HISTORIC BRIDGE SAVED FOR USE IN CANAL PARK

Editor's Note: The following article was assembled from a series of e-mail reports submitted by Dan McCain, President of the Wabash Erie Canal Association of Carroll County, Indiana.

Carroll County Wabash & Erie Canal, Inc. has been entrusted with the rescue and rehabilitation of a historic Indiana bridge. After waiting 5 years for a chance at a “one-of-a-kind” iron “Stearns Truss” bridge, we were able to secure such a relic for our Delphi Historic Trails. Located in Pulaski County, the bridge was one of over a dozen of these unique “pinned together” lightweight conveyances ordered by the county because they wanted to span their newly dredged drainage ditches intruding into the vast natural marsh land. The option came to us late in December 2005. Title to the 1905 iron structure was secured from the Pulaski County Commissioners. The bridge spanned the Big Monon Ditch west of Winamac, and had to be moved by March 31, 2006, prior to clearing and dredging operations in the spring. Due to the short time frame involved, Pulaski County offered the bridge to W&E Canal Association for ten dollars as an incentive to save the structure.

The plan was to disassemble and move the Winamac/Stearns Truss Bridge early in March from its location in Pulaski County to Delphi where it would grace the Van Scy towpath trail over the Wabash & Erie Canal. It was possible to move this unique structure in sections because it’s pinned together, not riveted, and was moved once before in 1913.

Things were happening too quickly to get a grant for the total job of removal, rehabilitation and placement. So we planned to initially remove it from the site, truck it to a safe place in Carroll County and plan for its thorough restoration and placement later.

The first step in the Winamac/Stearns Truss move began January 9th. A crew of volunteers from Delphi proceeded to the historic bridge site northeast of Francesville with tools and an especially good mix of penetrating oil. “Busting the rust” from decades of neglect was the order of the day.

This same crew of volunteers “busted their brawn” 6 years ago (and many days since) on other unique historic jobs. They were in the front line when the Carroll County Wabash & Erie Canal Association brought the 1873 Paint Creek Bowstring Arch Bridge from Camden, restored it, and placed it over the canal in Delphi. Now they were beginning another restoration. Step one of perhaps hundreds of steps needed to restore this National Register specimen in Pulaski County.

Armed with a ladder, which they didn’t even use, eight very long planks, rope and the special rust-busting oil, they crossed the “floorless” bridge. They lubricated the many pins, bolts and connecting cross members that make up this “one-of-a-kind” iron bridge. Winamac Bridge Company produced dozens of these lightweight bridges for use in locations like its Pulaski County site in the former marshlands of northwestern Indiana. This is the only example still known to exist.

The ladder wasn’t used as there was no sturdy place to stand it. Instead, Rollin “Monkey” Graybill just grabbed the iron beam projecting from floor to the top chord, planted his feet on the steeply sloping plate and ascended to the heights. Once on top he worked his way through the length of the top chord and oiled each junction point. Large iron pins hold together the sections. This would allow easier disassembly of components coming back to Delphi.

When he got to the north end he

(Continued on page 3)

The 1905 Stearns Truss crossing Big Monon Ditch in Pulaski County.

Photo by Dan McCain
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climbed down the steep end beam, crossed over to the other side as
monkeys might do, an ascended to the other top chord.

Other volunteers Ron, Roy, Bill and Dan prepared access with planks they
brought from Ed Gruber's farm to span the 76 foot length from cross beam to
beam at the original floor level. Bill worked with a shovel to clean the soil
off the unique metal caisson foundation, Ron measured and
inventoried the structure’s needs, Roy worked on testing the weight of the
bridge by slightly lifting one corner of the structure and Dan surveyed the
approach for giant crane access through the adjacent fields. All had a “fun day”
with an iron monument so unusual and in need of love.

Plans were made to bring the crane crew the following week for a full
evaluation of the lift. Swinging it into the adjacent field and placing it on
solid wooden blocking for disassembly would still be a job to complete before
April 1st. That commitment was made to the Pulaski County Commissioners
so the ditch brushing and dredging contractors could start work. Winter
could unleash her might later but the crew took advantage of this beautiful
day in early January.

On January 30, 2006, Delphi’s Canal volunteers took a 40 mile trip and
another step toward the ultimate move of Pulaski County Bridge #31 from
Pulaski to Carroll County. Rollin

Graybill brought his backhoe and moved the entry piles of soil blocking
both ends of the bridge, another volunteer brought his cutting torch,
several others worked on painting color coded stripes, and even a chain saw
helped to remove some latent brush from the site. A test of the “super”
penetrating oil with a little heat brought smiles in seeing century old nuts turn
off of several husky bolts.

Crane contractors Bud and Tim Stahl
from Kokomo made a final cruise of the
site to measure for the ultimate
removal and stated that they would be
ready (weather permitting) in two
weeks. Their job would be to lift the
iron bridge from its place on the Big
Monon Ditch and swing it to the north-
west into a field for disassembly. Once
the Stahl crew had let the sides down
flat they would leave the area. Then
volunteers would continue to
dismantle the components and load
pieces with a fork lift onto a semi
truck/flat bed trailer donated by Carroll
County farmer Tom Flora.

Early in February the steady crew of
five Canal/Trails volunteers gathered as
usual – this time next to a Classified
Forest south of Delphi. The mission
was to cut “blocking” for temporary
field support of the 1905 iron bridge to
be moved later in February. The 6 x 8 and 8 x 8-inch timbers were methodically cut from wind damaged white ash logs and the sawdust was flying. This effort included volunteer Rollin Graybill with his Woodmizer portable bandsaw.

Preparation of the blocking was necessary before the professional crane crew could lift Pulaski County Bridge #31 off of Big Monon Ditch east of Medaryville. This blocking would be needed as soon as the lift was made and the bridge was swung over the adjacent farm field. The next step would be for the lifting cables to be readjusted allowing stability for each side of the century old 76 foot long iron relic. Then disassembly could begin. Ultimately each side would lay flat to the ground.

Old bolts, nuts and unique two inch pins that hold the iron structure together had already been doused with penetrating oil in January. These rusty fasteners would have to come off with big wrenches and lots of “elbow grease” and often the addition of heat from a torch. The challenge of taking down this 16 foot tall by 17 foot wide frame would take a special elevated man-lift work platform positioned with a long reach forklift.

Good news came in the form of a $2,500 check from Historic Landmarks Foundation of Indiana. This check and many other private donations from $10 to $500 have blessed this project since the first word of the pending move was made in December. An important offer came from farmer Tom Flora south of Delphi. He loaned his semi flatbed trailer for transit. His offer would allow the dismantled pieces to remain on the trailer for extended time during the restoration process.

In March the six ton bridge was moved to Delphi’s Canal Park, where restoration is taking place. The weather was cool but fortunately dry, and we got done in record time. The procedure of taking it apart was straightforward just like the Winamac Bridge Company had planned when they made these structures “moveable”.

Restoration work was begun with the same cadre of volunteers that made the disassembly possible. The talents possessed by this crew are amazing and the volunteers were eager to tackle jobs associated with the restoration process, but they needed a leader with extensive knowledge of working with old metal. At just the right time a semi-retired educator, Vern Mesler from Calhoun County in central Michigan, came forth and he volunteered his time. Vern brings to Delphi unique skills and equipment from years of bridge restoration challenges. He even manages a “bridge park” in his county up north that includes Battle Creek.

Indiana historian and statewide bridge expert Dr. James Cooper from Greencastle has also been assisting in this project. Seven years ago, he advised the Canal Association when the 1873 Bowstring Arch (also known as
the Red Bridge) was restored and placed in Canal Park Annex. He consulted with the local men while they disassembled the structure and now is supervising the historic restoration process. “Jim,” as he is known to the local crew, is just one of the team as he volunteers his time as well.

Following disassembly, the pieces of the bridge were laid out on the huge concrete slab behind Peters-Revington Furniture Factory. The pad was not being used and provides a great workspace.

On June 8 and 9, Vern Mesler returned to instruct the local crew on his unique methods of dealing with “pack rust” which occurs between riveted panels of this bridge. Some broken rivets are in need of replacement because pack rust acts like the “freeze/thaw” expansion and contraction of ice which occurs when water gets between the plates and freezes. In many places along the chords the rust had actually expanded the plates and broken rivets. Straightening and flattening these bridge chord members is an important part of the restoration process. This is accomplished by a heating and hammering process which does an amazing job of driving out the accumulated rust and closes the plate gap from years of weathering of these chords. Each individual composite chord member to be restored is placed about 20 inches off the floor on timber blocks with the mid-point higher, and anchors in the concrete at each end tightened down to “stress” the metal. This is a method of preventing warping from the heat needed in this pack rust removal process. Altogether about 20 percent of the pack rust removal job was completed in two days.

