PRESIDENT'S LETTER

Greetings! First, I'd like to remind all of our members that our annual membership meeting will be held this year in conjunction with the World Canals Conference, September 10-14, 2002, in Montreal, Canada. The conference organizers have had a bit of a problem juggling what promises to be an impressive itinerary with meetings of the American Canal Society, Inland Waterways International, and the World Canals Conference Steering Committee.

Now, though, still about one month before the Conference begins, it appears that our membership meeting will be held at 5:45 pm on Thursday, September 12. The Director's Meeting is now scheduled at 4:00 PM on Friday, September 13. These dates are probably solid, but there may be some changes, so look for signs announcing our meetings, or ask someone in authority. It will be a good chance to try out your high school French.

Our election of Directors will be held at the annual meeting. We'd certainly appreciate a good turnout. An election ballot for Directors is being sent in a separate mailing. If you will be unable to attend the membership meeting, please ensure that you return the completed ballot to Bob Schmidt, Nominating Committee Chairman, as soon as possible. There is a provision for write-in candidates, but please ensure that the person you nominate in this way is aware of your nomination and agrees to serve the designated term. Also, keep in mind that those people nominated to serve as ACS Directors are chosen because of their successful project record in one or more of the ACS's stated goal areas. We do not, as with some societies, nominate a Director solely as a reward for attending society functions.

The Nominating Committee's slate of ACS Officers is also on the ballot and will be voted upon at the Director's meeting during the Montreal conference. All ACS members are welcome to attend that meeting. Officer nominations will be accepted from the floor, again with the same restrictions as those placed on Director write-in nominations.

One of the problems that has plagued all organizations such as ours in the last number of years is that we seem to be attracting relatively few younger members - men and women in their 20s and 30s.

The Paw Paw Tunnel; see page seven for Bruce Russell's story

The first time I was president of the Canal Society of Ohio (I served two terms separated by about ten years), I was 37 years old. I became president of the American Canal Society when I was 65 years old. I believe we can function best with a good mix of younger and older members. The question is, how do we attract the younger members? How do we make the history and engineering of our nation's Canal Era attractive to younger people?

It seems to me that it is up to the old timers to show the younger people just how interesting and how much fun our own particular brand of the canal hobby can be. I don't know what age we should aim for, but early this April I had a chance to do something positive in this area. The president of the Tuscarawas County (Ohio) Historical

(continued on page sixteen)
July 21, 2002 – Biking the Delaware & Raritan Canal with the state park historian (732-873-3050).

August 9-11, 2002 – Middlesex Canal weekend at Lowell (Massachusetts) National Historic Park (978-970-5000).

August 11, 2002 – Biking the Delaware & Raritan Canal with the state park historian (732-873-3050).

August 18, 2002 – Locktender’s House open 1-4 pm, Schuykill Canal Association, Mont Clare, Pennsylvania (610-917-0021).

September 11-13, 2002 – World Canals Conference, Lachine Canal, Montreal, Canada. Theme: “Infrastructure and Cities.” Contact: Julie Talbot, Coordinator; 514-283-6054, 514-496-1263 (fax); email: julie_talbot@cpch.gc.ca; websites to visit: www.canalsdelachaine.qc.ca and www.parksCanada.gc.ca/canalcanaline


September 15, 2002 – Locktender’s House open 1-4 pm, Schuykill Canal Association, Mont Clare, Pennsylvania (610-917-0021).

September 27, 2002 – “In Search of the Morris Canal” – a then-and-now slide program; 7:10 pm, Auditorium of Honeywell Corporation, Columbia Road, Morris Township, New Jersey (908-722-9556).

September 28, 2002, October 5, 2002, 9 a.m. This series of 11-13 mile canal walks will cover the entire Delaware Canal in five consecutive Saturdays (215-862-2021).

October 19, 2002 – Fall Clean-Up, Schuylkill Canal Association, Mont Clare, Pennsylvania (610-917-0021).


November 15, 2002 – “Paddlewheeling in the Path of Lewis and Clark” – a slide presentation about the Canal Society of New Jersey’s Columbia River cruise; 7:10 pm, Auditorium of Honeywell Corporation, Columbia Road, Morris Township, New Jersey (908-722-9556).

DEADLINE: Material for our next issue must be on the associate editor's desk no later than October 1, 2002.

Material submitted to AMERICAN CANALS for publication should be double-spaced and on one side of the paper only.
IN MEMORIAM

It is with great regret that we tell you of the passing of our editor, David Ross. David died on July 11, 2002, after a brief illness. He had been the Editor of AMERICAN CANALS, the quarterly publication of the American Canal Society, from 1990 into 1994 and, again, from November 1997 to the present.

David was an "Inland Waterway" man, Chairman of the ACS Navigable Waterways Committee, and a true "Southern Rebel." He will be greatly missed by all who knew him.

