational improvements have long since been removed or allowed to decay. Only on the Muskingum and the Kentucky have the original locks continued in use, and the Kentucky is now under a death sentence (see *American Canals*, no. 61, pp. 10-11, and no.

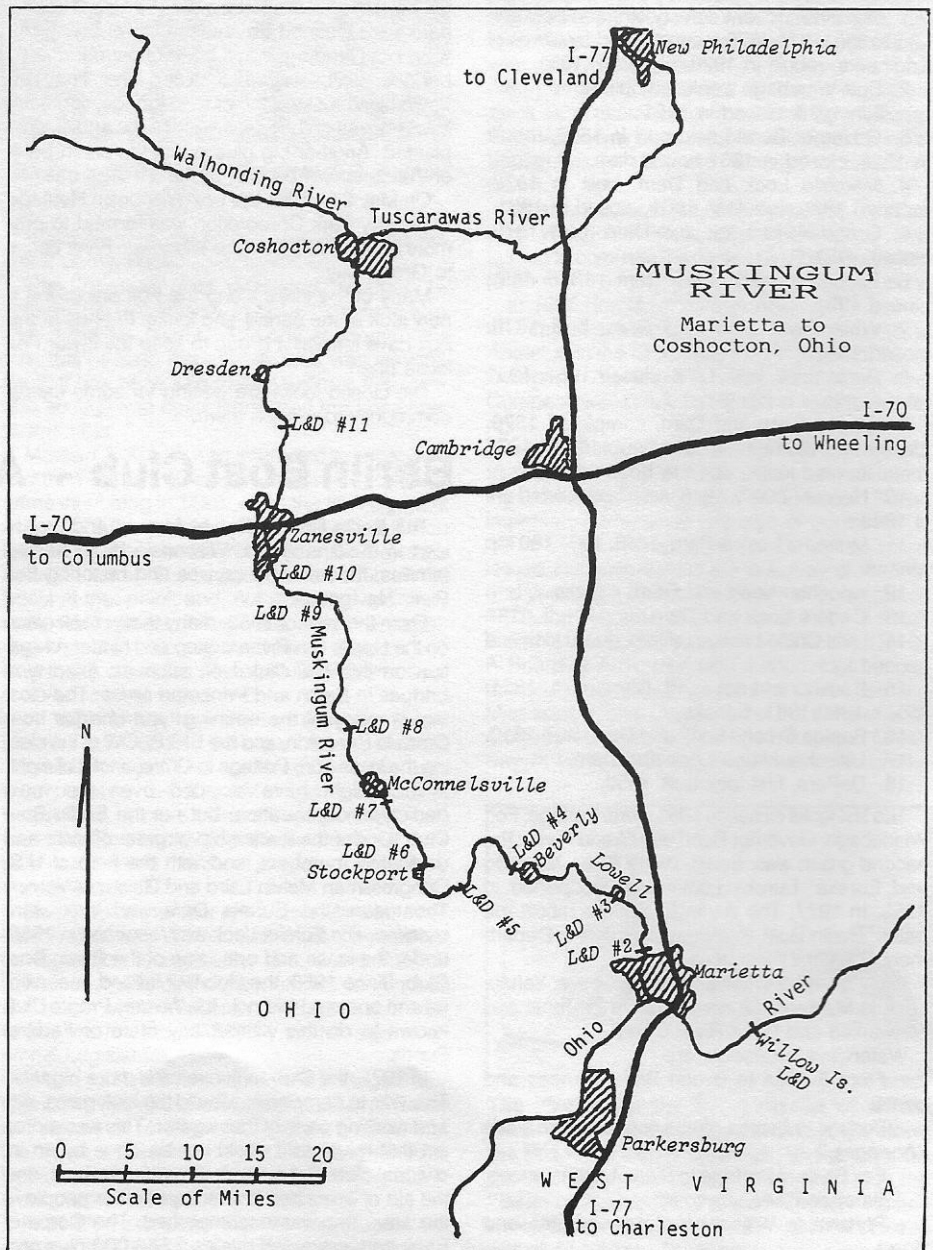
62, pp. 6, 7, and 9). Canal preservationists and boating enthusiasts alike have the State of Ohio to thank for this unique living museum. There is, unfortunately, reason to believe that the State of Ohio is insufficiently aware of our appreciation.

The navigational history of the Muskingum goes back to the earliest settlement by people of European origin in the Northwest Territory, and even beyond that. Native Americans used to travel by canoe from the Ohio River to Lake Erie via the Muskingum and its northeastern tributary, the Tuscarawas, which brought them to within an eight-mile portage of the Cuyahoga, and thence to Lake Erie. This route was very nearly duplicated for barge traffic when the canalized Muskingum was connected by a side cut at Dresden to the Ohio-and-Erie Canal and opened to traffic in 1842.

