

AMERICAN CANALS

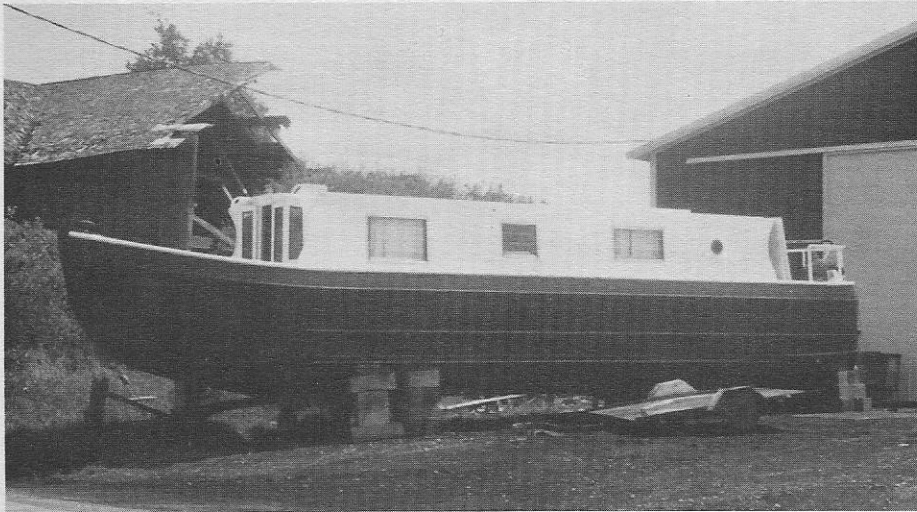
BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 62

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

AUGUST 1987

“HIRE-BOATS” FOR ERIE CANAL



This photo, made by Walter Meseck last May, shows one of Peter Wiles new English-type Narrow Boats under construction. Several of these boats are now in operation.

Mid-Lakes Navigation Company of Skaneateles, New York, headed by Captain Peter Wiles reports that they are introducing a fleet of three “hire boats” to their compliment of vessels which ply the Erie Canal and various lakes in upper New York State. The new vessels are 41-foot long, steel hulled, and styled to resemble the English Narrow Boats. They are designed to carry six people for a week’s vacation on the canals and will allow individuals to explore the waterways on their own. The new boats are outfitted with “all the comforts of home” — hot-water showers, complete galley

for cooking meals on board, sleeping berths, etc.

Also, Peter Wiles has assisted in resolving the question about what to do with the “City of Birmingham” — a traditional narrow boat sent over to the Vancouver World’s Fair in 1986 by the city of the same name in England. This truly English vessel is already touring the New York State Canal System with the cooperation of Brummagum Boats of Birmingham; the City of Birmingham, England; the British Waterways Board; the New York State Department of Transportation; and Mid Lakes Navigation Company, Ltd.

FARMINGTON CANAL CORRIDOR

ACS Director Art Sweeton has just sent us the following clipping from the Farmington Valley Herald for June 25th, 1987:

Connecticut environmental, historical and recreational groups, calling themselves Citizens for the Preservation of the Farmington Canal Corridor, have formed a coalition to promote the preservation of the 65-mile-long corridor from New Haven to Massachusetts for public uses, including a multiple-use trail.

The coalition includes: Sleeping Giant State Park Association, Sierra Club Connecticut Chapter, the Connecticut Trust for Historic Preservation, PROTECT, New Haven Preservation Trust, Appalachian Mountain Club and People’s Action for Clean Energy (PACE). Combined memberships of these groups total more than 17,000.

The Boston and Maine Railroad Corporation, current owner of the southernmost section of the corridor, has filed with the Interstate Commerce

Commission to abandon 15 miles of the corridor in New Haven, Hamden and Cheshire.

The Citizens for the Preservation of the Farmington Canal-Rail Corridor coalition is pressing for the protection and multiple use of the entire corridor, including the section currently proposed for abandonment.

The Farmington Canal is listed on the National Register of Historic Places. It opened for business in 1821. Eli Whitney was on its board of directors, James Hillhouse was the canal’s superintendent, and Henry Farnham was its engineer. The purpose of the canal was to move freight and passengers from New Haven harbor to Farmington and then through northern Connecticut to Northampton, Mass.

Horse-drawn barges carried large quantities of

PRESIDENT’S MESSAGE

I hope some of you have taken advantage of the long drought by getting out in the river to look for old canal boats and dams, and for sluices and wing dams from the beginning of our canal era two centuries ago. There’s a lost civilization out there, waiting to be rediscovered. Whenever the local canoeists say the water is too low, that’s the time for canal explorers to walk the river beds. In fact, as I write this, a crew of Virginians is mapping batteau sluices and wing dams on the Roanoke River above Brookneal and repairing some of them in preparation for a batteau rally. This is probably the first time these sluices have been repaired since they were abandoned in the 1830s.

Thanks to ACS Director Gibson Hobbs, we also had a rare look at part of the Kanawha Canal which is usually covered by Cushaw pond on the James River. I’d rather not have our historic canal sites inundated, but they can become “time capsules” as a result, potential sites for future archaeologists to study, with timbers and occupation layer intact and free of vegetation. We need to make sure such sites are not forgotten even if they are silted over — one of the goals of our American Canal Guide.

Don’t leave home without your ACS membership card! Dr. Al Celley took his to Panama, and it helped him get in to see the exhibits in the canal’s administration building in Balboa when it was closed. He also put us in touch with Mr. Willie K. Friar, Deputy Director of Public Affairs for the canal, who was kind enough to put together an hour-long videotape for ACS, composed of four films on the canal, including an impressive fast-motion voyage through the canal and a film on canal maintenance. You’ll want to see them all. This VHS tape is available for loan, but we need an Audio-Visual Committee Chairman to handle it and our other tapes and films. Any volunteers? And don’t forget that Terry Woods is still looking for a new Chairman for our Canal Index Committee!

Bill Trout

merchandise to and from the interior, adding to New Haven’s already well-developed inland trade.

As rail traffic became more important in the mid-19th century, competition from the railroad became more severe and the cost of running the canal too high.

The stockholders of the Farmington Canal voted to replace their canal with a railroad line. This railroad was primarily developed by Joseph Sheffield, who founded Yale’s Sheffield Scientific School.

In the post-Civil War period, as the railroads gained even greater importance, more track was laid. In 1887, the line passed into the hands of the New York, New Haven and Hartford Railroad.

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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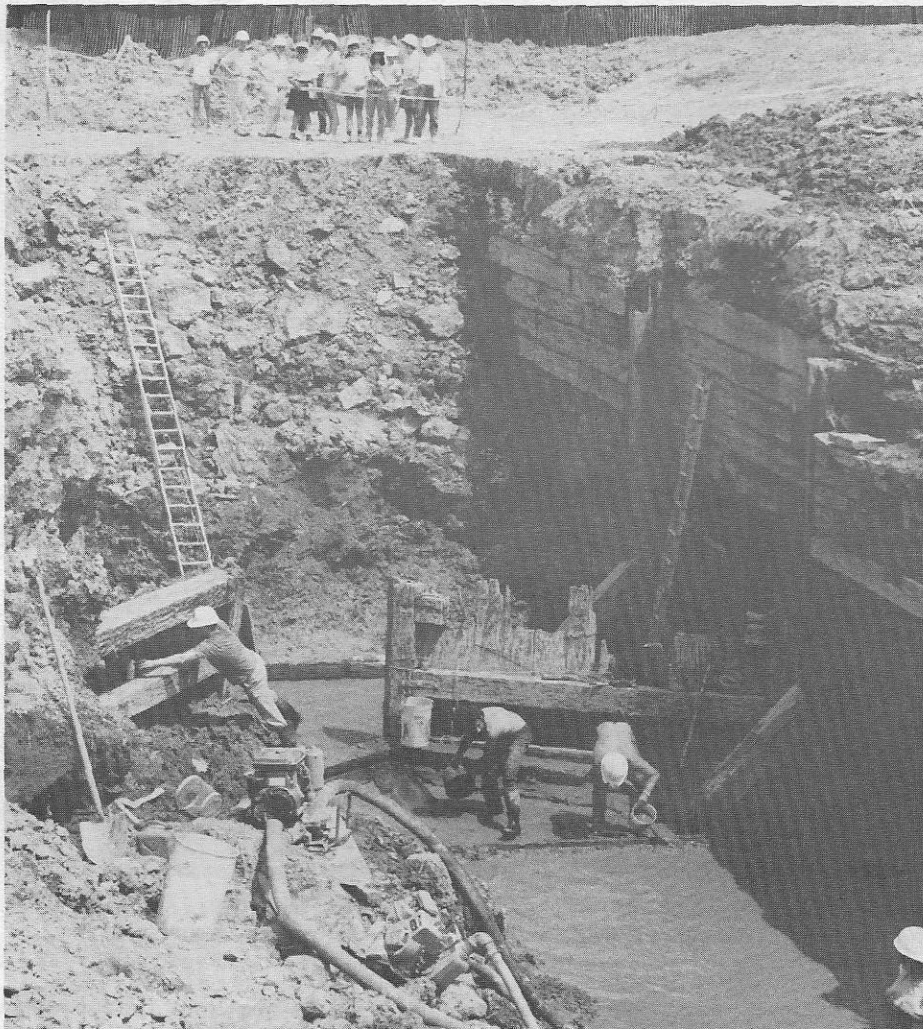
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ACS Growth Continues

We are pleased to report that, since its inception in 1972, the American Canal Society continues to grow — with total membership now approaching 850, in the USA, Canada and the United Kingdom. It has become a truly international organization!