THE C&O CANAL'S
By Bruce J. Russell,

THE C&O CANAL'S
Contributing Editor

The Chesapeake and Ohio Canal, which parallels the Potomac River from Washington, D.C. to Cumberland, Maryland, a distance of 185 miles, was completed in October of 1850. Groundbreaking had taken place on July 4, 1828 with much fanfare. The United States was still a young nation, and the population was moving westward from the original 13 colonies along the Atlantic Seaboard into the interior. One of the principal destinations was the Ohio River Valley with its abundant and rich farmland. George Washington had explored some of this territory prior to the Revolutionary War, when the limit of the frontier was Pittsburgh. After independence was gained in 1783, he again made a westward journey over the Allegheny Mountains to survey the virgin lands that would, within 50 years, become part of the region now called the Midwest. By 1790 the old forts that had served as defenses against Indian raids had been abandoned. Wagon train after wagon train of settlers headed westward in an unending procession.

Following the end of hostilities with Britain, normal trade and commerce between the two countries was renewed. English merchants visited American cities from Boston to Savannah for the purpose of making deals. American merchants sailed to Britain for the same purpose. While there, they observed that country’s efficient inland waterway system consisting of canals and canalized rivers. Although many had locks of only 7-foot width, the canals were still more practical than horse-drawn wagons for moving bulk commodities. One pair of horses was able to haul the equivalent of four or five wagons, because the wooden vessels encountered very little friction on the water’s surface; they simply glided along.

Inspired by what they saw in the former mother country, the visiting Americans determined that a system of inland waterways was the answer to their transportation needs. From 1785 until about 1810, railroads were not yet viable as long distance carriers of people and goods. Primitive lines did exist, but mainly to serve mines. Horsepower rather than steam-driven locomotives was utilized.

President Washington and others desired to create a water route from the Ohio River Valley to the new federal capital, under construction on the lower Potomac River between Maryland and Virginia. Initially their plan was to use the river itself, except in a few places where waterfalls and rapids existed. Here, bypass canals would be constructed. In the 1790s, work began at Great Falls, about 20 miles west of the city that would soon be known as Washington; however, it soon became obvious that navigation on the Potomac River was fraught with problems. Only when its water level was high could...
boats pass over it. At other times its depth was too shallow, resulting in vessels scraping bottom and being damaged by rocks or even sunk. Consequently the Potomac River was only useful for sending rafts downstream during times of high water. Made of lumber, these rafts were designed to be taken apart upon arrival in Washington or Alexandria and their timber sold. Clearly more practical solutions were called for.

Inspired by what they saw in Britain, Americans concluded that canals running parallel to rivers were the most obvious means of furnishing inexpensive transportation from the eastern seaboard into the interior. In 1817 work began on the Erie Canal in New York State. When it was finished in 1825, everyone had cause to celebrate. Despite of having to close during the winter due to freezing, it was a commercial success from its first year. By 1828 a steady procession of wooden boats moved across its 363 miles from Albany to Buffalo.

As the 1820s came to a close, other canals had either opened or were under construction throughout the eastern United States. On July 4, 1828, work started on what became known as the Chesapeake & Ohio Canal. Its goal was to form a waterway between Chesapeake Bay and the Ohio River. Once travelers and goods reached the latter, steamboats could be used to proceed farther into the interior of the Ohio Territory. Because the region through which it would travel was somewhat warmer than New York State, it was felt that the Chesapeake and Ohio Canal could be kept open longer than the Erie.

Gangs of laborers began digging at several locations. Many were Irish immigrants who may have built canals in Ireland. Stonemasons arrived from Wales to handle the building of 74 lift locks, 11 aqueducts, and over 200 culverts. Water for the canal was taken directly from the parallel Potomac River using short feeder channels. Although constructing a canal parallel to an existing river had certain advantages, it also created difficulties. When flooding occurred, excavation work on the 5-foot-deep canal prism was set back weeks or even months. Furthermore, the Irish laborers resented the fact that while they performed most of the hard manual labor, the Welsh and later the Germans held down most of the skilled jobs involving erection of the stone structures. What the Irish didn’t want to accept was that in their native countries these men had been engaged in the stone trade. They, on the other hand, had been primarily poor tenant farmers in an Ireland still under British domination.

An ominous event for the canal’s future was the start of track-laying for a railroad which would run adjacent to it from Washington and Baltimore toward Cumberland and beyond. This, of course, was the Baltimore & Ohio Railroad, which would ultimately grow into a huge carrier extending to Chicago and St. Louis. But in the late 1820s, most people could not conceive of railways as anything but adjuncts to mines. In fact, in Pennsylvania, short railroads were actually employed by canal companies to transport coal from mines to loading docks for canal vessels. Thus, when work began on the C&O Canal, few viewed railways as a
threat.