The settlement of whites in the Northwest Territory was prohibited prior to passage of the Northwest Ordinance in 1787. The flood of settlers that followed legalization had as their first target the Muskingum River. Marietta (originally Adelphia, renamed to honor the Queen of France, Marie Antoinette) celebrates its bicentennial in 1988, and

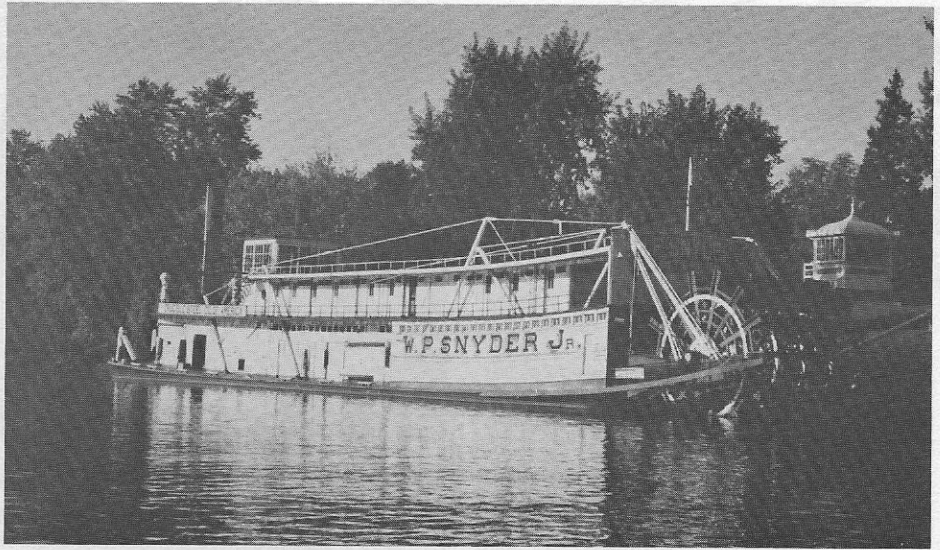
other towns along the Muskingum are not much younger. Zanesville was briefly the state capital before Columbus came into existence. Visitors to the Muskingum, whether by land or water, should stop at Marietta's Ohio River Museum for a more thorough and vivid immersion in the maritime history of the region. Waterborne visitors can tie up to the side of the W.P. Snyder, Jr., a sternwheel, steam-powered towboat which is one of the museum's exhibits: the "no docking" sign does not apply to museum visitors.

Paddlewheel boats are almost commonplace on the Muskingum. The Becky Thatcher, a restaurant and showboat, is moored just below the W.P. Snyder, Jr. at Marietta. Tying up to the Becky Thatcher is not allowed, but in 1988 there is supposed to be an adjacent municipal dock. Then there are a couple of operational paddlewheel excursion boats, the Valley Gem, based at Marietta, and the Lorena, based at Zanesville. Several private boaters along the river also have either acquired or fashioned for themselves paddlewheel vessels. On our most recent cruise of the Muskingum, we saw the only paddlewheel catamaran in my

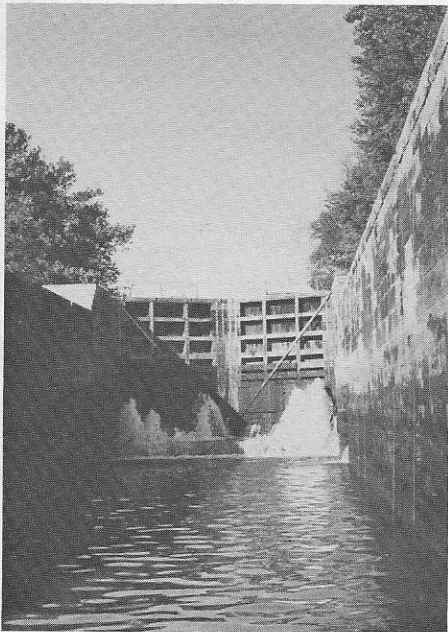


experience—or as some prefer to call it, a paddlewheel pontoon boat.