FIRST WELLAND LOCK EXAMINED



This photo was sent us by the Welland Canals Preservation Association in St. Catharines, Ontario, to show the archeological work they are doing this summer on one of the locks of the First Welland Canal, built 160 years ago. When all information has been photographed, measurements made, etc., the lock will be re-filled to preserve it. Because of the location of the lock, close to Lake Ontario, continual pumping was necessary to permit examination of the floor of the lock, and the remnants of the original wood gates.

Civil War Exhibit at Canal Museum

What do the Battle of Gettysburg, cotton, and the Erie Canal have in common? All three were pivotal elements in determining the outcome of the Civil War. On August 11, the Erie Canal Museum opened a major special exhibition exploring the relationship between the Erie Canal and the Civil War. The Exhibition will continue through November 30, 1987.

In the prewar years many of the towns along the Erie Canal actively supported the abolition of slavery. Abolitionist speakers travelled the canal and both the Erie and Oswego Canals were used by fugitive slaves in their escape to Canada and freedom.

On the eve of the Civil War the North was experiencing great change as it moved from an agricultural to industrial economy. The state's Erie Canal, opened in 1825, linked the east with the developing midwest. By 1861, the Erie Canal was one of the most important transportation routes in the nation.

When the call to war was sounded, the agricultural products of the midwest which had moved south on the Mississippi River, now travelled the Erie Canal route. The canal was a protected waterway, safely located far from the battlefields.

The Erie Canal was able to accommodate the important and ever-increasing amount of grain the midwest was producing for export to European nations, including England and Russia, whose grain harvests were poor. The grain was shipped east via the canal to New York City, where it was transferred to ocean-going vessels to be transported to Europe, whose grain purchases allowed the North to support its troops.

The Erie Canal also carried many more products important to the northern war effort. As the people of New York State united to save the Union, many of the cities and towns along the canal grew, undergoing the transformation into an industrial society, a transformation brought about, in large part, by the Erie Canal.

THE MISSISSIPPI RIVER

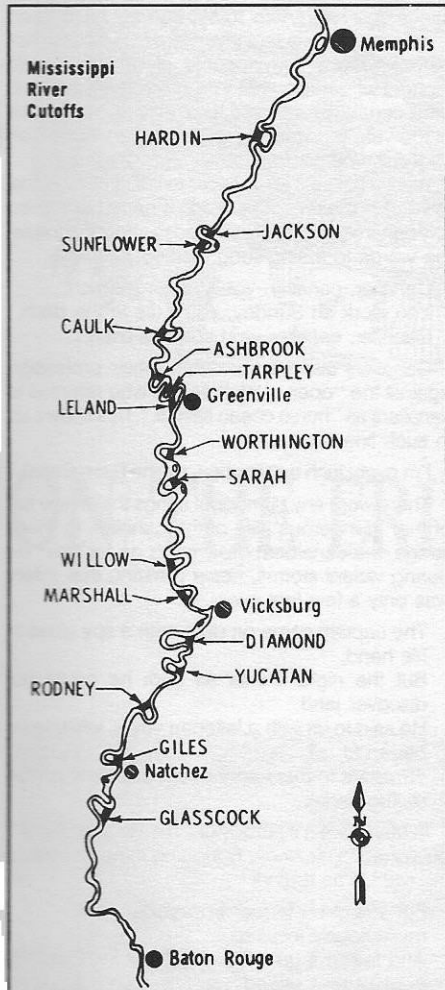
The Mississippi River, second longest river in the United States, draining approximately two-fifths of the total U.S. land area, has been important historically and commercially since the days of the Spanish and French occupation. It has always been the main line of travel between the Ohio River, the Central States and the great port of New Orleans. With the opening of the Illinois and Michigan Canal, it also began carrying water traffic to and from the Great Lakes.

The Spanish had opened a short canal east from New Orleans in 1785 to avoid the silt-filled delta of the Mississippi River, known as the Carondelet Canal. After the purchase of the Louisiana Territory by the United States in 1803, numerous unsuccessful attempts were made to clear a channel from the Gulf of Mexico into New Orleans sufficiently deep to pass large ocean-going vessels into that port. The first satisfactory channel, thirty feet deep, was engineered by James B. Eads, best known for his bridge across the Mississippi at St. Louis (1873 to 1875). He accomplished his objective by building jetties through the Delta in such a way as to scour the channel with the outflow of the river.

After the Civil War, the populace of lower Mississippi was in desperate straits. Ravaged by war, the area had never recovered from heavy pre-war floods. The river itself was still choked with the wreckage of both Union and Confederate gunboats and other river-borne vessels, sunk during



The Chain of Rocks Canal, built to by-pass a dangerous, swift-running reach of the Mississippi which contained many underwater ledges of rock. Completed in 1953, this short canal contains the southernmost lock (Lock No. 27) in the upper Mississippi lock-navigation system. (Map obtained from the Corps of Engineers by Walter Meseck.)



Man-made "cut-offs" on the lower Mississippi. Begun in the 1930s, these sixteen "cut-offs" have reduced total river length by 170 miles. (Courtesy Falk Corporation)

the heavy fighting below and above Vicksburg. River ports had been burned or ravaged by violent engagements on land and water. The area was still heavily-flood prone. In 1874 Congress authorized surveys of the river for both navigation and flood control and in 1879 formed the Mississippi River Commission. The Commission had seven presidential appointees, three from the Army Engineer Corps, with instructions to "deepen the channel, protect the banks, prevent destructive floods, and promote and facilitate commerce." The Commission made its first recommendations in 1880, which called for a complete system of levee and channel improvements, and the work began. After a flood in 1912, levees were raised another three feet, but a severe flood in 1927 proved this was not enough. The 1928 Flood Control Act authorized extensive further improvements to the river, both for flood control and improved navigation channels, between Cairo, Illinois, and New Orleans.

Meanwhile, between 1884 and 1895, the Army Corps of Engineers constructed five huge dams and reservoirs at the headwaters of the Mississippi to aid in navigation in time of low water, enlarging them and adding a sixth dam-reservoir in 1911. Following a careful study of upper Mississippi improvements in 1930, Congress approved construction of a nine-foot navigation system between Minneapolis and the mouth of the Illinois River. This system included construction of twenty-eight dams and locks (600 by 110-feet) to create full "canalization" of the upper river.

This project has been in operation since 1940, with resulting rapid increase to river traffic on the Mississippi above St. Louis. In 1939 only 2.4 million tons of commodities were barged between Minneapolis and St. Louis. In 1970 this had increased to 54 million tons. Most of the goods transported are petroleum products, coal and grain. Many new harbors, terminals and riverside industries have developed along this portion of the Mississippi. Frequent "bottlenecks" at Lock and Dam Number 26 (Afton, Illinois) have indicated the need for larger locking facilities at that point. River traffic between Cairo and New Orleans continues to grow as always. A longer navigation season above St. Louis is presently obtained by release of water from the upstream reservoirs to break the ice jams. Much work remains to make the entire Mississippi navigational year-round.

Our ACS River Explorer, Walter Meseck of Fort Lee, New Jersey, stopped in at Afton, Illinois, this summer to have a look at the New Lock 26 now being constructed there. He reports a lot of work has already been done, but that it will probably be another two years before the new lock is fully operational.

Walter says that grain shipments at this point on the Mississippi are picking up. He noted 15 tows above the old lock #26 waiting to move south, and about seven tows below the lock waiting to move north. Many of these tows require double lockage for the barges and a separate lockage for the towboat — hence the bottleneck at this point in the Mississippi System.

SONGS OF THE "HORSE-OCEAN SAILOR"

By Dr. William R. Hullfish

Dr. Hullfish, Professor of Music at the State University of New York, College at Brockport, is also a writer and singer and leads his own canal-ballad singing group known as the "Golden Eagles String Band." He is the author of *THE CANALLER'S SONGBOOK*, recently published by the American Canal and Transportation Center.

Come all ye dry land sailors and listen to me song,
It's got a thousand verses but I won't detain ye long,
It concerns the adventures of this Sou' Lisburn barge,
As I sailed as a man before the mast on the good ship Calabar.

Before the drone of motors drowned out the singing, songs echoed up and down the length of America's canal system. These songs tell us much about the nature of the canaller's work, his attitude toward himself, and the attitude of others.

Because the nature of the canaller's work was not one of hauling in anchors, lowering boats over the side, raising sails and hauling up yardarms, canal songs reflect more of filling in the slack time rather than hauling in slack sails. Unlike sea shanties, the canal repertoire contains almost no work songs. There is nothing resembling capstan shanties, long and short haul shanties, or other sailing work songs.

Using Borrowed Melodies

There are also very few canal songs with original melodies. Unlike sea shanties, whose melodic form comes from the type of work being performed, canal songs take their melodies and form from the popular music of the day.

Canallers apparently whiled away much of the time between towns and locks by making up personal songs to familiar melodies. Songs with dozens of verses, detailing a particular canal, are more common than universal songs adopted (and adapted) by generations of sailors. Canal songs have an individual nature about them rather than the universal, group singing approach.

Even canal songs that do contain a common chorus, which might have been sung by a group, often change the words to each chorus — a practice which discourages group singing. Many of the



canal songs with singable choruses may not have been sung by canallers at all, but by professional singers.