The biggest obstacle facing the builders of the C&O Canal was a mountain located in the Maryland village of Paw Paw, an Indian name. This barrier prevented continuation of the waterway westward towards Cumberland, a former frontier outpost until the region beyond started to become settled following the Revolution. The building of locks to surmount the mountain was out of the question. It was too high and steep. Likewise, construction of an inclined plane railway such as those found on Pennsylvania’s Main Line Canal or New Jersey’s Morris, didn’t appear to be practical either; therefore, it was decided that the C&O Canal had to go through the mountain at Paw Paw. The notion of canal tunnels wasn’t a new one. Many existed in England; in Lebanon, Pennsylvania, the Union Canal had constructed one. All that would be required would be engineering skills and the ability to use primitive blasting. In addition, hundreds of men with strong backs would have to haul away the rubble following each detonation of black powder.

Work on the 3,118-foot-long tunnel commenced in the 1830s. Despite periodic interruptions caused by labor unrest, accidents, and shortage of funds, it was finished in the late 1840s, in time for the canal’s opening in 1850. The bore featured elaborate east and west portals made of dressed stones. Under its arched roof, mules walked along the towpath, pulling the boats. No provision was made for interior illumination. Instead, the mule drivers carried torches which gave some light. Once traffic began to increase, a traffic control system was instituted. Several vessels would be permitted to proceed in one direction, and then there would be a reversal. Boats could not pass one another inside the tunnel.

Although the C&O Canal was supposed to go as far west as the Ohio River, it never did. By 1850 the railroad era was upon America, and financiers knew that the future didn’t belong to the canals, as they could only move cargo so fast, and for only eight or nine months of the year. Consequently Cumberland, Maryland, which was supposed to be the waterway’s temporary terminus, became its permanent one. Here a basin was excavated where vessels could wait between journeys to and from Washington. Ironically, at this basin the C&O boats picked up most of their coal from railroads. A special track was built to permit loaded rail cars to dump their coal directly into the wooden canal boats that were positioned underneath. This arrangement indicated that by the time the canal was finished in 1850 railroads had gained supremacy. It was the railroad that fed coal to the waterway. Each boatload was then taken east toward Washington to be burned in homes and factories. Many of the vessels didn’t make the complete 185-mile trip, but instead ended their voyages at intermediate points. In addition to the principal commodity of soft (bituminous) coal, lumber and cement were also transported. But black diamonds were king.

No regularly scheduled packet boats ran on the C&O Canal since rail service on the parallel Baltimore & Ohio was much faster. But special excursion boats were operated at many locations from Washington to Cumberland. People enjoyed a leisurely, recreational voyage on the packet boats, which featured upstairs seating. One line offered trips through the Paw Paw Tunnel, a major attraction in itself. The notion of boats going through a tunnel fascinated many folks then as it does now.
it does now. interestingly these excursions continued almost until the waterway's final year of 1924. "down the old potomac," a documentary film produced in 1917, features passenger-carrying excursion boats going through the paw paw tunnel. this incredible film is shown in the C&O Canal Visitors Center in Hancock, Maryland and is definitely recommended.

the C&O Canal witnessed considerable action during the Civil War from 1861 until 1865, but wasn't damaged. Rebel cavalry rode past the Paw Paw Tunnel on scouting expeditions for Robert E. lee's army, but there is no record of any attempt at blowing it up. Probably by 1860 most military traffic was moving along the adjacent B&O Railroad, which was targeted for destruction by Confederate forces. Had there been no nearby railroad, the C&O Canal might have been used for movement of troops and material by the Union armies headed to the battlefield in antietam, Maryland.

the C&O's best year for business was 1875, when over 500 boats traveled upon it. the major boat-building yards were located in Cumberland, and many carpenters found jobs there. But after 1880 business rapidly declined. Each time a flood damaged portions of the waterway, it was debated whether or not it ought to be abandoned. In 1889 its competitor, the B&O Railroad, acquired the canal and kept it running until 1924. The B&O paid the salaries of the lock tenders and did maintenance, such as lock and aqueduct repair and dredging. Furthermore, the life of a canal boatman became less appealing since it involved walking for miles along towpaths and depriving one's children of the chance to go to school. In addition, boatmen and their families lived in cramped quarters aboard their vessels.

After the floods of 1923, it was decided to shut down the C&O Canal permanently. Official abandonment was in 1924, the same year New Jersey's Morris Canal closed. Soon the water was drained and its surviving wooden boats were either sold or burned. Maintenance ceased completely, and within 25 years many of the locks and stone aqueducts had deteriorated; however, the tunnel at Paw Paw was lucky. Perhaps because it was built to high standards, it did not crumble or weaken. Instead it survived and its towpath remained clear enough for people to hike through it. In 1971 the entire C&O Canal was acquired by the National Park Service. Portions have been rewatered and made to look as they did when the canal was functioning. No rewatering has occurred on either side of the Paw Paw Tunnel, however, but at some future date this could occur. Then excursions could be operated through the over-3000-foot bore. What a tourist draw this would be! All that it would take to accomplish this is money. Little work is needed on the actual tunnel. The canal prism at either end would have to be cleared of trees and debris and then rewatered.