In some instances it is also necessary to “pad” the eroded areas of metal on critical pieces. This process involves arc welding to add metal in the depressed (rustied) areas and then grinding off the surplus to make the metal meet the original thickness standards and look like newer metal.

In July, Vern instructed nine Canal Association “regulars” in the art of riveting. Long heavy wrought iron beams (chords and posts) have had rust damage in the last century that left many rivets loose or entirely missing from their proper positions. Rivets must be heated to a bright cherry red in a hearth or oven beside the work site so that they may be quickly placed in the hole and immediately hammered with a “dimpled” (forming) head. A backup wedge must be placed behind the hot rivet to allow hammering the new rivet tight.

While restoration work progresses on the bridge, volunteers (with help from heavy machinery) will be preparing the site for this bridge to cross the canal in the lower section of the trail system. The spot selected for the re-erection is behind Dairy Queen on land owned and operated by the Canal Association and...
City of Delphi. It will become part of the Van Scy Towpath Trail 300 feet south of Bicycle Bridge Road at the point where the man-made “sidecut” entered the canal itself. Hopefully the bridge will be placed back on a metal caisson (canister type) foundation. Metal was the preferred footer in the early years of bridges over drainage ditches in Pulaski County as several of these spans were moved upstream several miles at least once when the ditch was cut deeper and wider. Much work is still ahead on the restoration and re-erection of this last known “one-of-a-kind” Winamac/Stearns truss bridge. The whole process of restoration and site development will likely take more than a year. Eventually the “raising” of this structure is anticipated to be by “old fashioned methods” under the direction of Vern Mesler. He has had experience with “gin-poles” and wooden framing supports built to handle assembly without using a crane. This effort might become part of a film documentary on historic bridge restoration as Vern directs these techniques. Thanks to all of the crew, many of whom were the volunteers who also helped move and restore the Paint Creek Bridge that now crosses the Canal above the stone bridge. And thanks to the donors who helped finance the Stearns Truss Bridge move. More donated money or grants are needed for completing this unique project. If you can help financially or physically, please contact the Canal Association at (765) 564-6297 or admin@canalcenter.org.

Additional photos follow on pages 7 and 8.

Bridge components loaded aboard Tom Flora’s semi flatbed trailer awaiting the move from Pulaski County to Carroll County.

Photo by Dan McCain

Vern Mesler, left and Dr. Cooper, right.

Photo by Dan McCain
Photo at top left:
This flat sheet of iron was part of the metal caisson foundation.

*Photo by Dan McCain*

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Photo at right center:
Heating carefully to avoid warping of the whole chord member.

*Photo by Dan McCain*

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Photo at bottom left:
Flattening with an air hammer removes the rust accumulations.

*Photo by Dan McCain*
GARFIELD WAS HERE

By Terry K. Woods

At the end of many a hard-fought campaign during World War II, the lead troops would finally achieve their objective only to find the words, "Kilroy was here" scrawled across a convenient interior or exterior wall. Kilroy, it seems, was everywhere, and always first.

We have a similar situation on the Ohio & Erie Canal with a fellow who was everywhere along the Buckeye Ditch. This fellow is Garfield. People in Akron will take you to lock #1 at Exchange Street and tell you the tale of Jimmy Garfield, a driver on his uncle's boat, who once refused to fight another driver to be first to fit the lock because "the other fellow was there first," and got into a ferocious fight with a driver at the same spot another time because "we were here first." He won that second fight by the way.

There is a spot under a large tree in Canal Fulton, Stark County that locals will point out. Here, they will say, young Jimmy Garfield would rest and read while his canal boat loaded. It was here once that he was accosted by a passer-by who inquired why a canal boat driver was spending his time reading. "I do not always intend to be a driver," the young lad is supposed to have replied; "I wish to be a school teacher." The passer-by smiled. "Then come along with me. I am superintendent of the local schools and you are now our newest teacher". So young Jimmy Garfield became a school teacher.

There is a tavern in Strasburg in Tuscarawas County that the residents will tell you was a favorite lunch stop for Jimmy Garfield when he was driving a team on the Ohio Canal. The fact that Strasburg is a good ten miles from the canal, a bit far for a lunch break, doesn't deter the telling, or the tellers.

The people of Fairfield County in Central Ohio will show you the lock where "Jimmy Garfield leaped fifteen feet across the chamber to fight a driver who was mistreating a horse". There was a small inn along the bank of the Shenango River in north-western Pennsylvania whose owner loved to tell the story of how a canal boat driver,
Jimmy Garfield, who nearly drowned in the “raging canal”, was dried off and warmed up at this Inn by the original proprietor.

There are more than twenty versions of the Kilroy Legend and only one about Garfield, but the facts concerning Garfield are just as hard to come by. Jimmy Garfield was born in 1831 in Cuyahoga County to the widow of a man who took, but never completed, two original sections of the Ohio & Erie Canal between Port Washington and Newcomerstown in Tuscarawas County. In July of 1848, at the age of 17, young Jimmy got a job as driver on Amos Lecher’s canal boat, EVENING STAR. Captain Lecher was, reportedly, Garfield’s uncle and took the boy on as a favor to Jimmy’s mother. Garfield, by all accounts, was a big lad at 17, very quiet and sort of ungainly. He read books constantly, at times when few could read at all and certainly didn’t read as a pastime. Many of his fellow boatmen considered him ‘soft’ – and he couldn’t swim.

The EVENING STAR carried iron ore from the Lake Docks at Cleveland down the Ohio & Erie Canal to Akron, then across the Pennsylvania & Ohio Canal to the fledgling iron mills at Youngstown, and general cargo back. It is doubtful if Jimmy made many trips with his uncle as he contracted malaria and went home to his mother to convalesce after less than a month as a boatman.

James Garfield became a Major General during the Civil War, and was elected to the Senate in 1862. According to tradition, he was asked by no less a person than President Lincoln to give up his commission and become a Republican Senator. It is said this shows what a good senator Lincoln thought Garfield would make. It might also show what a poor general Lincoln thought Garfield was.

During the Presidential Nominations of 1880, Garfield backed his good friend ex-General Sheridan, but somehow, when the voting became deadlock, “allowed” himself to become a candidate for president against former General Hancock. One of Garfield’s campaign managers had a booklet printed with the wonderful title, Towpath to Whitehouse. In it, Garfield’s many manly fights and moral good deeds along the canal were typified. In the book, Garfield worked on the EVENING STAR all summer (about three months) and was even promoted to steersman.

Garfield beat Hancock by less than 10,000 votes and became the 20th president of the United States in March of 1881. On July 2 he was shot by a disgruntled office-seeker, lingered for a while, and died on September 11 – our second martyred president.

So now we can guess why so many people along so many canal towpaths that Garfield never trod claim he was there. It is safe to say that he never taught school in Canal Fulton, had lunch at a Staatsburg tavern, or had a fight in Fairfield County. All of these places are far south of Akron, where Garfield would have led his mule team east, along the P & O Canal. It is also unlikely that Garfield fell into the canal along the Shenango, though the P & O did connect with that canal.

There is some evidence that Garfield did fall into the canal an inordinate number of times for being on the job less than a month. He was sort of ungainly and the other boatmen would play “nudge the new boy”. But since the canal’s minimum depth was 4’ and the maintenance gangs had a hard time keeping a 3’ depth, Garfield would have been in no danger of drowning – if he had the sense to stand up once he went overboard.

And the fights at Lock One in Akron? He must have had fights, even with a work stint of only 3 or 4 weeks. It is difficult to believe that the other drivers laid off this new, “soft” boy, even though he was the Captain’s Nephew. And why not at Akron? Did he win any of these fights? That’s hard to say. He certainly did in the minds of many people. After all, he was a martyred president!

Now, how about the other U.S. Canals? Do they have a “Kilroy” who was everywhere and did everything? I’d like to hear of them.
Canal Boat Replica Certification Application

What is certification?
The American Canal Society (ACS) offers its certification of operational canal boat replicas by completing and submitting this application form. Approved applicants will receive an 9" X 12" weather-proof, gold-lettered plaque of certification with the name of the certified boat, which may be mounted conspicuously on board for visitors to see.