Take this nice singable, call and response chorus from "Oh! Dat Low Bridge."

Look out, dat low bridge,
(Look out, dat low bridge)
Look out, dat low bridge,
(Look out, dat low bridge)
The captain, cook and all the crew,
Oh, duck your head way down,
The fastest ship in all the fleet,
Two Sisters come to town.

Even though the call and response form is used in many work songs, in this case it is more typical of minstrel show music. "Oh! Dat Low Bridge" was a song from Braham and Harrigan's 1880 minstrel show, *The Grip*.

A Typical Canal Song

More typical of canal songs is the popular epic song of the Nineteenth Century, "The Raging Canal." This song has no chorus, no call and response refrain and requires the singer to remember dozens of verses. In short, a song meant to be sung by one person.

Verse 1:

Come listen to my story ye landsman one and all,
I'll sing to you the dangers of that raging canal,
For I am one of many who expects a watery grave,
For I've been at the mercy of the wind and of the wave.

Verse 4:

The Captain told the driver to hurry with all speed,
And his orders were obeyed, for he soon cracked up his lead,
With the fastest kind of driving, we allowed by 12 o'clock,
We'd be in Schenectady right bang against the dock.

Verse 13:

Now if I live a thousand years, the horrors of that night,
Will ever in my memory be, a spot most burning bright.
For nothing in this whole wide world will ever raise my gall,
Except the thoughts of my voyage on the raging canal.

Although there is no proof that "The Raging Canal" was ever sung by canallers, it is very similar to songs collected from canallers, such as Captain Pearl R. Nye's epic, "The Old Canal." Both songs use borrowed tunes. "The Raging Canal" is based on "Caroline of Edinboro Town" and "The Old Canal" borrows the tune to "The Little Old Log Cabin in the Lane." Captain Nye's song has seventy-six verses and documents the entire geography of the Ohio-Erie Canal.

Solo Versus Group Songs

Instead of songs to coordinate a group effort, the canallers used more solo songs. Unlike large sailing vessels, the canalboat had a small crew and jobs were individual, rather than group chores. The driver walked along the towpath and the steersman stood at the tiller.

It must have been common practice to take a familiar ditty, like "Pop Goes the Weasel," and make up verses to fit the particular canal. In this instance, the canal was the Delaware and Hudson.

Round and round the Wurtsboro bend,
The big boat chased the squeezer,
Pat Flax's boat had passed them both,
Slicker than a weasel.
Slicker than a weasel.

The subjects used in canal songs tell us a bit about how the canaller viewed himself and how he was viewed by others. Songs about sailing were, quite obviously, very popular. The mule was also a popular subject and the most sung about crew member was the cook.

Sea Songs

Canallers adapted a number of famous sea songs for canal purposes. True to form, they chose solo songs. "The Dark-eyed Sailor" was easily adapted by changing the word "sailor" to "canaller." Captain Nye changed "The Jolly Skipper" in one sailing song to "The Jolly Boatman." Nye also changed the location of the skipper's exploits from the sea coast to Akron, Ohio.

At least two of Henry Russell's famous sailing songs were adapted to the canal. "A Life on the Ocean Wave," later to become the official song of Royal Navy, became "A Life on the Raging Canal." Instead of the line, "A life on the ocean wave, a home on its rolling deep," it became, "A life on the raging canal, a home on its muddy deep."

One of the reasons for canallers using sailing songs and references to sailing may have been to convince others that they were true sailors. Apparently many townspeople along the canals thought of canallers as little more than gypsies. Most canals were closed for at least a few months of the year so canalling was not even looked on as a full time occupation.

When I asked a 90-year-old resident of the canal town of Brockport, New York, if he remembered any canal songs, he proceeded to chant the following words to a sing-song melody.

Canaller, canaller, you'll never get rich,
You work on Sunday, you'll die in the ditch,
Canaller, canaller, you son-of-a-bitch.

Canallers also had to defend their profession against the "open water" sailors who referred to canallers as "horse ocean sailors." This shows up in such lines as:

I'm every inch a sailor boy, on the E-ri-e Canal."

There were any number of songs that made fun of the "dangerous" life of the canaller. In these songs, the canalboat crew hung on for dear life during violent storms, never realizing that safety was only a few feet away.

The captain came on deck with a spy glass in his hand,
But the night it was so dark he could not discover land,
He said to us with a faltering voice, while tears began to fall,
"Prepare to meet your death this night on the raging canal."

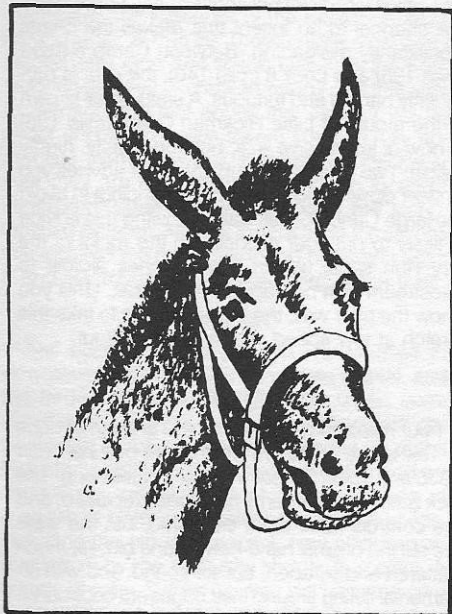
In Mark Twain's parody of "The Raging Canal," published in his book, *Roughing It*, he describes the rescue as follows:

For straight a farmer brought a plank,
Mysteriously inspired,
And laying it unto the ship,
In silent awe retired.

Then every sufferer stood amazed,
That pilot man before,
A moment stood, then wondering turned,
And speechless walked ashore.

An Irish canal song, "The Good Ship Calabar," ends in much the same way.

Then we all fell into the water,
and we all let out a roar,
There was an old farmer
standing on the edge of the bank,
And he threw me the end of his braces,
And he pulled me into shore.
No more I'll be a sailor
and go sail the raging main,
And the next time I go Lisburn,
I'll take the bloody train.



Mule Songs

Before motors took over, canallers sang about their mules, or in some cases, horses. Not all of the songs were complimentary. One song, a parody on the minstrel song, "Never Take the Horseshoe from the Door," warned canallers to "Never Take the Hindshoe from a Mule."

The business end of a mule is mighty ticklish,
Never, never touch him as a rule.
He'll kick you full of holes in seven seconds,
Trust him not there's mischief in a mule.

The kicking mule must have been notorious because he found his way into many songs.

Now this mule he was a daisy,
He pulverized the hog,
dissected seven chinamen,
and kicked a yellar dog.
He kicked as quick as lightning,
And had an iron jaw,
He's just the mule to have around,
to take your mother-in-law.

Captain Nye made up a song about one of his mules that was "cured" of kicking.

He was in the army and there you obey,
But he was like others, got smart by the day,
He sure would act stubborn would balk, kick and reel,
And want to kick you at most every meal,
So all became tired at last of his pranks,
For when he felt like it, would run, break the ranks,
He'd bray like a wild ass on mountain, in vale,
'til a surgeon got wise, cut the nerve in his tail.

Some songs told about the ailments and diseases common to mules.

When I drove a team of spavined mules,
On the E-ri-e Canal.

Some canallers bragged about their team.
Attend all ye drivers, I sing of my team,
They're the fleetest and strongest that ever was seen.
There's none that will toil with such speed down the creek,
Or start at the word of the driver so quick.

Songs About the Cook

Of course, of all the crew, the cook was the most sung about and also the most insulted. The poor cook couldn't do much of anything right. Her cooking was terrible, her disposition was even worse, and her appearance and age were the object of scorn.

The cook she's a daisy, she's dead gone on me,
With her fiery red hair and she's twice twenty-three,
She's crosseyed and freckled, a dumpling and a pet,
We use her for a headlight at night on the deck,
and

The cook we had on board the deck,
stood six feet in her socks.
Her hand was like an elephant's ear,
and her breath would open the locks.
A maid of fifty summers was she,
Most of her body was on the floor,
and when at night she went to bed,
Oh, sufferin' how she'd snore.

One thing that sets canal songs apart from other repertoires is the ever present good humor. Despite bad weather, bugs, insults and long delays at locks, the canallers laughed at it all, and most of all, themselves.

Like a fish on the hook I pine,
On his dull unchanging shore,
Oh, give me the packet line,
And the muddy canal's dull roar.

or

I've traveled all around the world,
And Tonawanda, too.

or

With the beef steak as tough as a fightin' dog's neck,
And the flies playing tag with the cook on the deck.

or

There's gravel on the towpath, hornets in the sand,
Oh, pity poor canallers that's far away from land.

or

The cook she wrung her hands and she came upon the deck,
Saying, "Alas what will become of us, our boat it is a wreck,"
The steersman knocked her over, for he was a man of sense,
And the bowsman jumped ashore and lashed her to a fence.

Because of the individual nature of the canaller's work and there being no necessity to coordinate the work of a large crew, the canal song remained a personal, solo song. The motor drowned out canal singing early in the century so most of the personal repertoires of canallers were lost.

We are fortunate that a few individual collections have been handed down in families or recorded before their authors died. James Lee, author of *Tales the Boatmen Told*, published three or four songs handed down in Captain Peter Lenstrohm's family.