There is presently a long-term plan in Cumberland to rewater the old C&O Canal basin and make the area look like it did circa 1885. Currently a wooden replica of a C&O Canal boat rests in the dry basin. Someday it might be floating, assuming it's watertight. Cumberland is only about 20 miles west of Paw Paw.

Getting to the Paw Paw Tunnel is very easy using modern interstate highways and then local roads. Paw Paw is clearly shown on Maryland and West Virginia maps. In the C&O Canal Visitors Center at Hancock, one can buy maps showing the entire C&O Canal, indicating major points of interest along its 185-mile length. Brochures on excursions along the rewatered sections are in the information racks. National Park rangers staff the center and can answer most questions about the canal and its future plans.

There is no danger whatsoever in walking through the Paw Paw Tunnel. As I made the trek, my thoughts turned toward the days when boat after boat passed through, and a procession of lighted torches, held by the mule tenders walking on the towpath, could be seen. I also thought of those Sunday excursion vessels depicted in the 1917 movie. Little did those participants realize that within seven years their journey could not have been repeated. But who knows, maybe by 2010, money will be found to rewater the old ditch so that such rides can again be offered.

Wooden replica of C&O canal boat at Cumberland
AN INTERESTING AND
By William E. Trout, III,

NEW KIND OF LOCK
Director, ACS

Cambridge Seven Associates in Massachusetts designed this lock model for Maymont Park's new nature center in Richmond, Virginia. The whole thing is in a glass box about five feet long. It's a great idea: by remote control, kids and their parents can let water in and out of the lock chamber, open and close the gates, and let a boat through. It is intended to demonstrate the technical details of lock operations.

It is a very interesting lock, entirely unlike any we have seen before, so we made the accompanying sketch and photo to show its technical details. The gates open in the downstream direction, and when closed are flat across. The downstream gates are taller than in other locks, going down into a very deep canal bed. No sluice gates are needed. The design is an interesting alternative to the traditional Leonardo daVinci style. Cambridge Seven Associates are at www.c7a.com if you would like to have a lock made or would like to comment on this one.

Just for fun we searched the internet to see what they had about lock operation. I particularly like www.terrax.org, which demonstrates on your screen how a lock works, and it warns you when you’ve done something terrible. It’s fun to spill virtual water over the lock gates in their two-lock staircase version.

Photo by W. E. Trout, III
Nancy Trout indicates the model

CANAL BUFFS
HALL OF FAME

American Canal Society President Terry Woods has long favored the idea of establishing a "Canal Buffs Hall of Fame" to honor those founding fathers, and mothers, of the ACS.

On page eight, we introduce our first inductee, William H. Shank. Along with Bill Trout and Tom Hahn, Mr. Shank founded the American Canal Society in 1972. In future issues, Tom Hahn and Bill Trout will be honored.

Our readers are encouraged to submit the names of other worthy individuals who have furthered the cause of canal preservation in the United States. Please send your submission to the president (see directory).
WILLIAM HALEDEMAN SHANK, P.E.

By Terry Woods

William H. Shank, a lifelong resident of Pennsylvania, was born in Pittsburgh on May 11, 1915. Bill's family moved often (seven times during his grammar school days) due to his father's job as an engineer with Bell Telephone of Pennsylvania. As a result, Bill attended a number of public schools. In 1932, he graduated from Camp Hill High School, but because he had skipped a grade, Bill's dad wanted him to attend Mercersburg Academy for a year to prepare for Lehigh University where he had already been accepted. He obtained his Bachelor of Science degree in Mechanical Engineering from Lehigh in 1937.

Bill met his future wife, Ruth Hershey of Glen Rock, in 1937, and they were married on January 10, 1942. Bill and Ruth had three children, Nancy O'Dell, Mary Ann Moore, and J. William Shank. As of early 2002, there were four grandchildren and one great-grandchild in the Shank clan.

Bill's first job (six months long) was in Cleveland, Ohio, designing heavy duty stoves for the American Stove Company. He then began work as a refrigeration and air conditioning engineer trainee in the Philadelphia office of York Ice Machinery Corporation. Moving to the firm's headquarters in York, Pennsylvania, Bill worked for a time in production and in the Sales Promotion Department, then was named Director of Public Relations in 1939. Shortly after he and Ruth returned from their honeymoon, in 1942, however, he enlisted in the U.S. Army and obtained the rank of Technician 3rd Grade. While in the service, he received special training at the University of Missouri. He then worked in Oak Ridge, Tennessee, on the then-secret atomic bomb (Manhattan) project in connection with the gaseous-diffusion process of uranium refining.