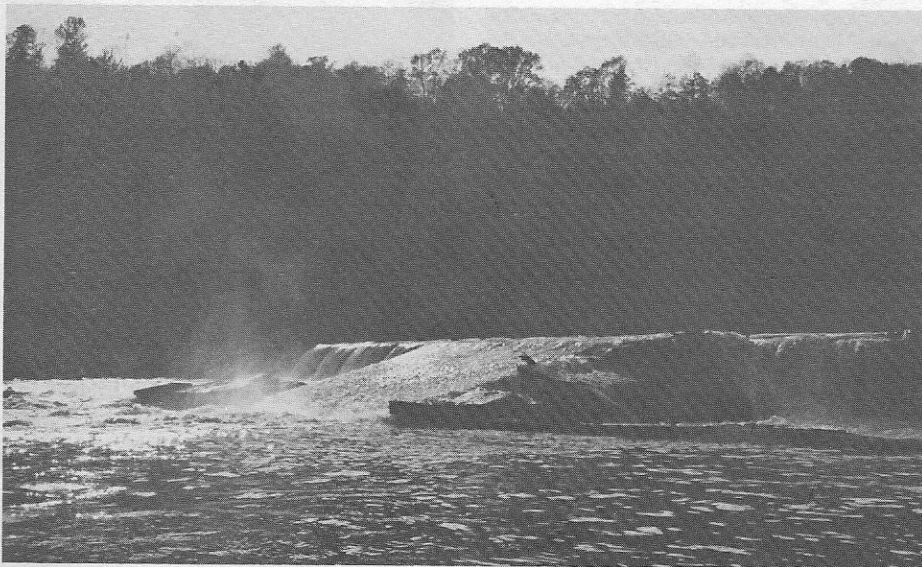
River transport was the most economical for the farmers, pottery makers, and other inhabitants of the Muskingum Valley, as long as it was the only transport available. Canalization restricted the river to small packets which could fit into the 35 by 150 foot lock chambers, and imposed 11 lockage delays over the approximately 95 navigable miles of the river, but even so business thrived, and the state earned a profit from tolls as long as more efficient railroad service was unavailable. Competition became effective in about 1848, and the decline in river traffic, revenue, and maintenance was rapid thereafter. Between 1861 and 1878, the state leased the navigation system to a private firm, but with no better results. At last, in 1886, the federal government was persuaded to take over the moribund waterway. Repairs were completed in 1891 on locks 1 through 10, and a new lock and dam number 11 were built in 1910. Lock and dam number 1 were subsequently removed when construction of the Belleville dam on the Ohio River



The W.P. Snyder, Jr., a stern-wheeled, steam-powered towboat originally based in Pittsburgh, is now an exhibit at Marietta's Ohio River Museum.



Attractive fountains demonstrate the urgent need for major rehabilitation of the locks.



The decrepit condition of dam number 7 makes good scenery but bodes ill for the future of the waterway.

raised the water level sufficiently to submerge them. Otherwise, what exists on the Muskingum today is the same system of locks and dams that the state built between 1836 and 1841, repaired but not modernized 50 years later.

For several years after the locks came under the jurisdiction of the U.S. Army Corps of Engineers, there was actually a renaissance of river commerce. Coal was found on the upper Muskingum and barged down to the Ohio Power Co. plant at Philo, while sand and gravel were barged up from the Ohio to construction sites along the river. All this was over by 1950, however, and the corps discontinued lockage operations in 1952 at locks 2 through 11, and in 1954 at lock 1.

There is not a lot of industry along the Muskingum, but there are a lot of people, and by the 1950s many of them were boat owners. What had been to them the gateway to the world was now merely a succession of small lakes, and they felt the deprivation keenly. Through such organizations as the Zanesville Yacht Club, they went to work on their legislators, and by 1958 the Muskingum River Parkway had been created and the locks were back in operation, this time strictly for

recreational use. The parkway is now a part of the Ohio State Park system.