John Lomax collected and recorded the songs of Captain Pearl R. Nye just prior to World War II, and only months before Captain Nye died. Ohio State University recorded over thirty of his canal songs. However, this is the exception rather than the rule. Untold numbers of canal songs died along with the canallers who made them up. The typical final verse of many canal songs has a ring of truth.

Now I'm the only son-of-sea cook,
That's left to tell the tale.

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Oh! That Low Bridge. Front Hall Record, FHR-028.

Songs of Ohio Country. Mark Record, MC1035.



LAST CHANCE FOR THE KENTUCKY (Part II)



A Lock and Dam #10, with the beach and some buildings of the Forth Boonesboro State Park in the right foreground. (Photograph by Corps of Engineers, Louisville District.)

By David F. Ross

This is the conclusion to the article by Dave Ross begun in the May 1987 issue of American Canals.

Locks 1 through 4, which still have limited commercial use, are operated by the Corps of Engineers on a two-shift basis (7:00 a.m. to 11:00 p.m.), seven days a week. The state-operated locks are open from 1:00 p.m. to 9:00 p.m. on Fridays and from 10:00 a.m. to 9:00 p.m. on Saturdays and Sundays. The trick, therefore, is to start early enough on Friday to reach Lock 5 by its 1:00 o'clock opening time. You are now at mile 82, 173 miles below Beattyville, and you have available 30 hours of lockage time to get back to that point by Sunday evening. A 346-mile trip in 30 hours requires an average speed of not quite 12 miles per hour. Allowing for refueling stops and lockage time, if you can cruise at 20 miles per hour, you should manage it easily. You then have all day Monday to get back to the 20th Century and the Ohio River. There are also a few weekends (e.g., Labor Day) when the locks are kept open through Monday.

As you begin your voyage, from the moment you enter the mouth of the Kentucky, you have the impression of slipping back to an earlier, simpler era, before the plague of civilization had begun to overwhelm the majestic beauty of the

natural world. The impression is misleading — if you had navigated the Kentucky a couple of centuries earlier, you would actually have seen more signs of civilization than are evident today (except in a few places). Many of the place names on the navigation charts, where at most you may see a few weekend cottages or an isolated farm, were once busy river ports. This is an area where economic development has proceeded backwards, as in large sections of Nevada, but with the difference that the humid climate and periodic flooding of the river have prevented the preservation of ghost towns. Here, the forest has reclaimed the land. If your imagination is capable of transforming bass boats on slack water into Indian canoes shooting the now-submerged rapids, then you have the perfect setting in which to fantasize yourself as a Joliet or Marquette — or perhaps a nautical Daniel Boone.

Just about a mile and a half above the mouth, however, you will encounter a marina. Don't pass it by unless you're sure you have fuel enough to reach Frankfort, 65 miles and four locks upstream. Neither the 1978 navigation charts nor the supposedly up-dated *Ohio River and Tributaries: Small Boat Harbors, Ramps, Landings, Etc.* also published by the Corps of Engineers, can be relied upon for marinas or any other human creations along the banks. Many were carried off in the record flood of 1979, and others were removed by economic forces when regular operation of the locks was discontinued in 1981. You should also be prepared for the fact that there are no chan-

nel markers, no lights or daymarks, and no directional signs. Channel work, moreover, has been negligible or nonexistent for many years — keep a close watch for snags and floating timber. Some of the shoals have grown in size since the charts were drawn, but for the most part, you will have no trouble with them if you stay fairly close to the sailing line shown on the charts. Since the channel marked is six feet deep and approximately 100 feet wide, slight deviations from it by recreational boats are not ordinarily hazardous. I know of only one place where recent shoaling has constrained the channel to an extent that makes the charts significantly misleading. Between Camp Nelson (mile 135) and Lock 8 (mile 140), the river is particularly narrow and tortuous. A small shoal shown at the mouth of Little Hickman Creek (mile 136) is now of impressive size, but, fortunately, highly visible. Two miles farther up, the chart advises you to steer close to the right bank (ascending) to avoid the large Canoe Creek bar. Following this advice is likely to put your propeller in the rocks of the Dry Run shoal, which now reaches almost to midstream with perhaps a foot of draft. Until you know the river well, the best advice is to take this stretch at low speed with a good lookout.

Lock One

Four miles from the mouth, you encounter Lock 1. This is one of the five which were built between 1836 and 1842, 38 feet wide by 145 feet long. The lock gates and the dams have been replaced, and the controls have been electrified, but the walls are still the original hand-hewn stone blocks, much battered and scraped, but still sound, and with ornamental fluting around their edges still occasionally visible. On some of the locks, it is still possible to read a painted sign advising you to pull the chain for lockage, but the chain will be gone. Blast your horn (one long and two short, as on the Ohio), and in most cases you will get through promptly. Be prepared, however, for the possibility that the lock tender has not heard your horn. This will not be because he is sealed in an air-conditioned control tower, surrounded by the crackling of short-wave radio transmissions (as on the Ohio). Corps of Engineers lock tenders are on duty full time, primarily to accommodate commercial tows which may pass once or twice a week at most. It is neither surprising nor reprehensible that they are sometimes out back hoeing their turnip patches, or inside on a television break. Keep cool, tie up, go ashore, and look around — you'll eventually find someone to put you through. When you do, it will be neither charitable nor helpful to display whatever resentment you may feel at the delay and inconvenience. Once you are in the lock, you may need all the good will the lock tender can muster on your behalf. Especially going up, the turbulence can be considerable. There are no floating mooring bits, and rarely will you find ropes left hanging on the wall for you to grab. Be prepared with good fenders and about 75 feet of stout rope, secured to your bow, that you can pass up to the lock tender if he is in the mood to lower a grappling hook for that purpose; otherwise, grab hold of a ladder on the wall, and brace yourself.

The one really serious delay that you may encounter in locking through results from arriving there together with a commercial tow. If you encounter a tow moving in the same direction, it is worth the extra fuel consumption to put on speed and beat it to the lock. If the tow is coming from the opposite direction, however, you won't know about it until you meet at the lock — and the tow will always be given priority over you. A Kentucky

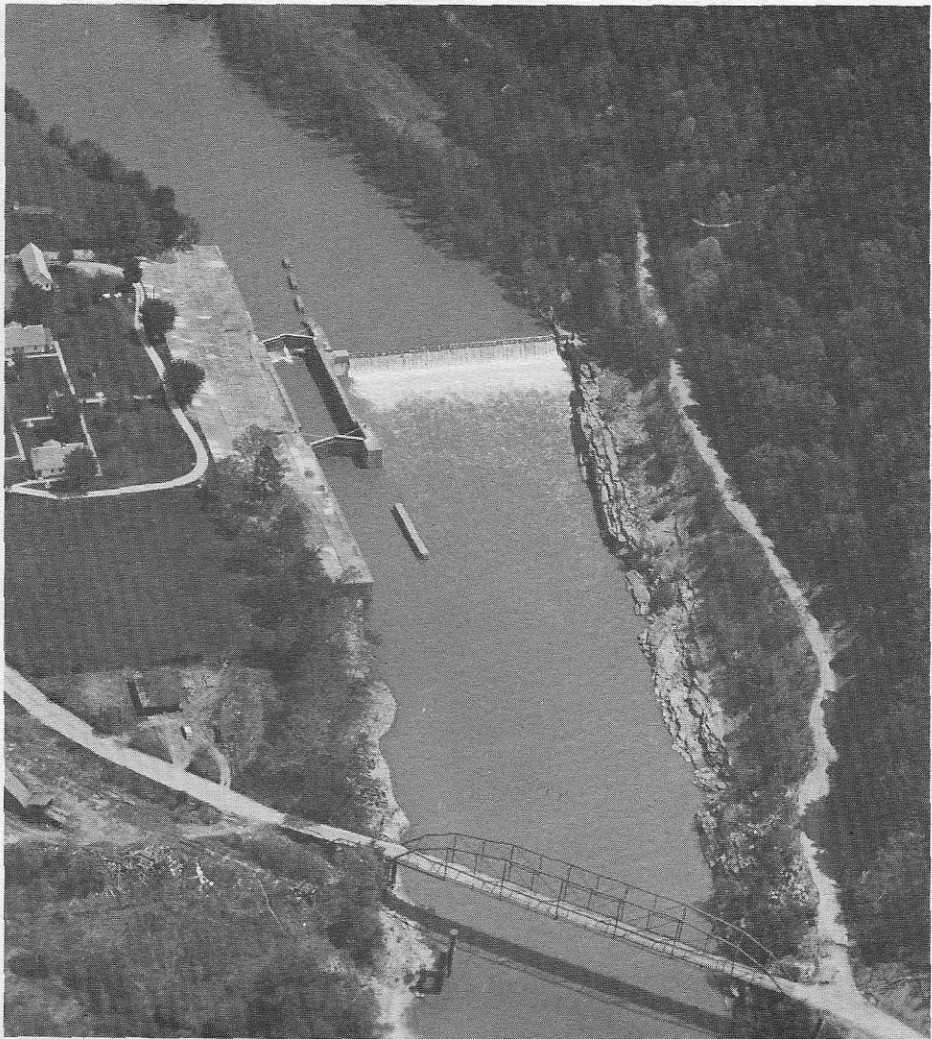
River barge flotilla consists of two barges 35 by 140 feet in size, one barge 35 by 95 feet, and a towboat 28 by 45 feet. This requires three lockages, the first two barges being separated, winched through individually, and then reassembled to the tow on the other side. The process requires from an hour and a half to two hours. It is a good show to watch if you're not in too much of a hurry, but I for one prefer to watch it after I have passed through the lock rather than when I am waiting my turn to enter it. The tows only operate through Lock 4, to Frankfort. Above that point, fortunately for your convenience but unfortunately for the future of navigation on the river, the only boats you will meet are pleasure craft.