Returning to civilian life in 1946, Bill served as editor manager of York Corporation's engineering periodicals and house organs. He joined the York advertising agency of W.H. Long Company in 1947 and, in 1948, joined Hardinge, Inc., industrial machinery manufacturer of York, as Advertising Manager and Director of Public Relations. For thirteen years, Bill was also editor of the firm's external sales house organ, Hardinge Highlights.

Bill entered the field of private-practice engineering in 1964, when he became Promotional Manager for Buchart-Horn, Consulting Engineers & Planners. He later assumed the duties of Public Relations Manager and also acted as editor of the company's periodical. Between 1964 and 1968, Bill authored a number of technical and semi-technical papers for the trade periodicals. It was during this period that Bill Shank began writing history books in earnest, though he had written The Amazing Pennsylvania Canals in 1960. Bill launched a freelance advertising practice in 1968 and built up a clientele of a number of nationally known engineering and industrial firms from central Pennsylvania. The creation, writing, and production of technical brochures was one of his specialties.

A close study of Bill Shank's family and ancestors will leave no doubt that he comes by his enthusiastic interest in canal lore and his-
tory naturally. Bill's great-great-grandfather, Michael F. Shank (the original family name was Schenck), a German immigrant ship's carpenter, settled in Liverpool, Pennsylvania in 1820 and built some of the first canal boats to navigate the Susquehanna Division Canal. His son John operated a canal traveler's hotel in Liverpool. Wilson, John's son, worked for the Pennsylvania Railroad when the company still operated canals. Wilson's son Clyde (Bill's father) surveyed portions of the Bald Eagle and Spring Creek Navigation as a young engineer. Perhaps canals were always in his blood.

In 1937, as an engineering major at Lehigh University, Bill researched the abandoned tunnels of the South Penn Railroad, recently acquired by the state to turn into the Pennsylvania Turnpike. The resulting research paper was deemed best by the professor in charge. Bill later used it as the basis for his book, Vanderbilt's folly, A History of the Pennsylvania Turnpike. After college, Bill found an outlet for his historical interests as a member of various historical societies in Pennsylvania. In the late 1950s he attended a lecture in Harrisburg on the state's canals. He became so intrigued by the subject that he began his personal research, becoming more and more interested as he progressed. This research brought him in contact with others in the state who were interested in canal history. In 1960 he published the Amazing Pennsylvania Canals. In 1964, a number of these interested people formed the Pennsylvania Canal Society. Bill became editor of its quarterly historical publication - Canal Currents.

In 1972, Tom Hahn, Bill shank, and Bill Trout co-founded the American Canal Society. Bill Shank was the publisher of the Society's quarterly historical publication American Canals from its inception until 1997 and its second editor beginning in 1985. Bill was also the American Canal Society's second president, serving from 1979 to 1985.

Bill shank and Tom Hahn established the American Canal and Transportation Center in 1973. This enterprise published and distributed books on transportation history. That joint venture has produced more than twenty historical works, many of which are in their fourth, fifth, or more printings. Tom Hahn retired from the venture a number of years ago and now Bill Shank has followed suit. The publishing company that Bill and Tom founded is now ably managed by Bill's three children.

In addition to The Amazing Pennsylvania Canals and Vanderbilt's Folly, Bill Shank has personally authored: Three Hundred Years with the Pennsylvania Traveler, Historic Bridges of Pennsylvania, Great Floods of Pennsylvania, Indian Trails to Superhighways, History of the York-Pullman Automobile, and York County Historic Sites and Tour Guide. Bill has also coauthored, along with Messrs. Mayo, Hahn, and Hobbs, Towpaths to Tugboats, a History of Canal Engineering.

His professional and community titles have included: Vice President, Central Region Pennsylvania Society of Professional Engineers (1971-73); Director, National Society of Professional Engineers (1971-73); President, Lincoln Chapter P.S.P.E. (1964-65); President, York Torch Club (1957-58); Presi-

(continued on page ten)
D&R Book to be Published in September 2002

The Delaware and Raritan Canal, an Arcadia "Images of America" book, will be published in September. Written by Linda J. Barth, the book features nearly 200 historic photographs and postcards of this waterway, one of the most successful towpath canals in the United States.

Did you know that for almost 170 years, the Delaware and Raritan Canal has meandered across the narrow waist of New Jersey? Did you know that the D&R was one of our nation's most successful towpath canals, carrying more tonnage in 1866 than the more famous Erie Canal? Did you know that Johnson & Johnson, Roebling, and Fleischmann's Distillery all had their start along the D&R? Did you know that the canal provides the people of central New Jersey with both a water supply and a premier recreational facility?

The Delaware and Raritan Canal introduces you to the people, the locks, and the aqueducts that made the canal work. This waterway, now the centerpiece of a popular state park, transported men and supplies between New York and Philadelphia during three wars. Inventor John Holland used the canal to deliver his Holland VI submarine to Washington for its Navy trials, and luxury yachts, like J . P. Morgan's Tarantula, cruised the waterway. The Delaware and Raritan Canal will introduce you to this gem of central New Jersey.