Criteria for certification:
The term "replica" implies that the design is based on credible evidence of a historical canal boat or general type of boat that operated in the vicinity of the replica. These are the general key criteria for certification:

1. The general exterior appearance of the boat, including size and proportions, should be consistent with historical examples.
2. Preferably, most materials visible to visitors should be traditional materials in forms reasonably historic in nature, i.e., wood, canvas, planks, beams, hemp rope and clapboard, etc. in order to convey an authentic sense of history. However, modern materials such as plywood, sheet plastic, 2" x 4"s, or nylon rope or fabric are acceptable, if designed to simulate traditional materials. Metal or fiberglass hulls and structural elements are also permitted, provided they are essentially unrecognized as such by laypersons. Contemporary amenities such as rest rooms, bars, or table service, etc. are acceptable where required for public use.
3. Traditional motive power by mules or horses by towline is preferred, but electric power systems, well concealed, are acceptable. Combustion and steam engines, if consistent with local historical examples, are also acceptable.
4. Boat should operate publicly on an actual historical canal segment, or in a physical setting that duplicates one; i.e., with a towpath. Operation through an actual lock is highly desirable, but not required. Likewise, costumed crew and historical docents are highly desirable, but not required. Such details heighten the sense of history for visitors.

Materials required for certification:
1. Available photos, plans, sketches, and dimensions of the existing or proposed replica design, describing her general shape, size, and configuration.
2. Historical photos, plans, lines, or drawings of boat or boats on which the replica boat is patterned.
3. A written description and itemization of construction methods and materials used or proposed, the method of operation plan, and the physical, geographical, and historical area in which the operation will or does take place.
4. A copy of the following completed application form.
Application Form
Name of contact

Address

Phone  fax  email

Organization represented

Name of boat to be certified

If existing boat, date boat went into operation

If new boat, date operation is to begin

Name(s) of designers and primary fabricator(s) of boat

Date  Signature of applicant

Submission of materials
Submit this completed application and materials required to: Carroll Gantz, Chair, Canal Boat Committee; 817 Treeloft Trace, Seabrook Island, SC 29455. Materials will be returned after review, upon the request of the applicant.

Processing of application
1. After application and materials are received, they are reviewed by the Canal Boat Committee, (CBC) which prepares a recommendation for the ACS Board of Directors.
2. ACS Board reviews applications, materials, and CBC recommendations for decision.
3. If certification is approved, a 9" X 12" weather-proof, gold-lettered plaque is ordered, and delivered to the applicant for display on boat.
4. If certification is not approved, applicant will receive a CBC Chair report with reason(s) for denial. The applicant may respond to appeal the decision and describe corrective measures to be taken for reconsideration.

Plaque
The general design of the plaque is attached.

Nominations
Anyone may nominate a boat. However, on submitting an application, the written agreement of the boat’s owner and agreement to display the plaque should be included.

Questions
Any questions about the application procedures or status of review should be directed to Mr. Gantz (Email: carrgantz@worldnet.att.net; Phone: (843) 768-3780).
Certification of Authenticity

The American Canal Society certifies that this canal boat

(Name of boat)

has met our design criteria as a reasonably authentic historic replica of a canal boat or type of canal boat that operated in this vicinity in the nineteenth century.

(Date)

www.americancanals.org
FROM THE PRESIDENT
By David G. Barber
This September 12th through 14th, the World Canals Conference was held in Bethlehem, PA. Since many of our directors and members attend the WCC, we held our annual directors’ meeting just before the conference on the morning of September 11th.

For those who have not attended a World Canals Conference, I would like to note that it is the annual meeting of folks who are the career operators of canal parks and those enthusiasts who are actively involved in the canal preservation and restoration effort world wide. In odd-numbered years, the conference is in Europe. In even years, it is in North America.

Attending these conferences introduces one to many interesting people involved in canals throughout the world and allows one to network with them. Several interesting news items at this year’s conference were as follows:

The folks from the Chesapeake and Ohio Canal were celebrating the launching, on the weekend before, of the “Charles F. Mercer,” a replica boat at Great Falls, MD. This new steel hulled boat of traditional lines replaces the veteran “Canal Clipper,” which has been unserviceable for a couple years.

All of the funds for this boat were procured from private and local government sources. They also are working to rebuild the Catoctin Aqueduct that collapsed many years ago in the Hurricane Agnes floods. The recently restored Monacacy Aqueduct was reported to be capable of holding water, although rewatering is not in the current plans.

Tours at the conference showed the serious damage from three recent fifty year floods along the Delaware Canal. But we also heard the plans and commitment to rebuild. On one conference tour, we visited Morris Canal Plane 9 West and saw what the decades of work by one man, Jim Lee, and his family can do to restore and document an historical canal engineering site.

Other talks included discussions of progress and plans at Delphi, IN and Camillus, NY, both volunteer run and staffed efforts. The added spice of the conference was the inclusion of a group of sixth graders from a charter school in Rochester, NY, who are actively and effectively working to remove a street and restore a section of the enlarged Erie Canal to public navigation, including the historic aqueduct over the Genesee River.

FROM YOUR EDITOR
I apologize most sincerely for the long period of time since the last issue of American Canals. The delay is entirely my fault, due to pressing personal issues, and is in no way the fault of any of the Society’s other Directors, Officers, or members.

Paul J. Bartczak

BOOK REVIEW
By Bob Friedman
Tucked away in the annals of the world’s canal and river sailing craft is the story of Lake Champlain’s sailing canal boats. They came into being with the completion of the canal that connected the lake to the Hudson River and the Erie Canal in 1823. A second canal, completed in 1843, linked the lake to the St Lawrence River and thus completed one of the major trade routes of the US in the 19th century.

The author, Arthur Cohn, director of the Lake Champlain Maritime Museum, traces the history of the canal boats, their ports along the lake, and the building of a replica boat in 187 pages. The book is filled with historical photos and lots of color shots in a very pleasing 11” x 8 1/2” paper covered edition. The boats themselves are grouped into four classes of increasing size covering the periods from 1823 to 1873.

All of this documentation leads to the heart of the book and that is the building of a replica sailing boat from the 1862 period. The search begins with the examination of three boats that sunk in Burlington harbor. The first was the Isle de Motte of 1841 and the second and third boats were the General Butler and the O.J. Walker from 1862. These wrecks are in excellent stages of preservation and are detailed in beautiful underwater photos. Plans were drawn from these wrecks and other documentation and the building of the Lois McClure began.

Construction is documented with photos and a set of fold out plans showing sheer, floor and deck. There is also a rigging and sail drawing. A body plan is missing and would be of great help to the modeler but the excellent construction photos show bow and stern framing details and should not present a major problem. A model can be built using plank on frame or lifts. Planking detail can be seen on several of the historical photos and can be easily replicated.

Not only is this book an interesting read but it offers the modeler a fun project that can help fill the time between major building efforts. Building the Lois McClure should go quickly, especially if the hull is bread and butter built. My only criticism of this effort is the lack of a set of building plans that would insure the accuracy that some modelers demand. All efforts to get the museum to issue them have met with resistance but I am hopeful that the museum staff could be pushed with enough phone calls.

The book is $24.95 plus shipping. If you want to get a copy please contact me off list at:

bobcat2@bmi.net.

This item was submitted by Society Director Bill Gerber.
THE TRIM CANE CANAL
By William R. Price

One of the most profound pieces of historical work I have read was the book entitled "Nothing Like it in the Whole World" written by Stephen Ambrose. The book opened my eyes to the fact that not all American history was considered before. In fact, Ambrose's works led me to re-evaluate my own understanding of important dynamics of history and how my own family fit within that framework. In my opinion, Ambrose's treatment of the railroad is its evolution as a force defining, and in some cases refining, not only boundaries, but the purpose of our nation, and our relationship to each other as Americans, is profound. An underlying current of Ambrose's writing touches the dynamics of the emergence of the railroad between 1800 and the late 19th century. That dynamic was the juggernaut that spearheaded the power and economic might of the great railroads and their evolution. A shocking portrait of Abraham Lincoln as a young railroad lawyer winning against all odds a landmark case regarding the right of way of railroad bridges across waterways highlights a subtlety of history that perhaps many of us have not explored. For the railroads to prosper and grow, our way of life as a nation had to change from the largely rural agrarian society to the consumer driven industrial society we still try to cope with today. And more than a few bridges had to get knocked down to do it.