Officially, the Palisades of the Kentucky begin around Gratz, at mile 29. These are the most spectacular geological and scenic feature of the Kentucky River valley — sheer limestone cliffs that soar to perhaps 300 feet above the water. It will be about another 75 miles before you can fully appreciate them, however, because on the lower river they are not quite steep enough to reject vegetation. What you will see there are steep, forested hillsides. Most of the palisade formations that inspired the name are found between Locks 6 and 10, roughly the middle third of the river.

Frankfort

Just above Lock 4, you will find yourself in downtown Frankfort. This is the state capital, and the largest of the three significant urban communities still located on the river. There are opportunities to refuel here, and if you tie up at the Frankfort boat Club dock (about mile 66) and go ashore, you will be within a half-dozen blocks of a wealth of historic houses and public buildings, including the old state capitol, now operated as a museum by the Kentucky Historical Society. A couple of miles farther up, you will pass the new state capitol, an impressive sight if you are passing after dark when its dome is floodlit; during the day, you are unlikely to notice anything but the multi-story parking garage which adjoins it. If you don't refuel at Frankfort, or maybe even if you did, top off your tanks at Clifton (mile 79) — you won't have another chance for quite a while.

At mile 82, you reach Lock 5, the last of the 1842 locks and the first of those now under state operation. My impression is that the state lock tenders, perhaps because they work only weekends or perhaps because their only responsibility is for recreational boaters, are a little more likely to be ready and waiting for you when you arrive. Often, they will call ahead to alert the next lock that you



Lock and Dam #14, the most modern element of the Kentucky River navigation system—only 70 years old. (Photograph by Corps of Engineers, Louisville District.)

are on the way, and it is not unusual for the lock gates to open as you approach. Delays at worst are minor.

One of the attractions of the Kentucky River, but also one of the things that makes the continuance of navigation questionable, is the almost total absence of industrial establishments along the river. Just below the lock at Frankfort, you passed a working distillery (there is also an abandoned distillery at Camp Nelson, mile 135). Now, just above lock 5, movie buffs will be pleased to find the Tyrone Power Plant. This is merely a steam generating plant for electrical power, which happens to be located near the community of Tyrone — nevertheless, there is nothing to prevent you from imagining that it is a monumental memorial to a fallen idol, and dropping a tear or a rose as you pass.

Cummins Falls, shown on your chart at mile 105.5, and adjacent to a concrete launching ramp which is not shown, is not much of a waterfall, but one of the few (so far as I know, the only one) visible from the river. More significantly, it is where you get into the real palisades country. If you have driven the Interstate Highways and Parkways of Kentucky you have seen similar sights, where the engineers have met grade standards by making deep vertical cuts through limestone outcroppings. This is exactly what the river has done, but it has accomplished the task much more slowly and with a great deal more attention to detail. The engineers created their own kind of beauty, but it did not in-

clude the laborious carving out of such formations as Twin Chimneys Rock (mile 107.5). Keep watching for snags and floating timber, but don't fail to take in the sights along the sides as you go by.

Hydroelectric Plant

Lock 7's dam includes the only hydroelectric plant on the river, and brings you into a section that includes a number of other human works of some interest. Just a mile above (at mile 118) is High Bridge, a National Historic Civil Engineering Landmark. When first built, in 1877, it was the highest bridge in North America and the highest railway bridge over navigable water in the world. Twenty-six years earlier, John Roebling had begun construction of a suspension bridge here, but the project was never completed. The present bridge, built in 1911, is 306 feet above the water. Close by the bridge is Shaker Landing, the mooring place of the Dixie Belle, a sternwheel excursion boat operated by the management of the restored Shaker community (officially named Pleasant Hill but more commonly referred to as Shakertown) a short distance inland. The Dixie Belle is not a restoration, but a modern replica; Shakertown itself, however, is the genuine article, and well worth a visit for the food as well as for the sights. You may have difficulty finding a place to tie up without taking the Dixie Belle's berth, however, and

(Concluded on Page Nine)

Trout Makes Cover of National Geographic

If you haven't already seen it, get a copy of the June 1987 Issue of the NATIONAL GEOGRAPHIC. On the cover you'll see an old Bateau replica of the 1700s being poled up the Seneca By-Pass of George Washington's "Patowmack Canal." One of the boat crew is our own ACS President — Bill Trout — dressed in full colonial boatmen's garb of the late 1700s. The full story is told on pages 716 to 753 inside the magazine, by National Geographic Editor — Wilbur E. Garrett, who traveled with Bill and his crew members. The entire article includes an excellent description (with illuminated maps) of the old Patowmack Canal, 1785-1828 — not to be confused with the much later C. & O. Canal on the Maryland side of the Potomac. Thanks to Bill Trout and Editor Wilbur Garrett, the American Canal Society is now gaining national recognition.

HIDDEN WATERWAY WONDERS



The Buczyniec Incline, with empty boat-carriage in foreground, looking down the incline to the lower canal level. (Squires photo.)

by Roger W. Squires

The canals of Poland are visited by few enthusiasts because of the lack of information about them in the West. Yet one Polish canal has the unique feature of retaining in operation five water-powered inclined planes, each of which is in daily summer use by a fleet of passenger carrying boats. This is the ELBLASKI CANAL.

The Elblaski Canal links the river port of ELBLAG, 25kms east of GDANSK on the Baltic Coast, to a series of inland lakes the bulk of which are centered around the town of OSTRODA. The waterway had its origin in the 1840s, when the area was East Prussia, to provide a supply of timber and agricultural produce to the boat yards at ELBLAG. Original plans envisaged thirty wooden locks, but initially only five were built to connect lake DRUSNO to the settlement of JELONKI. Before the remainder of the canal was built the engineer, Herr STEENKE, was sent to America to inspect the water powered inclined planes on the Morris Canal in New Jersey. He was much impressed and on his return to Poland got approval to use inclined planes instead of locks for the 87 meters height difference between the first section of canal and the upper lakes. The copied designs of the Morris Canal inclines were modified locally by Herr Lentze and the machinery for four inclines was produced by the area Royal Machine Works at DIRSCHAU, under the direction of Herr Kruger.

The machinery for the four inclines was built to a common standard, and each incline had two counterbalanced carriages each with two four-wheeled bogies 2.8 meters apart. Each of the bogies being mounted to permit turning on the horizontal axis to adjust to the variations in the slope. Each carriage was designed to carry craft of up to 60 tons on rails 3 meters apart. Maximum craft size being 20 meters long by a maximum of

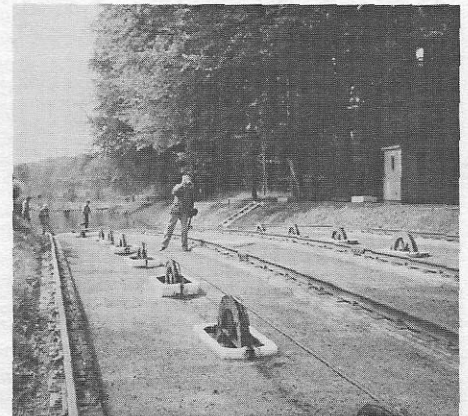
3.5 meters beam, narrowing to 2.5 meters at the keel. The inclines opened in 1860 and were a great success. The original equipment was modernized between 1874 and 1881 and remains in operation today. The four inclines are each powered by 68 horse-power breast shot water wheels, some 6 meters high and 2.5 meters wide, using water drawn from the upper canal level by means of an enclosed pipe through the canal embankment. The machine houses and waterwheels being placed at right angles to the canal, below the upper level, with the continuous hauling cable linking to both carriages and the main winding drum by passing over a series of wheels to facilitate changes in cable direction. The upper wheel mounts being set at the side of the channel, adjacent to the water takeoff sluice, some 100 meters back from the hump, whilst the lower station is sited in the center of the channel a similar distance back from the bottom of the incline.

Boats of up to one meter 20 cms draught thus are able to self load themselves onto the carriages at both the upper and lower levels before being conveyed dry over the inclined plane. Once loaded, the craft are carried on the carriages at a maximum speed of around one meter per second.

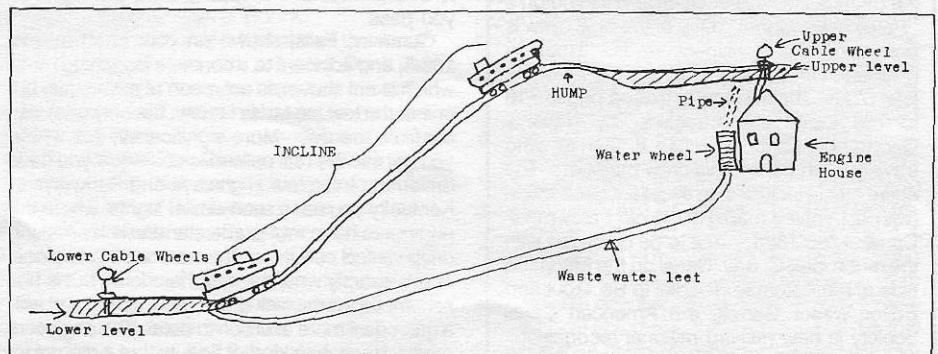
The whole operation for a complete transit of each plane being completed in about 8 minutes. Although the hauling cable is continuous, with the carriages passing each other on the plane, the equipment is designed to operate with only one carriage loaded so as to allow the passage of single craft if the need arises, which is the usual situation today.