To order your copy of The Delaware and Raritan Canal, send your check, payable to the author, for $20 plus $3.00 tax and shipping, to Linda J. Barth, 214 North Bridge Street, Somerville, New Jersey 08876. Orders will be shipped as soon as the book is available from the publisher. For further information, please call 908-722-7428.

WILLIAM SHANK, P.E.
(continued from page nine)

...of his church choir and a member of the local AARP Chorus. Bill has also been a correspondent for his class at Lehigh University. He wrote a class column in 2001 to prepare for their 65th reunion in 2002. Bill moved into his new residence at Autumn House at Powder Mill in York, Pennsylvania late in the winter of 2001.

Bill has been a mentor to many of us younger canal buffs, including yours truly who met Bill via correspondence while in a Canton, Ohio hospital bed in 1969. Bill Shank is someone I have looked up to in this hobby. I suppose I always will.

CANAL TIMBER YIELDS A SURPRISE

As several Delphi (Indiana) Canal volunteers curiously watched, Rollin Graybill sliced the surface layer from a weathered 27-inch diameter log. To the surprise of all, the wood was remarkable in quality and color. This log, recently removed from the canal during dredging operations in Canal Park, had some distinguishing marks from an ax that had cut it down, and it was massive, dark, and without any bark. Likely it had been submerged for the last 150 years in the canal, but it also might have been used in the water as some part of a dock structure—no one knows for sure.

The unique opportunity to explore the interior of this log started when the canal volun-

(continued on page eleven)
teers working on securing needed timbers for recon-
struction of a full scale lock gate needed some sawing
done. Graybill came to Canal Park with his Wood-Mizer
portable sawmill. That day started with a look at re-
cutting some old floodgate timbers that had been ac-
quired from Huntington's Forks of the Wabash historic
site last spring.

New timbers approaching one-foot square were needed
by the volunteers to construct the main beams of the new
Interpretive Center's lock gate display. As Graybill
pealed off the surface layer, the true quality of the oak be-
gan to appear. Layer by layer the first boards came off and
the grain and strength of the oak were near perfect. The
gasoline-powered band saw spewed out the cutting dust
as the center of the log was released in four 90-degree
directions. The final yield of four heavy timbers and sev-
eral planks provided man's first look at the near perfect
grain.

One of the timbers had to be sliced with a 60-degree
angle face. This will replicate the shape of the miter sill that
backed up the lock gate when it was closed against
the second gate in the end of a massive lock chamber.
With professional ease in 15
minutes, Rollin setup his tim-
ber for the critical cut. That
piece came out as near per-
flect and would have been a
pioneer craftsman's pride if it
had been his whole day's
work in 1839.

When finished, this lock
gate will adorn the interior of
the canal museum and be-
come part of the interactive
displays that will delight the
public. Completion of the In-
terpretive Center's exhibits is
expected in a year and open-
ing of this facility will bring
educational experiences and
entertainment to young and
old alike. Delphi has had a
colorful canal era history that
will play out in the new cen-
ter.

Over 60 exhibits featured in
dozens of galleries will be
placed in this new 3,500
square foot museum. A grant
from the Department of Natu-
ral Resources—Wabash
Heritage Corridor Fund will
pay for costs of the needed
materials while volunteer la-
bror helps match the local in-
put requirements of the pro-
gram. Some more elaborate
and detailed exhibits will be
contracted to specialty firms
for construction this fall. In-
teractive displays and major
entries in each gallery could
be supported by contribu-
tions from donors. Recogni-
tion will come in the form of
plaques with sponsor's names on these exhibits.

This summer and fall, vol-
unteers are needed in craft-
ing many of the exhibits. If
you have experience with
woodworking, metal crafting,
or old time jointing and peg-
ging of timbers and wish to
volunteer your expertise,
contact coordinator Dan
McCain at 765-564-6297.

Pictured below: Assistant saw-
yer Waylin Graybill, son of Rollin,
examines the ancient inner rings of the
oak log that may date back to
the tree's beginning life in perhaps
1700. This beautiful block with its
interesting cut end (propping the
butt off the ground) will adorn the
Lobby of the new Interpretive Cen-
ter when opened in a year. Mark-
ing the rings will provide a glimpse
at a much earlier history of this
Indiana country long before Euro-
pean influence.
LOLLYGAGGING ALONG THE ERIE CANAL
By Linda J. Barth, Associate Editor

"If you're expecting a white-knuckle ride, you've come to the wrong place," Capt. Dan Wiles warned us. "At eight miles per hour, this trip is a lollygag."