While studying my own family and its role in the westward expansion of the United States I discovered several preceding generations involved in disputes with the railroad industry itself as represented by various conglomerates and companies. The main arch-villain of this saga and ultimate salvation for our family was the Illinois Central Railroad. My Third Great Grandfather was the last of a generation of entrepreneurs who built and maintained canals and was descended from generation after generation of men with similar backgrounds. My Twice Great Grandfather and his brother inherited the remnants of nearly 8 generations of American families that followed agrarian commerce and made their livelihood along the canals and waterways of America. In the end, my twice great grandfather lost most of his fortune, all of his land, and his brother lost his life. My great grandfather, growing up in a family driven by its own heritage, found salvation in the very instrument of the family's demise, the railroad. As one of the first members of the family to transcend from being a farmer to being a railroad carpenter, he stepped across a wide gap from what had been America to what America was to become. His sons became construction workers and tradesmen and his grandson was on the project team that built the first commercial nuclear reactor on the banks of the Clinch River in Tennessee in the 1950s. All of this within 6 generations that all draw their heritage back to the Trim Cane Canal.

When you query the USGS GNIS data base for Mississippi using the feature name "Trim Cane" and the feature type "canal" one record is returned on the feature, indicating it exists in Oktibbeha County running generally from Longview Mississippi to Starkville. The following table (Figure 1) shows the information returned on the record.

<table>
<thead>
<tr>
<th>Feature Name:</th>
<th>Trim Cane Canal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Type:</td>
<td>Canal</td>
</tr>
<tr>
<td>State:</td>
<td>Mississippi</td>
</tr>
<tr>
<td>County:</td>
<td>Oktibbeha</td>
</tr>
<tr>
<td>Latitude / Longitude (nn°nn'nn&quot;/nn°nn'nn&quot;)</td>
<td>USGS 7.5' x 7.5' Map</td>
</tr>
<tr>
<td>332845N 0885340W</td>
<td>Longview</td>
</tr>
<tr>
<td>332935N 0885229W</td>
<td>Starkville</td>
</tr>
</tbody>
</table>

Figure 1 Trim Cane Canal return from query of USGS GNIS Data.

A similar query without specifying the canal returns both Trim Cane Creek and Trim Cane Canal. The difference in the Creek is a longer span covering a few more miles of the area between Double Springs and Cedar Bluff Mississippi. The table below (Figure 2 on the following page) shows the USGS return for Trim Cane Creek.

It is quite evident on this topographical map (Figure 3 on the following page) that a portion of the original Trim Cane Creek has been altered and the channel straightened consistent with canal building.

Prior to 1850 in the United States, canals to move commerce were as common as many modern transportation systems we take for granted including highways, airways, and railways. By the 1850s, railroads were beginning to connect America's commerce, largely agricultural, with widespread markets. The heyday of agricultural-based canal-driven commerce for central Mississippi seems to have been between 1840 and 1860. Traveling down the modern day Tombigbee Waterway, the ports at Waverly and Columbus, Mississippi represent the virtual mouth of a series of agricultural commerce routes that stretched miles to the west into Mississippi's Oktibbeha, Choctaw, Chickasaw, Clay and Noxubee Counties. These counties are widely regarded as the second tier counties formed in the 1830s after the treaty of Dancing Rabbit opened the Mississippi Indian Territories for settlement.

One of the most vivid accounts of life in those times comes from Judge Thomas Battle Carroll in his book Historical Sketches of Oktibbeha County. Judge Carroll was born in Oktibbeha County and lived all his life there. His recollections of the canal are the most vivid account we have. Judge Carroll tells us the canal along Trim Cane Creek was actually the property of several large landowners and not opened to the public at large. He identifies three ports along the creek and describes the antebellum society that flourished there. Judge Carroll was of the opinion that the use of the canal waned after 1850 as the railroad made its way from Columbus,
Figure 2 Trim Cane Creek return from query of USGS GNIS Data.¹

Mississippi on the Tombigbee to Starkville and beyond.³ Judge Battle’s writings describe nearly a century of development in Oktibbeha County Mississippi, beginning with the inception in 1834 when the founding fathers met in a wood by a spring northeast of present day Starkville to elect officers and establish the county government. Through good times and bad, Judge Battles’ writings may be one of the most comprehensive memoirs that exist on the history of any county from its inception to the early 1900s. According to the Judge, commerce transportation between 1835 and 1840 was largely over roads from the prairie farms to the river-ports. He goes on to say “When fall came ox-teams or mule teams from the several parts of the county slowly and laboriously hauled the cotton to the Tombigbee. The roads, seldom good, were almost impassable through the prairies when bad weather had set in. The Merchants, too, had to make use of these summer and winter, good weather and bad, to haul their goods from the river-ports to Folsom and Mayhew and thence to Starkville.”⁴

The first port along the creek described by Judge Carroll was established by Major John Thompson north of Starkville around 1840. The landing was established near Major Thompson’s home. While it is difficult to pinpoint the exact location of the landing, the Judge’s general directions tell us it was north and east of Highway 389 which runs north out of Starkville through Pheba, Mississippi. Major Thompson was one of the first and largest landowners in Oktibbeha County.⁵ Major Thompson was also closely associated with David Montgomery, another prominent landowner. Each man had married the other’s sister.⁶ Being among the first white settlers into the Mississippi Indian Territories, these men purchased original land Patents from the U. S. Government through the Columbus Land Office in Lowndes County Mississippi. It is highly likely that they were among the early planners and forces behind the development of the Trim Cane Canal.

The second landing established along the canal was where present day highway 389 actually crosses the canal itself. This second landing was perhaps the most prominent and was known as “The Boat Landing” by older residents as late as the early 1920s.

The third landing described by Judge Carroll was Pearson’s landing which was a little over a mile farther up the creek towards Longview. The 1909 Wellborn Map, that shows a great deal of detail concerning locations of residences, indicates a Pearson’s canal connecting to the Trim Cane just over a mile southwest of The Boat Landing.⁷ The landings described by Judge Carroll appear on the map in Figure 4 on the following page.

Judge Carroll’s description of activities along the canal are intriguing because the first time I read them in 2003, I realized these were the same stories I heard my father tell me from the early 1950s. Independently confirming each, the stories themselves were what brought my interest in the plight of the canal to the forefront. Judge Carroll tells us “the plantation owners would use their slave laborers to work through the summer clearing the banks from anything that would impede the barges journey including overhead trees and branches as well. In the fall, the cotton would be loaded onto floats designed to carry 300 bales each. When the water rose high enough, normally in October, they would begin the journey to the Tibbee then the Tombigbee. Sometimes they would drop the Cotton off in the ports in Lowndes County, Waverly or Columbus but on many occasions they would
continue the journey all the way down to the Gulf Port in Mobile.  

Also around 1840 several new families settled in Oktibbeha County from Greene County Georgia, north and west of Augusta. These new families included the John Wesley Gilbert family. The Gilbert family migrated across Georgia and Alabama in a series of moves between 1833 and 1840. John’s mother remained in Georgia through the mid 1850s so he kept in close contact with her unit she, too, relocated to Oktibbeha County just prior to 1860. The Giberts settled on Line Creek near Muldrow in the northeastern corner of the county. The Greer family which was already prominently established in the county early on, and held a good deal of the original land patents, was also from the area around Augusta Georgia. As I have studied the canal data sheets around Augusta Georgia, it appears that plans were very much underway on some of the Augusta Canal as a means to counter the progress of the railroad diverting commerce to Charleston. These plans seem to have been under consideration as early as the mid 1830s. It appears that many of the families heavily investing in the land along the Trim Cane-Line Creek- Tibbee Creek waterways came into the Mississippi Indian territory predisposed to look for canal based solutions to agricultural-commerc related problems.

Recently, while conducting research into our family, we learned more about the canal from the first-hand account of Mary Jane Price Parker, who we refer to as Aunt Mamie Parker or Auntie. Auntie recalled the men working on the canal, loading the barges with cotton and leaving in October for the month-long journey to Mobile, Alabama where the crops were sold. She recalled the men would take dynamite to clear log jams on the way. Today, the canal is almost completely blocked in places due to beaver dams. Auntie’s recollections were given to my own father and his cousins during countless summer evenings in the 1930s while sitting around Auntie, under huge spreading oak trees in the muggy Mississippi summertime.