The original five wooden locks on the canal were replaced with a fifth incline in 1885. Although the cradles and cable mechanisms were similar to the initial designs, in this case a FRANCIS TURBINE was substituted in place of the water wheel. This turbine mounting needed extensive rebuilding in 1987, when I viewed the planes, but is now fully operational. So now the canal has five operational inclined planes in a distance of 9.2 kilometers which lift craft some 99 meters between the main lake levels. A fleet of five diesel passenger craft have been built to ride the inclines and two of these offer a daily summer service through the canal, each working in turn from Elblag and Ostroda. The whole cruise takes 10 hours and provides a spectacular canal trip. Two other craft in the fleet run passenger services through the upper lakes, utilizing canal links and two ordinary pound locks. A third smaller lock near Ostroda provides smaller pleasure craft access to another lake.

Commercial traffic on the Elblaski Canal ceased in 1950. Since that time it has been kept open solely for the use of pleasure craft. Today about 400 boats a year make a regular migration through the canal each spring and return again to the Baltic coast for the winter. Each is charged 100 zlots (35 cents) for each transit of a lock or incline plane. Together with the passenger boat tolls the total revenue of the canal is 70,000 zlots (\$250), far short of the 1.5 million zlots it costs each year to run the waterway. Fortunately, the balance



Looking over "the hump" to the upper canal level. (Squires photo.)



KENTUCKY'S LAST CHANCE

(Concluded from Page Seven)

the short distance does not seem all that short if you are traveling it on foot. Another paddlewheel boat which you may meet in these parts is the miniscule Little Toot, so named for the calliope which it carries on board for serenading passersby at the captain's whim. Camp Nelson, 17 miles farther along and previously mentioned for its defunct distillery, was a Union fortification during the Civil War. Various attempts have been made to establish the location as a center for tourism, and there are now some limited facilities open there — supposedly including a gas dock which, however, does not seem to be open with great regularity. Just above Lock 9, at about mile 158, is the Valley View ferry, said to have been in continuous operation since 1785, and now the only ferry crossing on the Kentucky. There is also a marina at Valley View, with several more just a few miles ahead.

Fort Boonesboro State Park is the next major attraction, at mile 176. This is supposedly where Daniel Boone, in 1775, established the first permanent settlement (by people of European stock) in Kentucky. The precise site is somewhat uncertain, and the city of Harrodsburg claims a founding date of 1774, but anyway, it's very close. You can tie up here, and the park includes an imaginative reconstruction of the fort which is an easy walk from the landing.

Beyond this point, you can continue to enjoy the wilderness scenery and the increasingly meandering river; you can see the twin cities of Irving and Ravenna and your last chance to refuel at mile 218; you can have the satisfaction of knowing that you made it all the way to Beattyville; but nothing will be greatly different from what you have already seen. If you're afraid you might not make it all the way, Fort Boonesboro is probably as good a place to turn around and start back as any.

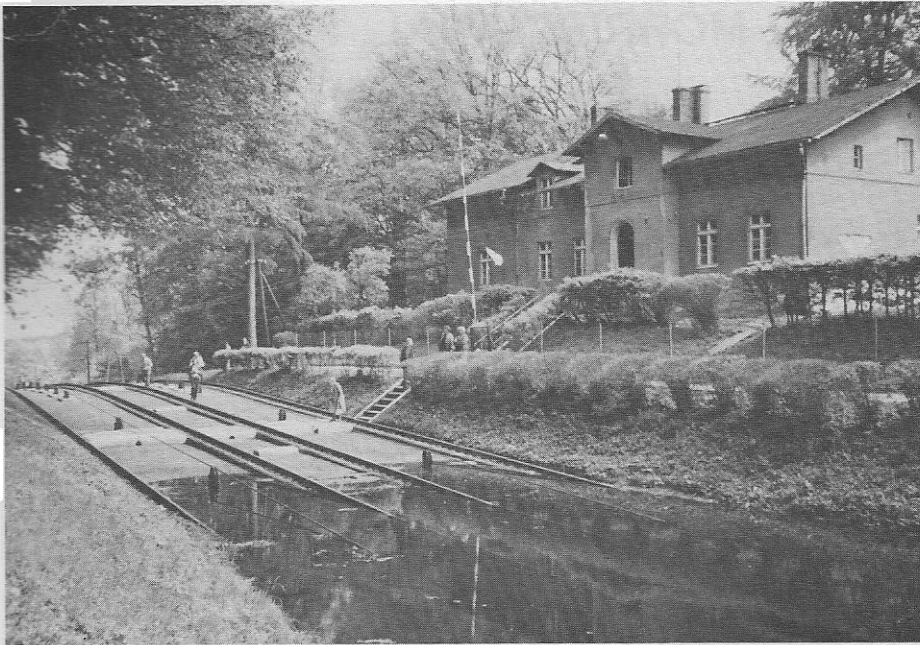
Ohio's obsolete Muskingum River, whose locks are of the same vintage as the Kentucky's, is now the Muskingum River Parkway, a part of the Ohio state parks system, with lockage provided on a seven-day-a-week basis entirely for recreational use. Locks which are obsolete for commercial traffic are perfectly adequate for recreational boating — their antiquity is an additional asset. Conceivably, the same sort of use could be made of the Kentucky navigation system. It is unlikely that it will, however, unless a considerable number of boaters and other visitors demonstrate interest in a tangible way. After 1987, there may never be another chance.

For current information on lockage operations, call the Corps of Engineers at 502 582 5606 (for Locks 1 through 4) and the Kentucky Water Patrol at 502 564 3074 (for Locks 5 through 14). Kentucky River navigation charts may be obtained for \$2.00 from District Engineer, U.S. Army Engineer District, Louisville, Post Office Box 59, Louisville, Kentucky 40201-0059.

David F. Ross
228 Conn Terrace
Lexington, Kentucky 40508

Associate Editor Needed

We need a person, skilled in the Graphic Arts Field, hopefully with some editing and publishing background, to join the staff of AMERICAN CANALS. Such a person would assist "yours truly" in putting together each issue, and understudy me against the time when I retire as Editor. After all, fifteen years is a long time! Bill Shank



The "hump" at the summit of the incline, with the upper canal level in the foreground. In the background, the Incline Operator's house. (Squires photo.)

is funded by the Polish government who are committed to keeping this unique waterway in use. It is a great pity that more canal enthusiasts do not go and sample for themselves the smooth, silent and swift operation of the only operational water-powered inclined planes in the world. Travel in Poland today is easily organized. There is now no reason why the Inclined Planes of the Elblaski Canal should remain hidden waterway wonders.

INCLINED PLANE	LIFT.
CAKUNY	13.8 m (With Francis Turbine)
JELENIĘ	22.0 m (With water wheel)
OLESNICA	24.20 m (With water wheel)
KATY	18.9 m (With water wheel)
BUCZYNIC	20.6 m (With water wheel)



Pulley wheels and cables on the Buczyniec Incline, showing how the operating cables come from the side of the canal and turn at right angles in the water. The upper level of the canal is shown. (Squires photo.)

CANAL CALENDAR

September 19-20, 1987 — Canadian Canal Society Autumn Field Trip, Kingston, Ontario. Contact: John Burtniak, P.O. Box 304, Thorold, Ontario L2V 3Z3, Canada.

October 1-2, 1987 — Merritt Lecture and Welland Canal Rally, St. Catharines, Ontario. Guided tour of Fourth Canal. Contact: Welland Canals Foundation, P.O. Box 745, St. Catharines, Ont. L2R 6Y3, Canada.

October 2-4, 1987 — Fall Tour of the Pennsylvania Canal Society. Headquarters: Hotel Easton, Easton, PA. Tour includes Lehigh Canal from Mauch Chunk to Easton. Optional Tour on Sunday to Plane 10 on the Morris Canal. Contact: Canal Museum, P.O. Box 877, Easton, PA 18044.

October 2-4, 1987 — Sixth Annual Tour of the Canal Society of Indiana. Headquarters: Terre Haute. For full details contact Thomas Meek, 413 High Street, Fort Wayne, Indiana 46808.

October 9-10, 1987 — Fall Tour of the Canal Society of Ohio. Portage Lakes and Portage Summit near Akron on the Ohio and Erie Canal. Write: Sandra Gates, 560 Maynard Avenue, Canal Fulton, Ohio 44614.

October 12, 1987 — Erie Canalside Street Fair (Columbus Day) at Erie Canal Museum, 318 Erie Boulevard, Syracuse, New York 13202.

October 25, 1987 — Canal Society of New Jersey Tour along the Morris Canal, western section. Headquarters: Waterloo Village. Tour includes six inclined planes and five locks. Leader: Bob Barth, R.D. #7, Box 662, Newton, New Jersey 07860.

November 12-13, 1987 — Annual Meeting of the Association for Great Lakes Maritime History, Kingston, Ontario. Write: David T. Glick, P.O. Box 25, Lakeside, Ohio 43440.