The passengers had gathered in the dining room of the Emita II, just before casting off on our three-day Erie Canal cruise. Bob and I had driven to Brewerton, New York, just north of Syracuse, the night before to be ready to board at 8:30 on Friday morning. We were just finishing breakfast when Capt. Dan called everyone together for an orientation. All meals, he said, would be on board and our overnight lodging would be in onshore hotels in the village of Herkimer and the city of Amsterdam.

And so, we cast off at 9:00 a.m. from the dock at the western end of Oneida Lake, the largest lake in area (79.8 sq. mi.) in the state and, at 5 miles, the widest section of the New York State Barge Canal. Built between 1905 and 1918, this enlarged waterway utilizes lakes and rivers as well as dug sections of canal. On this journey we would follow the Mohawk River to the Hudson.

At the eastern end of Oneida Lake we entered the narrow cut that was dug for the present-day version of the Erie Canal. Soon we reached Locks 22 and 21 and began our climb to the Rome level. We actually passed just south of Rome, which lies along an ancient water route linking the Great Lakes with the Atlantic Ocean. Except for the short portage ("The Oneida Carry") on nearly level ground between the Mohawk River east of the city and Wood Creek to the west, a colonial traveler could journey from New York City to Canada using this water route. Fort Stanwix, which was the second largest fortification in North America when the British built it in 1758, protected the portage during the French and Indian War. Abandoned after the war, the fort continued to serve as a center for Indian affairs.

In 1777 a small British force under Gen. Barry St. Leger laid siege to the fort for three weeks. After his Indian allies deserted, and fearing the imminent arrival of American reinforcements, St. Leger lifted the siege and withdrew to Canada. We were to learn more about Fort Stanwix and the American General Nicholas Herkimer later on our tour.

Just west of Utica, we began the long descent to the Hudson, as Lock 19 lowered the Emita 21 feet. Just as we were beginning to wonder what had happened to the old, original Erie Canal, Capt. Wiles announced that he planned to give a talk on that very subject tonight at the Herkimer Motel. In addition to telling us about the canal, Capt. Dan explained his family’s involvement in stimulating preservation and boating on the historic waterway.

"For the early settlers," he said, "going west to the Ohio, Indiana and Illinois territories was a difficult proposition. The only east-west geological gap in the Appalachian Mountains, from Georgia to Maine, was the Mohawk River valley."

He went on to explain that Governor Dewitt Clinton did not dream up the idea of the Erie Canal, but he was the political force in getting the job done. President Jefferson
Inside a lock on the New York State Barge Canal

Photo by Linda J. Barth

had vetoed the idea of the federal government paying for the canal, so the tenacious Clinton had changed tactics and convinced the population and the legislature of New York State to finance the waterway and keep the profits.

There were no engineering schools in this country at that time, so the canal was a learn-as-you-go experience. The engineers studied the English waterways, but the Erie presented some problems that had to be solved on the job: digging through the Montezuma swamp, crossing the wide Irondequoit Valley, and overcoming the 76-foot height of the Niagara Escarpment at Lockport.

The original canal, "Clinton's Ditch," was 363 miles long, 40 feet wide at

the surface, and four feet deep. To overcome the 675 feet in elevation change between Lake Erie and the Hudson River, 83 locks were built to raise and lower the canalboats. Eighteen aqueducts, water-filled bridges, carried the boats across rivers.

The Erie Canal opened amid continuous celebrations in 1825, with Gov. Clinton carrying Lake Erie water to New York Harbor in a "Wedding of the Waters." And, was it all worth it? Was the canal successful? Consider this: Before the canal, the cost to ship a ton of freight between Buffalo and New York City was about $100 a ton. Within the first ten years of the canal's existence, the cost had dropped to $4 a ton!

With such success, it was soon apparent that the canal would have to be enlarged. From 1835 to 1862, the channel was deepened to seven feet, widened to 75 feet, and, in many places, rerouted; double locks were constructed to permit faster passage of vessels; lateral canals were dug to allow the populace living farther from the main canal to enjoy its benefits.

But as the railroads grew, they began to rival the Erie in tonnage carried. By 1885, three years after tolls were abolished on the Erie, the combined New York Central and the Erie railroads transported four times as much freight as the canal.

This competition caused a serious decline in mule-pulled canalboat traffic. And so, early in the 20th century, the New York State Barge Canal, the waterway we use today, was constructed for modern freighters.

Remnants of an aqueduct that once carried the Erie Canal across the Mohawk River.

Photo by Linda J. Barth
The next morning, as we enjoyed a sumptuous breakfast, we cruised the short distance to the Herkimer House, a New York State Historic Site. This was the home of General Nicholas Herkimer, who rallied 800 men and boys and hastened toward Fort Stanwix during the British siege. Two days into their march, Herkimer and his men were ambushed by Iroquois and British loyalists. Seriously wounded as the fighting began, Herkimer continued to command his militia, which held its ground despite fierce hand-to-hand combat. After the six-hour battle, the general was carried to his home where, ten days later, his leg was unskilfully amputated. He died a few hours later.