It probably wasn’t until completion of the Augusta Canal work that my own ancestor, Thomas Price, migrated to Oktibbeha County. He is shown in the county with his family in the 1850 U.S. Federal Census but had been in Edgefield County South Carolina, just northeast of Augusta, in 1840. Assuming the Augusta Canal was completed around 1847, it appears that timing for him to move on to other opportunities, improving and maintaining the Trim Cane Canal, may have been perfect.

Auntie’s grandfather was Thomas Price. Although she probably never really knew Thomas, she almost certainly spent a lot of time with her grandmother, Malinda Price, Thomas’ widow. According to Malinda’s Southern Claims Commission Petition filed in the 1872-1874 period, Thomas was murdered during the war. Auntie would have been very young when that happened, and probably would not have known her grandfather except through tales from her father, mother, and grandmother. Auntie did recall that Thomas owned a great many draught mules and horses as well as machinery to dredge the canal and shape the roadway along the banks of it. Keeping in mind this was not a traditional canal that commerce flowed both ways on, we can imagine that Thomas also maintained many of the roads in Northern Oktibbeha County as well. We recently obtained Southern Claims Commission Petitions where Malinda and her neighbor Robert C. McDaniel filed a claim against the U.S. Government for those very mules and horses that were confiscated by General Benjamin Grierson in his 1863 raid through central Mississippi.

Auntie’s father was Thomas Garland Price and her Uncle was Daniel Price, both men who, in the 1870s, fought the progress of the railroad across what is the present day boundary of Clay and Oktibbeha Counties in Mississippi. Undoubtedly her recollections included stories handed down by her grandmother and first hand accounts of the activities of her father and uncle following the war.

Veda Florence Price Schneider recalls as late as 1915-1920 when the entire community around New Hope and Longview, Mississippi would gather on the banks of the Trim Cane, and the men would work the dredge boat and clear off the overgrown brush from the banks while the women would cook dinner in large pots. I was somewhat surprised to learn that the canal was still cleared and obviously used for
commerce of some sort as late as the early 20th Century.

Having established that the canal existed and that our immediate family in Mississippi had direct ties to it, the next step was to try to determine why they came to Mississippi and how they got associated with it in the first place. As a result of some very fortunate DNA test results, we were able to establish our family line back to Chester County South Carolina where Daniel Price lived on the banks of the Sandy River. That Daniel Price’s lineage is well established as far back as John Price in Jamestown, Virginia around 1650/1611 by Vina Chandler Price in her book titled John Price: Immigrant to Virginia. The original John Price was a well-educated fortune seeker from Brecon, Wales. As the family migrated from Jamestown to Henrico County, Virginia, each successive generation established property on the banks of waterways that were significant commerce routes. Reading Vina Chandler Price’s list of deeds and property for this family also illustrates life along the waterways and canals. The Society’s index pages of canals in Virginia and South Carolina almost serve as a roadmap to the family’s migration from Virginia to Mississippi over a period of 250 years.

Daniel Price of Chester County South Carolina was clearly a farmer and lived his entire life on the banks of the Sandy Branch of the Broad River, dying there just after 1850. His oldest son, John, inherited the farm. The rest of his sons followed various vocations. Daniel’s grandfather had purchased the land in Chester County South Carolina in 1766 and continued to invest in land up and down the Broad River until 1768, when he moved to the Santee River near Berkeley on Fish Dam Shoals. We aren’t sure of the exact timing of the relocation to this area but the Society’s data sheet for the Santee indicates that the Private Developers began planning for that Canal by 1786, and indicates the need was recognized well before the Revolutionary War. By 1791, the family that had left Chester County South Carolina had settled in Orangeburg District, South Carolina. Daniel’s father, grandfather, brothers, uncles and cousins ultimately migrated to Edgefield County, South Carolina. Their property deeds fall along the major waterways and canals constructed in those areas.14

One could conclude that these men were farmers first and had little to do with the development of the canals, but Auntee’s stories seem to imply that at least Daniel’s son, Thomas Price, who was in Edgefield County SC in 1840, was engaged directly in Canal building. In fact, Thomas did not migrate to Mississippi in the 1830s or 1840s with the majority of those that settled the Indian Territories. He came, instead, around 1850 or just before, timing perfectly the 1847 completion of key canals around Augusta Georgia.

Once in Okitibeha County, the Price family’s close association with Greers, Gilberts, and other families that had been in and around Greene County, Georgia, near Edgefield County, South Carolina, seems to indicate that Thomas showing up there was not an accident. Thomas Price’s sons Thomas Garland, and Daniel Price, both married girls that lived along the Trim Cane-Line Creek-Tibbee River waterway. One girl was a Gilbert and the other a Greer. Over time, memories of the Trim Cane as a canal have waned. Today it is thought of mostly as a creek overrun with beaver dams. There are still stretches of the canal that can be recognized for what it was as it cuts across the swampy areas north and west of Starkville Mississippi.

Based on the writings of Judge Carroll, the stories of Auntee, and Veda Carpenter, we can clearly see there was a vibrant antebellum society that flourished along the canal from the late 1830’s through the Civil War. The canal itself remained in active use as late as the period 1910-1920 when the community would gather to work on its upkeep. Recent discoveries of artifacts belonging to our family indicates that those who lived in that society enjoyed quite a few luxuries, including very fine lace that was part of my great-great-grandmother’s wedding dress, a silver tea service still blackened with soot from the fire set by the Union raiders in 1863, and rare Daguerreotype photographs of Thomas and Malinda Price that figure from the pre-war era. Reviewing the lists of property confiscated by the Union soldiers during the raid, it appears that our family and the families of others in the area of the Trim Cane Canal were very well off through at least that point of the war.

From the time the Union raiders stepped on Thomas Price’s property, the fortunes of his sons began to wane. After the war Malinda was able to get the property passed to their two sons in a lengthy probate process that lasted nearly 5 years from 1867-1872. Documents in the courthouse in Clay County Mississippi indicate a long and arduous court battle between landowners along the present day Clay County and Okitibeha County Mississippi borders and the Mississippi and Ohio Railroad (M&O RR).

Thomas Price’s oldest son received a judgment in his favor around 1879 and was awarded $250 for the railroad’s crossing of his property. (See Figure 6 on the following page.) Thomas Price’s youngest son is not mentioned in the settlement, although his portion of the property was adjacent to his brother’s property.

The youngest son died in April 1879, either of wounds received during the war or from tuberculosis. By 1880, our family had been driven from the land Thomas and Malinda settled, splitting into a group that went to Texas and another that stayed in Okitibeha County Mississippi. By the early 1920s, Robert Joshua Price, a grandson of Thomas and Malinda Price, returned to buy property just south of the original family land, north of the Trim Cane Canal. Money for the property was substantially augmented by the insurance claim received by the family after Robert Joshua’s son, Robert Lee Price, was killed in action in France on October 5, 1918, literally days before World War I ended.

Recently, at a presentation to the Golden Triangle Civil War Round Table in Starkville, I presented information about the Trim Cane Canal, and many esteemed scholars and longtime residents of Okitibeha County were surprised at the reference to Trim Cane as a canal. I believe the USGS information alone establishes the fact that the feature was once a canal and the stories of Auntee and Judge Carroll have given some substance to the functionality of it. Presently the canal is little more than a deserted maze of beaver dams and creek bottoms.
Figure 6 M&O RR Rail Line along northern Oktibbeha County
Border where it crosses land once owned by Thomas Price

NOTES:
Pages 26-33 contain a revealing background on Lincoln’s involvement with the railroad’s expansion in Illinois prior to his successful political career.
2http://www.nps.gov/ query on feature name Trim Cane; feature type canal
3http://www.ushistory.org/ query on feature name Trim Cane; feature type creek
5Carroll, Judge Thomas Battle, Historical Sketches of Oktibbeha County, edited and amended by Alfred Benjamin Butts, Alfred William Gardner, and Frederic Davis Mellen, August 1, 1930, reprinted 1983. pages 55-56
6Carroll, Judge Thomas Battle, Historical Sketches of Oktibbeha County, edited and amended by Alfred Benjamin Butts, Alfred William Gardner, and Frederic Davis Mellen, August 1, 1930, reprinted 1983. page 47
7Carroll, Judge Thomas Battle, Historical Sketches of Oktibbeha County, edited and amended by Alfred Benjamin Butts, Alfred William Gardner, and Frederic Davis Mellen, August 1, 1930, reprinted 1983. page 55
8Carroll, Judge Thomas Battle, Historical Sketches of Oktibbeha County, edited and amended by Alfred Benjamin Butts, Alfred William Gardner, and Frederic Davis Mellen, August 1, 1930, reprinted 1983. page 92

OPENING EXHIBIT FOR
THE NATIONAL CANAL
MUSEUM GALLERY

“Along the Canals”
Opening Exhibit at the Emrick Technology Center

“Along the Canals,” an art and photographic exhibit by Canal Society of New Jersey members, Jean and Gordon Perry, will be featured at the opening of the new National Canal Museum Gallery at the Elaine & Peter Emrick Technology Center in Hugh Moore Historical Park, Easton, PA, until January 15, 2007. The gallery exhibit, featuring original artwork by Jean, and photographs by Jean and Gordon, includes the Lehigh Navigation, Delaware Division Canal, Morris Canal, Delaware & Raritan Canal, Union Canal and the Delaware & Hudson Canal.