MEMORIES OF THE MORRIS CANAL, Part 2



In 1932, the City of Newark built a double trolley line along the route of the abandoned Morris Canal which ran for 4-1/2 miles and became known as the "City Subway." This photo, made in 1946, shows a typical single trolley-car traveling along the above-ground route of the old Morris Canal. The route is still being used, now carrying modern PCC type streetcars.

By Bruce J. Russell

The literature on canaling in America contains little to suggest that Newark, N.J. was once a bustling canal port, but it was. Until the Morris Canal was extended an additional 11 miles to Jersey City and tidewater on the Hudson, Newark served as its eastern terminus. It was only due to New York City's demand for Pennsylvania anthracite coal that the Morris Canal's directorate authorized the eastern extension to Jersey City sometime after the waterway first opened for business in 1831. In 1836, six years later, the new portion was opened to through traffic, and a continuous water route between the Delaware River at Philipsburg and the Hudson River at Jersey City was then available to shippers.

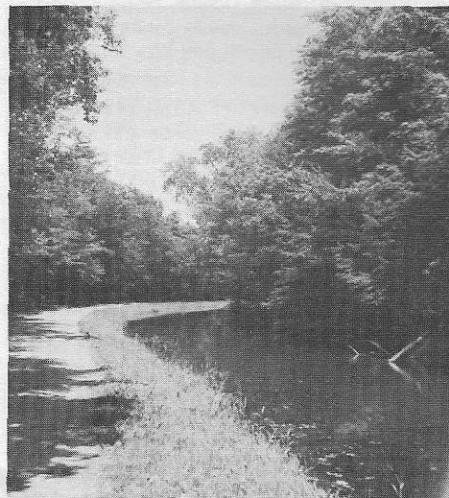
On the site of what is now the N.J. State Office Building (bordered by Raymond Blvd., Commerce Street, McCarter Highway, and Mulberry Street) stood the Newark Farmer's Market and wharf. It was here that canal boats unloaded various agricultural cargoes — potatoes, corn, sugar beets, turnips, flour, etc. Although in its declining years the Morris Canal was almost exclusively a coal hauling waterway, in earlier days its traffic was somewhat more diversified. By means of the canal the farmers in Passaic, Morris, and Warren counties could get their produce to areas of major population in a relatively short time. Other non-coal commodities brought to Newark by the Morris Canal were cut and dressed building stones quarried in and around Garret Mountain near Paterson. Several very old churches are known to have had their large sandstone blocks brought to Newark via canal boat.

The old Morris Canal passed beneath Newark's very wide Broad Street via a long underpass which lacked provision for a towpath. Hence the mules had to be walked over the busy thoroughfare while the boats were poled through.

Following cessation of navigation in 1924, the question of what to do with the old Morris came

up again and again at City Council meetings and other public gatherings. A rather unique solution resulted in the preservation of about 3 miles of the waterway from Norfolk Street to a point on the Newark-Belleville boundary. The city was anxious to remove as many streetcars as possible from the downtown central business district since they were starting to tie up traffic in an era of rapidly rising private automobile usage. Furthermore, there was a need to create a new through route in the commercial part of the city to take some of the burden off Market Street.

From Pennsylvania Station, just opened by the Pennsylvania RR to Norfolk Street, the prism of the Morris Canal was converted into a two-track subway tunnel to be used by single-unit trolley cars. Using the "cut and cover" (as opposed to



Between Wharton and Dover a short section of the Morris Canal has been restored (with water) to its original condition, towpath and all! (Photo by Bruce Russell).

the deep boring) method, approximately one mile of the Morris Canal was converted into a subterranean railway with stations at Warren, Washington, and Broad Streets in addition to the last stop at Penn Station. Work commenced about 1933 during the depths of the Great Depression, and it was finally finished in 1935. Funding from the WPA made the project possible. The original idea behind Newark's mini-subway was to funnel streetcars from as many lines as possible into it, thereby getting them off the downtown streets. By means of building connecting trackage plus ramps leading into the tunnel several car lines were effectively rerouted into the facility. Meanwhile above the tunnel a new street — Raymond Blvd. — began to carry vehicular traffic.

As a touch of class the stations in Newark's subway were decorated with colored tiles depicting scenes along the old Morris Canal, and these murals can still be viewed and admired today. Although somewhat surrealistic, they faithfully depict life on the old waterway. Once outside the trolley subway the route continues for about three additional miles on the surface to a terminal at Franklin Ave. where the cars reverse themselves on a balloon loop. These three miles were converted from canal prism to private right of way streetcar line by means of draining, installing crushed stones for ballast, laying of track, and installation of 600 volt DC trolley wire. Except for these additions, the original canal prism and right of way is still intact and rather well preserved. A trip over the "City Subway" (as the line is called) reveals a few sandstone walls in the section between Orange and Norfolk Streets which date from the 1870s or earlier and were thus contemporary with the Morris Canal in its heyday. Furthermore, the north wall of the old Newark City Jail, built in the late 1830s and now a designated historical landmark, abuts the trolley line. While today's inmates can look out of their cells and see PCC streetcars, their predecessors could take pleasure in the sight of canal boats. It would seem entirely feasible that the rectangular sandstone blocks used to construct this detention facility were quarried in or around Garret Mountain and brought to the site by Morris Canal boat.

It was only an accident of history that prevented the ENTIRE bed of the Morris Canal from Franklin Ave. to Paterson, a distance of about 21 miles, from becoming an interurban trolley line linking the two cities. Although the right of way of the abandoned canal was available for a pittance, the electric trolley car and its cousin, the "interurban" were becoming passe. Thus there was no interest in acquiring it, and the idea was quickly forgotten. In time the inevitable selling off of bits and pieces of the old prism occurred, and by the last 1940s little was left to remind people that there was a Morris Canal. Although a few streets with very long gradients mark the locations of former inclined planes, and a railroad bridge in Bloomfield once spanned canal waters, virtually nothing else is left until one reaches a golf course adjacent to the Garden State Parkway. Here some evidence of the prism is discernible. North of this point the Parkway is actually built over the canal and thus nothing survives. However, in Clifton a very short segment has miraculously escaped obliteration, and in recent years a small group has restored it to look like a genuine canal, complete with water and towpath. A historical marker completes the scene. However, wherever residential and industrial development occurred west of the end of the City Subway, the Morris Canal was in almost all cases destroyed. Only in the less built up sections do remains of it exist.



At Ledgewood, one of the Morris Canal's quarter-mile inclined planes is still in excellent state of preservation. The spillway which carried excess water from upper to lower levels is quite apparent to the right of this photo. The bed of the inclined plane is to the left. (Bruce Russell photo.)

Since so little of the Morris Canal survives west of the Newark-Belleville City Line, the four of us proceeded westward to Boonton, N.J., which was a major point on the man-made waterway during the last century. Boonton contains the remains of one of several inclined planes on the Morris Canal where canal boats were placed atop railway cars or cradles and hauled up or lowered down elevations of varying heights. Use of these planes, or marine railways, eliminated the need to construct long sequences of lift locks. Thus less water was required for the raising and lowering of canal boats, and time was also saved. Plane technology such as that once used on the Morris Canal survives on the Elblag Canal in Poland and in one location on the Trent Seven Waterway at Big Chute in Ontario, Canada.

Arriving in Boonton, we had no difficulty locating the old Morris Canal inclined plane. Unfortunately, no restoration work has been undertaken, and the entire site is covered with vegetation plus garbage and other refuse. Most of the wood frame buildings adjoining the plane are products of the last century and thus witnessed the boats moving up and down the quarter mile distance from

top to bottom. Boonton once boasted a large iron and smelting industry, and both the coal to fire the furnaces plus the crude ore to be smelted arrived by Morris Canal boat.

Leaving Boonton, we visited a few spots where mini-restoration work on the Morris Canal had been done during the past few years. In Wharton a two-mile-long segment had been rewatered and the old towpath cleared to create a sort of linear park. The flavor of the old Morris was certainly recreated at this location, and the city fathers are to be congratulated for their efforts at preserving a piece of Americana. A historical marker cast in bronze tells the story of the waterway, and school groups from the surrounding area are frequent visitors. However, a short distance away another portion of the Morris Canal prism has met a slightly different fate. Many years ago concrete walls had been erected between the towpath and the berm side, and the resulting enclosure converted into a swimming pool. How many of the children using it will ever know that boats filled with "Black Diamonds" from the mines of Pennsylvania once glided over the same spot where they were cooling off during a hot summer day.

Farther to the west in the borough of Ledgewood could be seen a cleared and partially restored inclined plane. Although the steel rails upon which the wooden cradles carrying the boats had been removed over a half century earlier, the stone saddles supporting them are still visible. In addition, the spillway which carried the water from the top of Ledgewood Plane to the bottom was in a remarkable state of preservation. With a little imagination it was not difficult to visualize the boats being raised and lowered along this stretch, the cable moving at a constant 2-3 mph. The four of us spent considerable time here, walking the full quarter mile length of the plane plus looking for the remnants of the tunnel which carried water to the subterranean turbines which powered the lifting cable. Eventually we found what we were looking for. Enough was still in place to bear witness to the function and purpose of this particular plane of the Morris Canal. Some evidence of renovation was visible. More importantly, the site is being looked after, and unwanted vegetation is periodically removed.