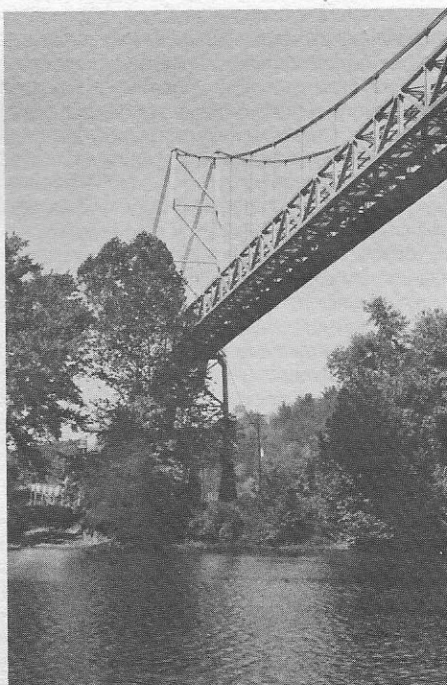
Ohio is not the only state which is in the recreational waterway business. New York's Barge Canal system, still commonly known as the Erie Canal, is primarily a recreational waterway today. A somewhat different sort of decision-making process was involved here, since the Erie had never passed out of state control and has never been declared a state park, but a similar commitment does seem to have been made to its preservation by the state government. This example may have helped to persuade Ohio to preserve the Muskingum, just as 150 years ago the building of the Erie Canal influenced Ohio to canalize the Muskingum in the first place. The South Florida Water Management District operates the Kissimmee Waterway for purely recreational navigation, but navigation is not its principal purpose. As Florida state policy alternates between drainage of wetlands and restoration of wetlands, the Kissimmee (which is a drainage channel) may lose its navigational capacity. Michigan's Inland Route is maintained for recreational use by a coalition of state and local agencies, among which the state operates one of the two locks—but on a toll basis. Kentucky's state government has now for three years been considering an appeal of the death sentence on the Kentucky River, and the final verdict is not yet in. Ohio's Muskingum is thus one of a small number of models for the preservation of obsolete waterways, with certain unique features: the preservation of not merely the original lock chambers but the original lockage technology; and the use of the state park designation to give at least the appearance of permanence to the arrangement.

In making its decision 30 years ago, the government of Ohio employed a firm of consulting engineers to advise it. The firm presented two plans for the rehabilitation of the system: a minimal plan, which would enable the state to operate the locks for 10 years before undertaking a major investment; and a plan for a major rehabilitation at the outset, which would suffice to keep the locks operational for 50 years. The state selected the first plan, and accordingly should have either abandoned the project in 1968 or invested in a major rehabilitation at that time. It did neither. For the past two decades the locks have been continued in use while fully depreciated, and the results are clearly evident. Lock leakage can pro-

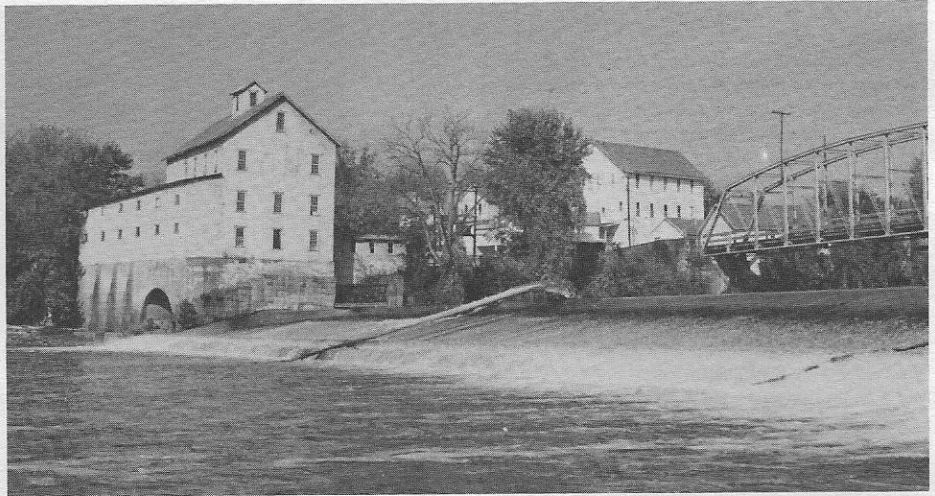
duce quite spectacular visual effects, but its underlying message is ominous. Just two days after we completed our most recent cruise of the Muskingum, lock number 4 was shut down without notice because leakage under the sill made the upper gates inoperable. Operational funding, once in a governmental budget, tends to become routine; but capital projects are never routine and seldom uncontroversial. The Zanesville Yacht Club and its allies along the river have found that lobbying for waterway preservation is not a historical event but a permanent career.

The first step in planning a cruise of the Muskingum is to check your schedule with the parkway office. The days and hours of lockage vary with the season as well as with the condition of the locks, and at certain times lockage is provided only with advance notice. A.C.S. member Wilson Greatbatch recently cruised the Muskingum by canoe, and had to go ashore at every lock and hunt up someone to operate the gates. A folio of navigation charts can also be purchased from the parkway office, and if you wish they will furnish a form which, when signed by all 10 locktenders, can be exchanged at the Zanesville Yacht Club for an impressive certificate testifying that you are a fully qualified Muskingum River Navigator and Shallow Water Sailor. Our own voyages of the Muskingum have been made on board the *Rosa Parks*, a historic aluminum Lone Star cruiser, vintage 1955, which, like the Muskingum, has been called back from the grave and, also like the Muskingum, requires constant maintenance to stay afloat. With its somewhat younger 70 h.p. Johnson outboard, it can do about 28 knots; nevertheless, we find that four days is about the right amount of time to allow for a round-trip cruise of the Muskingum. You could do it in less, but there is no certificate awarded for speed, and it would be a job rather than a pleasure trip.