The exhibit and lecture are sponsored by the National Canal Museum and the Elaine & Peter Emrick Technology Center.

20% of all sales will be donated to the National Canal Museum.

CANAL SOCIETY OF NEW YORK STATE ANNOUNCES A CANAL STUDY TOUR OF GERMANY—FALL OF 2007

Society President Thomas X. Grasso will lead a group of enthusiasts to tour canal, transportation, and industrial sites in northern and west central Germany between September 11 and September 26, 2007.

A flyer describing this tour is reproduced on the next two pages of this publication.

At the time of this writing, final costs have not been established. Please access the Society’s web site (www.canalsnys.org) for the most up-to-date information on pricing and any changes in itinerary (click on the 2007 Tour link. The detailed itinerary includes photos of sites to be visited.).
Canal Society of New York State

Presents

Canals, Waterways, Ship Lifts, and Aqueducts of Northern and West Central Germany

Tuesday, 11 September – Wednesday, 26 September 2007

Spend 16 days and 14 nights traveling with Society President, Tom Grasso, on a spectacular odyssey across northern and west central Germany from Berlin to Frankfurt am Main to visit, cruise, and observe a wide range of canal curiosities of yesterday and today. Splendid Medieval and beautiful towns with half-timbered buildings and baroque architecture will also be examined.

This once-in-a-lifetime program will focus on the exceptional beauty of the northern German waterways especially the Mosel River Valley, the Rhine River Gorge, and Europe’s largest canal project—Project 17—the new (2003) locks and aqueduct over the River Elbe north of Magdeburg.

Some of the many sites include:

- Magnificent Berlin with its many waterways; Technical Museum with canal, railroad and air craft exhibits; plus Berlin castles, cathedrals, monuments, and shopping
- Cruising the River Spree and Landwehr Canal in Berlin
- Visit fascinating Dresden with magnificent restoration (2005) of beautiful baroque church completely destroyed by 1945 bombs (the Frauenkirche) & Zwinger Palace
- Walking on and cruising through the mightiest aqueduct in Europe, Magdeburg Aqueduct over the Elbe on the Mittelland Canal and twinned Hohenwarthe Locks
- Cruising through 2 boat lifts - Niederfinow and Schannebeck - visit two others - closed
- Western Civilization's first summit level canal - Stegnitz Kanal (1390-1398) with flash lock and round lock (1724)
- The Henrichenburg site in the Ruhr District with 2 boat lifts (1899 & 1962) and 2 shaft locks (1913 & 1989) on the Dortmund Ems Kanal
- The Industrial Archeology and Museums of the splendid Ruhr District with cruise of Duisburg Harbor world's largest inland port
- Visit UNESCO World Heritage Town Quedlinburg & stunning Lüneburg - 3 night stay
- Germany’s fascinating “spaghetti junction” at Minden-Mittelkanal Kanal & River Wesser crossing - 2 aqueducts old and new & side by side, shaft lock, pump house
- Panoramic views - Mosel River Valley; new lock construction; then City of Koblenz
- Cruising through the magnificent Rhine River Gorge

In addition to 5 nights in Berlin, this spectacular 14 NIGHT canal tour will include 3 nights in Lüneburg, 3 nights in the Ruhr at Castrop-Rauxel, 2 nights in Frankfurt. Only 1 night is single layover in Koblenz. All Germany bookings by Herr Heinz Ackermann of Irro-Reisen, Lüchow.

Your cost is just

$_____ per person double occupancy——booked before January 1
$_____ per person single occupancy——booked before January 1

This price includes: A) Round-trip airfare on Continental Airlines from Albany, Syracuse, Rochester, or Buffalo connecting through Newark, for flight to Tegel Airport in Berlin on Tuesday 11 September and return from Frankfurt on September 26 through Newark. B) All hotels (3 and 4 star) and breakfast, all luggage handling at hotels EXCEPT carry-on luggage, all dinners except 1 in Berlin, 1 or 2 lunches, deluxe motor coach ground transportation, 11 boat trips, 7 museums, 45 SITE VISITS, GUIDEBOOK, admission fees, taxes including VAT, and tour guides

NOT INCLUDED: Most midday lunches, public transport fares in Berlin, luggage handling at airports, bus driver gratuity
Please check our website: www.canalsnys.org for detailed itinerary.

HARDCOPY OF TOUR ITINERARY OR EMAIL VERSION AVAILABLE BY CONTACTING SOCIETY PRESIDENT TOM GRASSO

(A minimum of 25 people is required
TRAVEL INSURANCE IS AVAILABLE- Contact Debbie at Gallery of Travel (below) FOR DETAILS

SOME DAYS WILL REQUIRE MODEST WALKING

To make a reservation for air bookings, please contact Debbie Kreskow at:
Gallery of Travel 125 White Spruce Blvd. Rochester NY 14623 phone: (800) 888-7232
Email deb@galleryoftravel.com

To make a reservation for the Germany portion or if you have any questions contact:
Tom Grasso 233 OVERBROOK RD. ROCHESTER, NY 14618
home phone: (585) 387-0099 cell phone: (585) 314-3782
Email: tgrass01@rochester.rr.com

DEPOSIT AND PAYMENT SCHEDULE: NOTE: PAYMENTS FOR AIRFARE MUST BE SUBMITTED TO GALLERY OF TRAVEL SEPARATELY FROM THE GERMANY TOUR PORTION, AS FOLLOWS:

NOVEMBER 15, 2007 $ ____________  MAY 15, 2007 $ ____________
AIRFARE CHECKS: PAYABLE TO- GALLERY OF TRAVEL ---- ADDRESS ABOVE

GERMANY PORTION: CHECKS PAYABLE TO-CANAL SOCIETY OF NEW YORK STATE TOURS
SEND TO TOM GRASSO---- ADDRESS ABOVE

November 15, 2006 $ ____________  February 15, 2006 $ ____________
April 30, 2007 $ ____________  July 30, 2007
$ ____________  Final Payment

NOTE: A LOWER DOLLAR VALUE RELATIVE TO THE EURO AT THE END OF JUNE 2007, COULD CAUSE AN ADJUSTMENT IN THE AMOUNT DUE ON JULY 30 FOR GERMANY PORTION
NATIONAL CANAL MUSEUM UNVEILS NEW EXHIBITS ON MAY 23

Hands-on activities put focus on the visitor

$2 million investment transforms three galleries and 8,282 square-feet of space

A News Release dated May 23, 2006

EASTON, Pa., May 9, 2006 – Imagine taking a trip down a 19th century towpath canal, through towns and villages, on boats loaded with cargo for the big port city. Now, imagine no longer and experience the new National Canal Museum!

The arriving visitor is welcomed on the third floor of Two Rivers Landing by an entryway that sets the stage for the visit. A new entrance system of glass walls and doors greets the public visually while cutting off humidity to the museum’s other galleries. Upon entering Water Works, visitors sense a space designed for new discoveries. They are greeted by a 90-foot water-filled model canal system set in a topographical environment that wraps around two walls of the gallery. Kids and adults are immediately engaged in the fun and learning as they pilot their boats through locks, over aqueducts and up inclined planes. Two stand-alone water tables – one devoted to the principle of buoyancy and the other, friction – invite visitors to try their hand at moving heavy cargo with less effort on water.

The model canal system represents a large portion of the museum’s investment in hands-on exhibits in over 8,000 square-feet of space on the third and fourth floors of Two Rivers Landing.