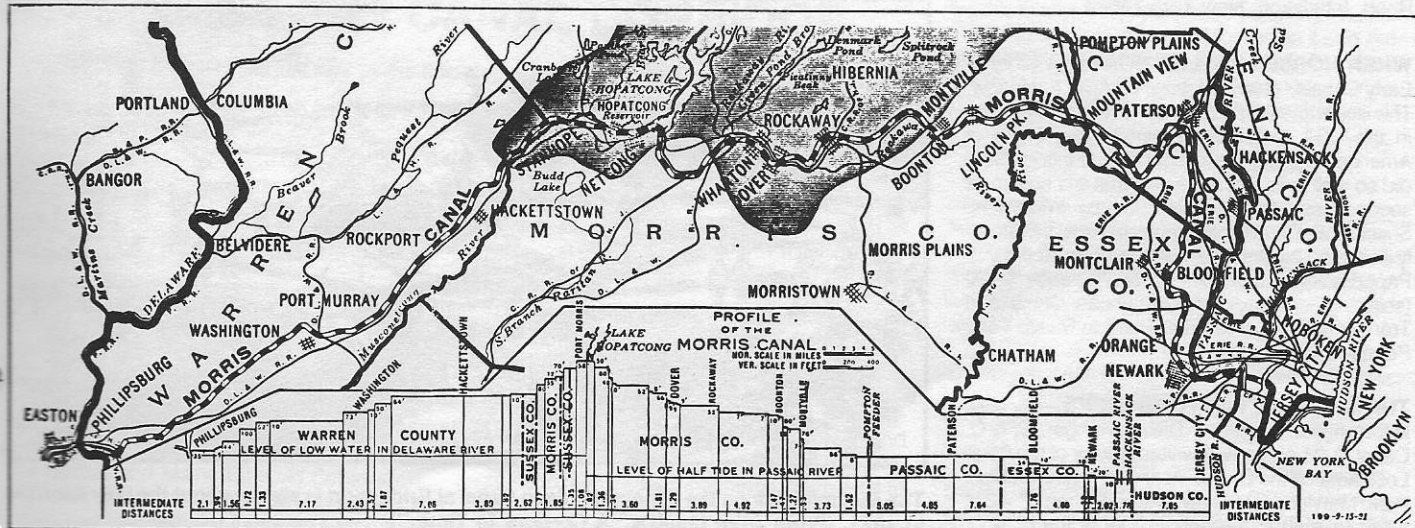
Our foursome then proceeded in the direction of Lake Hopatcong, but we first visited another body of water where excellent traces of the Morris Canal are still visible to the casual observer. At Lake Musconetcong the canal boats were taken out of the man-made waterway and towed from one shore to the other. A towpath spanned the lake, and the mules and drivers used it while the boats glided across. Once on the opposite side



The point at which the Morris Canal boats entered Lake Musconetcong. In the foreground is the small basin which stood at the foot of one of the inclined planes. In the distance, segments of the old tow-path causeway across the Lake are visible. On this causeway, the mules towed the boats across the Lake. (Bruce Russell photo.)

they reentered the canal and resumed "normal operations." This unique segment of towpath is still visible although in a few spots it has eroded away. Nevertheless, there is no problem visualizing what was done here. Remains of the locks which permitted the boats to enter Lake Musconetcong and leave it were much in evidence. On the eastern side the lock is actually on private property but the owner graciously allowed us to walk around and take all the photos we wanted to. On the western side the lock has been completely filled in, leaving only the uppermost stones to mark its location. This action was taken for two reasons. The first was to eliminate a potential safety hazard, and the second was to stabilize the chamber so that given the passage of time, it wouldn't collapse or cave in. What an interesting sight Lake Musconetcong must have been at the zenith of the Morris Canal's prosperity, with boats passing by every few minutes, their mules slowly walking the long towpath across the tranquil waters. As they approached the shore, a blast on the conch shell let

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MORRIS CANAL MEMORIES

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the lock tender know that it was time to open the gate for another vessel. Since navigation occurred during the night as well as during the day, it must have been quite something to see a series of "night hawk" headlamps creeping across the darkness of the lake, each one marking a canal boat's location. Scenes such as these are what American canaling was all about.

To be continued



In the park area at Lake Hopatcong, (summit and reservoir for the Morris Canal) stands this restored and protected "Scotch Turbine" of the type which operated the Morris Canal Inclined Planes. Canal buffs from Pennsylvania and New York State are shown in the foreground. (Photo by Bill Shank.)

McKELVEY HEADS ENGLISH TOUR



ACS Vice President Bill McKelvey (extreme left on bridge) with the group from the Canal Society of New Jersey, which he piloted around England. Photo by James Milne of the London Daily Telegraph, at the Marple Bridge in Cheshire.

Forty members participated in the fourth Canal Society of New Jersey Study-Tour to England and Wales this summer. In the above view they were celebrating the Fourth of July at Marple, the junction of the Peak Forest and Macclesfield Canals. They toured the Cheshire Ring in seven narrow boats chartered from English County Cruises. Four members of the Trent and Mersey Canal Society (U.K.) accompanied the group on much of the route aboard "Tidley Jostman."

The leader of the New Jersey group was Cap-

tain Bill McKelvey, who also organized their 1982 trip. Highlights of the trip were visits to the Black Country Museum, brunch in a dining car hauled by a steam locomotive in the Severn Valley Railroad, Anderton Lift, Barton Swing Aqueduct, Marple Aqueduct, York, Pontcysyllte Aqueduct, Elksmereport Boat Museum, Chester, and Iron-bridge Gorge.

McKelvey is beginning to plan for the next trip to southern England and Wales in 1990. Tour number 5 will concentrate on the Basingstoke, Kermet & Avon and Mon & Brec Canals.

NEW CANAL BOOKS

MARCO PAUL'S TRAVELS ON THE ERIE CANAL — by Jacob Abbott. A 1987 reprint of an 1843 fictional book about the experiences of a young boy traveling along the "Old Erie." Interesting and accurate details of all nineteenth century canal travel are included — how locks operate, how teamsters drive their horse or mule-teams on the towpath, life on board the packets and line-boats and inclined planes on the nearby railroads. A 203-page paperback, with many old woodcuts from the original book. \$6.95 plus \$1.00 for shipping from Empire State Books, 2989 Lodi Road, Interlaken, New York 14847.

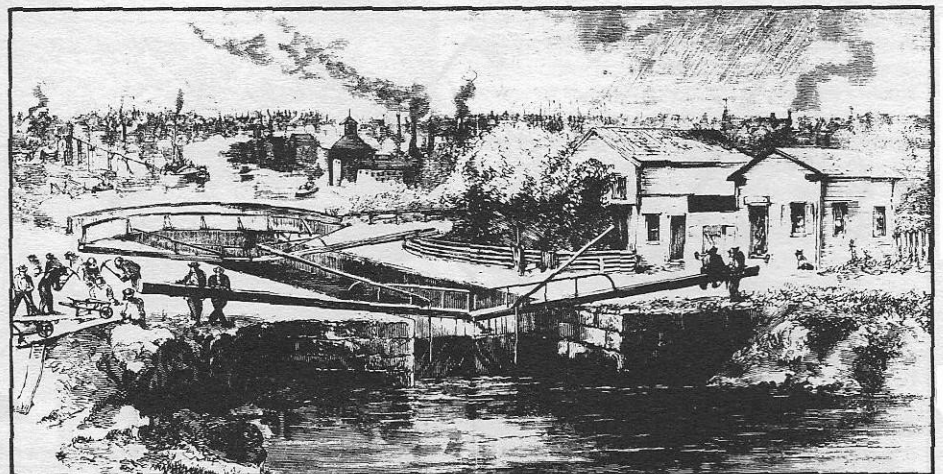
WHEN HORSES PULLED BOATS, A Story of Early Canals - (1987 printing) by Alvin F. Harlow. This little-known exposition of the historic canal era in the USA, originally written by the Dean of American Canal Buffs for school students in 1936, did so well in its first reprinting that it is now in its second reprinting. Introduction by William H. Shank, P.E. Canal bibliography included. Profusely illustrated by Orson Lowell and Philip Hoffmann. Paperback with four-color cover, 72 pages. \$6.00 (shipping included) from American Canal and Transportation Center, 809 Rathton Road, York, Pennsylvania 17403.

THE COMMUNITY OF FOUR LOCKS — by Mike Mastrangelo, Allegheny District Ranger, C. & O. Canal. A 24-page, well-written history of the Four-Lock area on the C. & O. near Fort Frederick State Park, Maryland. Also now available — an 8" x 23" full-color map of the entire route of the C. & O.

Canal, Georgetown to Cumberland. Write: C & O Canal National Historical Park, P.O. Box 4, Sharpsburg, Maryland 21782.

A CORRIDOR IN TIME — (1836-1986) - by John Lamb. A well-illustrated 30-page booklet giving the complete history of the various Illinois and Michigan Canals over a 150-year period. Maps included. Free from the author, in care of the History Department at Lewis University, Route 53, Romeoville, Illinois 60441.

BOATERS AND BROOMSTICKS (Tales and Historical Lore of the Erie Canal) — by Lionel D. Wyld. A 150-page paperback, well illustrated, with index. This book runs the gamut of short stories, true and fictional, of life along the Erie Canal in the 1800s. Included are canal songs, famous personages who traveled the "Old Erie," the engineers who built the canal, and a large selection of items researched by the author — of great interest to canallers. \$9.95 from North Country Books, 18 Irving Place, Utica, New York 13501.



The Summit Lock on the Illinois-Michigan Canal at Bridgeport is shown about the way it looked in 1871. (From John Lamb's "A Corridor in Time.")