The sights along the Muskingum are more placid than exciting. As one of the river's local publicists has expressed it, "No frowning precipices darken the water." It is all rolling wooded hills, farms, small towns, and clusters of vacation cottages. The most dramatic sights are provided by the moving water itself as it struggles to recapture its freedom from man-made constraints:



The only coal now moving on the Muskingum crosses the river by conveyor belt.



The mill at Stockport is still a working grist mill, but now relies on electricity rather than water power. Its side provides a record of high water on the river.

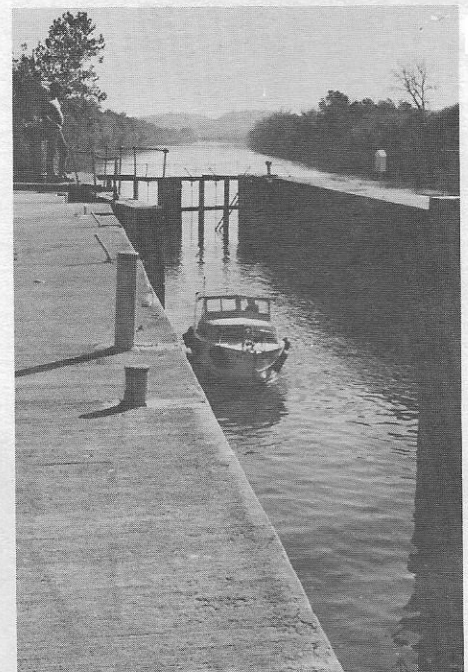
cascades where dams have begun to crumble, and fountains where locks have begun to fail. The bucolic charm of the river is enhanced by the absence of the trash with which Americans express their contempt for nature along so many waterways, and by the relative absence of heavy industry. The most conspicuous industrial establishment is the Ohio Power plant at mile 28.5, where a suspension bridge supports a conveyor belt carrying coal across the river—the only coal now moving on the Muskingum. More typical of the valley is the old mill at the dam (number 6) in Stockport. Although no longer powered by water, it is still a working grist mill. The lack of trash is no mere happenstance. An annual clean-up organized by community volunteers has produced this effect. It illustrates the concern which the residents feel for the river parkway, and their desire to present it to visitors in the most favorable light.

Hospitality is a ubiquitous characteristic of the Muskingum. All along the river, motels, restaurants, bars, and grocery stores have put out docks for the convenience of boaters. At Malta, the local business association has created a boaters' park—no dock, as yet, but the bank is suitable for tying up to a tree and stepping ashore for a picnic or a shopping trip. The Zanesville Yacht Club offers daily guest memberships to nonlocal boaters.

Navigational hazards need also to be noted. The river itself has never been dredged, but four of the locks are on canals paralleling the river which do require dredging and receive it less frequently than they might. Shoaling seems particularly a problem at the upper end on the landward side of the canal leading to lock number 3. Both entrances to lock number 11, which is not on a canal, were nearly blocked by shoals on the landward side at the time of our latest visit. There is a low railroad bridge at the upper end of lock number 10's canal which will present a clearance problem for houseboats and some cruisers—just which ones depends upon the height of the water. Normal clearance is 11 feet, but it can be considerably less. The bridge will be raised on 3-hours notice, given through a locktender. Between locks number 10 and 11, around mile 83, there are rocky ledges in the center of the river, shown on the navigation charts but not marked with buoys. Above lock number 11, you are on your own. The charts indicate that the foot of Copeland Island (mile 89) is the head of navigation. Depending upon the draft of your boat and the height of the water, you may be able to go considerably farther, perhaps even as far as Coshocton. We have been as far

as Dresden, the original head of navigation, during high water. If you do venture into this stretch, be prepared for strong currents—it is not altogether reassuring to wake up in the morning in a different place from where you anchored the night before.

For further information, including lockage availability and charts, contact the Park Manager, Muskingum River Parkway, P.O. Box 2806, Zanesville, Ohio 43702, phone 614 452 3820 or 614 452 3147. When ordering navigation charts, enclose \$3.00.



The "Rosa Parks" passing from the lower to the upper chamber of the tandem lock (Lock Number Ten) at Zanesville. Only one gate of the center pair of gates is open to pass the "Rosa Parks."

For additional reading and history on the Muskingum River please refer to AMERICAN CANALS Number 38, page 3; AMERICAN CANALS Number 39, pages 6-7; or BEST FROM AMERICAN CANALS Number 11, pages 52-53.