Moving down the ramp to Towpath Town, visitors experience canal life first-hand in a rich historical environment that opens to the fourth floor mezzanine. Here, they can harness a life-sized mule, explore the mechanical advantage of block and tackle systems, experiment with canal boat steering mechanisms, and become a canal-era entrepreneur by playing the Canal Captain Simulation Game. Canal artifacts are interspersed throughout: see first-hand an 1830s transit used for surveying, Erskine Hazard’s drafting equipment and a mule scraper. In the center of Towpath Town sits the colorful full-scale Ohio canal boat adorned with life-sized canal characters from the “My Name Is Jeremiah” original stage production. Role-playing and activity areas abound. A locktender’s house and toll collector’s house illustrate the two sides of canal life. There’s even a toddler activity area and appropriately placed seating where people can sit and rest.

The multi-dimensional visitor experience culminates with Engineering America on the fourth floor. Taking center stage is the museum’s original water table “Thoughts Flow.” Here, children and adults learn about the properties of water as they manipulate panels to change water flow and direction. Visitors can build and operate a lock (and then blow up the dam holding back the water!) using the lock puzzle computer game. Have you ever operated a crane? Crane tables challenge visitors of all ages as they attempt to load and unload cargo from boats. Visitors can try their hand at building a suspension aqueduct, a masonry aqueduct, or an entire canal system. These dynamic modular exhibits are designed to travel and broaden the impact of the science and technology associated with canals and inland waterways. They can be made available to smaller museums that may not be able or willing to fund permanent exhibits.

The new exhibits are funded in part by a grant from the National Science Foundation. Total project cost is $2.1 million. The National Canal Museum will contribute $500,000 to the project through donations to the Teaming Up for Kids and Science campaign which has raised $341,000.

The exhibits are the creation of the Science Museum of Minnesota (SMM), the Oregon Museum of Science and Industry (OMSI), Vincent Cuilla Design, and the National Canal Museum. The museum’s staff and skilled volunteers have worked in the new galleries since January preparing the floors, walls and ramps; rebuilding the existing Ohio canal boat; and constructing the new toll collector’s office and locktender’s house. “We kept our painting clothes handy over the past few weeks,” says museum director Rob Rudd. “Our entire staff pitched in and helped.”

The nation’s top science advisors and institutions were recruited to design and fabricate the new exhibits. The Oregon Museum of Science and Industry, located in Portland and founded in 1944, is a world-class tourist attraction and educational resource. The OMSI exhibits staff has worked with museums all over the United States. The Science Museum of Minnesota, founded in 1907, is a large regional science museum located on the banks of the Mississippi River in downtown St. Paul and serving an audience of more than a million per year. The museum offers a complete package of exhibit services from design to fabrication to installation. Their in-house exhibits division has more than 65 full-time staff.

The following article appeared in the June 28, 2006 edition of the (Sterling, IL) Daily Gazette. © 2006 Sauk Valley Newspapers. All rights reserved. Reprinted with permission.

SECRET JEWEL

Concerned citizens have done much to restore waterway

By Andrew Walters
Gazette Reporter

Today, a visit to the Hennepin Canal generally means bringing a bicycle or fishing pole, or perhaps just a good pair of walking shoes to hike the scenic byway.

That’s a far cry from when it was first built nearly 100 years ago, when grain and coal barges dominated the 155-mile waterway that bridges the Illinois River with the Mississippi.

It is also a pleasant change from the overgrown garbage dump the feeder canal had become after decades of neglect.

The Hennepin, which runs south from the Rock River in Whiteside County to the main canal in Bureau County, was finished in 1907, but by 1951, it no longer was a working canal, and by the late ’80s, “it had deteriorated badly,” said Dick Stinson, member of the Rock River Development Authority, a volunteer group that works with the
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**ORIGINS OF THE HENNEPIN CANAL**

By Andrew Walters
Gazette Reporter

Although much heralded in its day, it seems the Hennepin’s original purpose was doomed from the start. Talk of building the canal began in 1834, but construction didn’t begin until 1892, and by the time it opened in 1907, it was innovative, but obsolete. The Hennepin was the first American canal built of concrete without stone cut facings, and some of the innovations pioneered on the Hennepin were probably used on the Panama Canal. For instance, both used concrete lock chambers and both used a feeder canal from a manmade lake to water the canals, because both needed water to flow “uphill.”

But even as the canal was being built, the Army Corps of Engineers was widening the locks on the Illinois and Mississippi rivers. With lock chambers 20 and 40 feet narrower than the rivers it connected, the canal was obsolete before the first boat made its initial voyage.

Before the railroad, though, waterways were the most viable way to ship cargo, especially grain, out of northern Illinois to Chicago or Quad Cities markets. But by the time the Hennepin Canal construction began, the railroad had arrived.

Still, the canal was seen as an advantage to farmers because it provided rate competition to the railroad industry, which had a corner on the grain shipping market.

“In other areas where there was waterway routes, it helped keep the rail rates in check,” said Steve Moser, director of the Hennepin Canal Visitor Center in Sheffield.

It also proved convenient—farmers would sometimes load barges simply by removing a board in the wooden bridges over the canal and dumping grain from trucks or wagons directly onto barges below, Moser said.

Although it was used consistently from 1907 through 1948, traffic was never overwhelming along the Hennepin, and by the ’30s, the canal was used primarily for recreational purposes.

“The 1920s was the biggest as far as cargo, but even that was only a fraction of the total capacity,” Moser said. “It was never heavily used because upgrades to the Illinois river system allowed for bigger barges.”

In fact, technological advances in nearly every aspect of travel came much more rapidly than was anticipated in the 1890s, he said.

Being not suitable to larger barges, the canal soon lost favor as a trade route. The Corps of Engineers reported no traffic on the canal in 1948, and it was closed to traffic in 1951.

“It just kind of sat there for a while and decayed and fell apart. Certain pools (between locks) even dried up,” Moser said.

For decades, that was the fate of the canal, until volunteer groups, such as the Friends of the Hennepin Canal in Sheffield and the Black Rock River Development Authority began stepping in.

Now the 104.5-mile Hennepin Canal Parkway State Park is on the National Register of Historic Places, offering recreationists hiking, fishing, biking, snowmobiling, canoeing and a host of other activities.

*This item was submitted by Society member John McPherson*

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**ACCOMPLISHMENTS OF THE ROCK FALLS CHAPTER OF THE ROCK RIVER DEVELOPMENT AUTHORITY**

In August 2005, the Illinois Department of Natural Resources honored the Rock Falls Chapter of the Rock River Development Authority for its “exceptional volunteer service to the agency.”

*This item was submitted by Society member John McPherson*
According to the IDNR, the Rock Falls chapter was established in 1985 as part of a larger project that coordinated local municipal volunteers along the Rock River in an effort to help Hennepin Canal State Trail in Sheffield.

A group of about 15 people began by volunteering to open up the canal by hand, clearing a meandering trail along the old canal towpath, and turning it into a trail that was safe, clean and attractive. They also took on another project that raised more than $10,000 in contributions, materials and in-kind services to gravel, then oil and chip the first three miles of the recreation trail — the start of what is now a 91-mile Hennepin Canal trail network.

Since records were initiated in 1990, there have been 12,500 volunteer hours provided to the Hennepin Canal by this group. In 2004, members bought 12 can buoys for the Sinnissippi channel at a cost of more than $1,200. In May 2005, they sponsored a canal cleanup day more with than 100 participants, and that August, they donated $3,000 to the resurfacing of a section of the canal recreational path. “Their efforts are extraordinary, and it shows at Hennepin Canal State Trail,” the IDNR said.

The chapter is always looking for new members and volunteers to help with canal preservation. Call Jim Latta at 623-2608.

*This item was submitted by Society member John McPherson*

The following item appeared in *Trust Talk*, the newsletter of the York County Heritage Trust, in the Fall of 2004. It is reprinted with permission.

**YORK COUNTY SITE OF PENNSYLVANIA’S FIRST LIFT-LOCK CANAL**

By June Lloyd

The small town appearance of York Haven today belies its importance in the evolution of transportation in America. On a cold November 22, 1797, Governor Thomas Mifflin and a packed boat load of dignitaries traveled upstream through the ice-chunked locks of the Conewago Canal to officially open one of the first canals with locks in America.

Pennsylvania was a fertile land, but the surplus wheat and flour had to be transported to ports such as Baltimore and Philadelphia to be sold and transshipped. Good roads were scarce, so water transport was a feasible alternative. Although wide, the Susquehanna River presented some impediments to navigation, the primary obstacle being the falls in the river at the mouth of the Conewago Creek in Newbury Township.

On July 3, 1792 a group of Philadelphia businessmen, headed by financier Robert Morris, signed an agreement with Governor Mifflin agreeing that “at the Conewago Falls they will cut, establish and maintain a Canal...” The newly-formed Conewago Canal Company agreed to do so for the sum of $5,000 ($13,350). They must have known this would not be nearly enough to pay for a canal with at least two locks, which was specified in the agreement. The number was originally calculated to pay for a sluice passageway with no locks. The drop of the river, however, was twice the gradient to allow a safe descent and practical ascent around the falls on a simple sluice canal.

The Philadelphia canal financiers had to be looking at benefits in the long run, planning to divert the Susquehanna commerce to Philadelphia by connecting with the new Lancaster to Philadelphia turnpike by off-loading at Wright’s Ferry (Columbia). In conjunction with the Schuylkill and Susquehanna Navigation, which joined with the Delaware and Schuylkill Canal to form the Union canal consequently stretching from Middletown in Dauphin County to Philadelphia, much of the commerce of Pennsylvania would thus be directed to Philadelphia instead of its rival port of Baltimore.

The project turned out to be much more expensive than anticipated, with a final cost of nearly $120,000, not including any maintenance or the wages of a lock keeper (about $200 a year). Smaller river boats did use the canal for some years, but larger boats, capable of running the falls themselves, were soon built. Canals were also a relatively short-lived mode of transportation, being widely replaced by mid-nineteenth century by the then unforeseen advent of the railroad. They were, nevertheless, an important stage in the history of commerce and economics in Pennsylvania.

More about the Conewago Canal and other modes of early Pennsylvania transportation and commerce can be found in books and manuscript files at the York County Heritage Trust Library/Archives. The 2004 journal of *Canal History and Technology Proceedings*, a recent addition to the collection, contains the “Conewago Canal: First Canal of Pennsylvania” by Robert J. Kapsch, Dr. Kapsch drew on the Trust manuscript collections, among others, to research this well-written article.

*June Lloyd was the chief librarian for the York County Heritage Trust and is now retired.*

*This item was submitted by Society Director Bill Gerber.*

**WICKET! WICKET!**

(A fable for radio)

(Theme music: sunrise.)

The Scene: The light of dawn is breaking through the green leaves of the forest, somewhere in the Virginia piedmont. In the foreground, crouched beside the massive trunk of an ancient oak tree, is the intrepid naturalist (not entirely unlike David Attenborough). Turning toward the camera, he whispers:

“We are here, waiting very quietly, to witness one of the rarest sights in nature. Through the mist, on the other side of this great White Oak, is a nesting box occupied by a mating pair of miter gates. This nesting box, which we knowledgeable scientists call a ‘canal lock,’ is made of wonderfully crafted blocks of solid granite laboriously carved from the igneous rock which forms the fall line paralleling America’s eastern coast.”

“Nearly two centuries ago, at a considerable expense of labor, hundreds of these massive granite blocks were quarried by hand, carried here, and ingeniously arranged to form a rectangular box. Each stone was set in its special place in a bed of special mortar known as hydraulic cement, made from special limestone.
discovered by canal engineers in the center of the state.”

(Theme up: “If you build it, they will come”)

“When the nesting box was ready, the miter gates arrived, two by two. In a lock, miter gates look delicate, like birds’ wings or leaves of a book. But they are made of huge timbers held together with gate irons; each weighs over a ton. As each leaf arrived, it was nestled into position, settled down on its pintle and strapped to its own hollow quoin with its own gate strap. Here each gate was destined to live out its useful life, its movements limited to the open position, fitting neatly into a gate pocket in the stone wall; and to the mating position, with its entire miter firmly in contact with its mate’s.”

“Back in those early days, no one realized that miter gates mate for life, and that the gestation time takes many decades. Back in those days, the love life of the miter gates was constantly interrupted by canal boats passing through, forcing the mating pairs apart, and working them so hard that they aged before their time. When their balance beams fell off, and they began to sag and fall apart, they were ripped untimely from their nests, discarded without ceremony, and replaced by new gates. This heinous practice, unknowingly, led to one of the greatest tragedies of our time.”

“Are we here today under this great oak tree, in sight of an ancient canal lock, because local people have reported strange underground noises here in the last few days. If you listen carefully, you can hear them too.”

(Plaintive cries: “wicket! wicket!”)

“Boat traffic on this canal ceased almost a century ago. Here in this nesting box, one pair of miter gates was left in the mating position, and remarkably, through all those years, the pair has managed to remain intact. It is undoubtedly for this reason that it is at this spot where we may soon witness one of the rarest sights in nature. During the last few days, intrepid scientists have monitored the underground noises and have predicted that the blessed event is due this morning. If we remain quiet enough we may witness the event and record it on film for the very first time.”

(Louder cries: “WICKET! WICKET!”)

“And now it’s happening! Something is coming out of the ground, from the nether regions of the lock pair! Now we can see it - it’s like a large iron butterfly. It’s lifting its wings, trying them out for the first time, and now it’s flapping them, and flying away, up the canal! Soon it will be looking for its own nesting box. If it’s lucky, it will dig in there, pupate, and in a few decades it will emerge as a full-fledged miter gate. We wish it luck.”

(Fading away: “Wicket! Wicket!”

(End theme up and out. Canned applause.)

This item was submitted by Society Director Bill Trout.

FURTHER RESEARCH NEEDED ON THE MIDDLESEX CANAL

In May 2006, Society Director Bill Gerber noted that highway construction in East Cambridge, Massachusetts had uncovered structures related to the Middlesex Canal, in a portion of the canal which has been inadequately researched.

The “Big Dig” folks have begun work to reopen the mouth of the Miller’s River in East Cambridge. I’ve not yet gone to see it, or photograph it, but apparently this is happening somewhere near “Tower A,” i.e., a switching tower used by the commuter rail system for trains entering and departing North Station.

Though little known to Middlesex Canal people (but a topic for study that needs to be seriously pursued), there was a complex of four canals constructed in East Cambridge in about 1810, remnants of which can still be seen along Edwin Land Blvd. These were constructed by Andrew Cragie’s Lechmere Point Corporation in about 1810 as part of a land development plan that included the construction of docks and canals in East Cambridge (across the Charles River from Boston). Named the Broad, South, Portland (or North), and Lechmere Canals, this network was intended to link East Cambridge and Cambridgeport, through the Middlesex Canal, to the commerce of the Merrimack Valley.

Rob Winters found some documentation about these canals, with maps showing their location, in an MIT publication; I assume more can be found at the Cambridge Historical Society, probably Mass Historical Society, etc.

The Broad Canal extended for more than half a mile parallel to and just north of Broadway. This canal remained in use into the 20th Century and its eastern end remains intact today. Running between what is now Portland and Fulkerson Streets, the Portland/North Canal connected the Broad Canal to the Miller’s River, meeting the river at a landing near what is now the intersection of Lambert and Gore Streets. The South Canal ran parallel to and south of the Broad Canal, for about a quarter mile, between Broadway and Canal Streets (the latter was renamed Harvard Street, later terminated at Portland Street by Tech Square). The middle of the Broad Canal was connected to the east end of the South Canal by a short connecting canal, near what is now Ames Street; from here another connecting canal provided an alternate access to the Charles River. The Lechmere Canal was a dredged inlet with a seawall located in what once was the Charles River. It may have come into existence as the river was filled in around it.

Anyhow, a component of what was once part of the Middlesex Canal’s history is being opened; and I’ve now told you just about all I know about the East Cambridge Canals. Would someone please pick up on this? I can’t, "my plate’s full" for the foreseeable future. (Whoever does pick it up, please keep us informed about what you are learning, and consider generating: (a) an article for Towpath Topics, and (b) an exhibit for the museum, perhaps to augment the exhibit Dave Dettinger did on the Cross-Boston/ Mill Creek Canal.)

COMING ATTRACTIONS

Look for the following articles in future issues of this publication:

A five-part series on “By Canal Boat, Cable Tram and Steam Train Through England and North Wales” by Bruce Russell

“Imagery of a Nineteenth Century Canal” by Jeremy Reiskind

And two articles by David Johnson on the 2005 World Canals Conference in Sweden and Norway’s Telemark Canal.