For the remainder of this second day we cruised eastward under a brilliant blue sky to Amsterdam. After dinner aboard, we were bused to the Best Western Hotel.

Some of us, however, needed an ice cream treat, and our search resulted in a wonderful discovery. Fariello's Old-Fashioned Ice Cream and Candy Store, opened in 1925, had an extensive list of flavors from three different ice cream companies. It was like stepping back in time to see this shop with its wire chairs, round tables, and jars of candy delights.

Captain Dan began Day Three with a walking tour of Lock 11; he simply and clearly explained how the locks are filled with water, and emptied, by gravity — no hydraulics, no pumps. All of the equipment at the locks is kept in immaculate condition. Each lock crew vies for the yearly prize of Best Lock; since this includes appearance as well as maintenance, performance, and courtesy, the lock areas are usually adorned with trimmed lawns and beds of colorful flowers.

Not only do the locks provide amenities for boaters, but many of the towns have developed canalside parks as well. Some of these include electric and water hook-ups for the boaters, while others offer a welcome tie-up for access to stores and supplies.

When the St. Lawrence Seaway opened in 1959, commercial traffic on the Erie Barge Canal plummeted. The economy of the many villages and cities suffered as businesses closed and freighters took the northern route. Some citizens suggested that the waterway should be shut down.

But then along came Peter Wiles, Sr., father of Captain Dan. While operating a golf course and restaurant on Skaneateles Lake, Mr. Wiles purchased the mail boat that had delivered the mail to residents at the southern end of the lake for 100 years. As this business evolved into sight-seeing and dinner cruises, Mr. Wiles thought about the Erie Canal, just to his north.

Instead of closing the waterway, he reasoned, we
have to redirect the revenue stream. Forget the commercial tonnage and count the pleasure boaters who have money to spend. They need restaurants, laundry and shower facilities, and recreation. To take advantage of this potential market, Mr. Wiles bought a larger boat and offered short cruises on the Seneca River and the Erie Canal. Due to the popularity of these rides, the Wiles family bought the *Euphonia II* and began offering three-day cruises.

Now, finally seeing the success of Mr. Wiles’s efforts, canal towns have begun to change. Freight terminals have been converted to marinas, parks have been improved, and towns are getting involved in tourism. As success has bred more success all along the canal, the New York State Canal Corporation, a division of the New York State Thruway Authority, has jumped on the bandwagon. This agency that operates the waterway is creating a Canalway Trail that will eventually cross the state, sometimes following the Enlarged Erie and sometimes the Barge Canal.

While the Barge Canal is flourishing, our cruise was coming to an end. Finally we descended the last 150 feet to the Hudson via the Waterford flight of five locks, built to circumvent the Mohawk’s Coohoes Falls. And, at the bottom lock we saw the new Waterford Visitor Center, a final view of this new tourism initiative. Cruising south on the Hudson, we passed through the Federal Lock and tied up at Troy Dock, the end of a peaceful, relaxing cruise on this revitalized waterway — the Erie Canal.

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**JOHN SHAW OF PLYMOUTH COLONY, PURCHASER AND CANAL BUILDER**

*Jonathan A. Shaw*

Duxbury Barrier Beach lies along Cape Cod Bay, a sandy crooked finger of land ten miles long, dividing Green Harbor in Marshfield from Duxbury on Duxbury Bay and ensuring that sea travel between Green Harbor and Duxbury is long and hazardous. At some time before 1 July 1633, twelve or thirteen years after the landing of the *Mayflower* at Plymouth, "Mr. [William] Gillson, John Shaw, & the rest," as part of a covenant with the General Court of the Colony, agreed to undertake the "cutting" of a boat passage between "Green's Harbour and the bay." This is the earliest canal still in existence in America. It connects Green Harbor and Duxbury Bay to create an inland water route from Plymouth via the Duxbury creeks and Green Harbor River, through a narrow creek to the South river estuary and up the North River to the present town of Hanover. The Cut, as it was soon called, may have been difficult to complete, and for whatever reason, Gillson and Shaw were delayed in the construction. As a consequence the General Court threatened them with £10 pounds in fines if they did not fulfill their agreement and finish the work by October 1. Four years later, on 4 January 1638 [7], the Cutt, which had no doubt proved itself worth its purpose as a safe route for the passage of people and goods between Marshfield, Duxbury, and Plymouth, was ordered to be enlarged to "eighteen foote wide and sixe foote deep." Colonial ships and barges in the middle of the seventeenth century were small, and the widened and deepened canal was designed to permit the passage of medi-

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2. It was preceded on 5 July 1637 by a col-de-sac canal, no longer in existence, that lead from the Charles river to the settlement at Cambridge Nathaniel B. Shurtleff, *Records of the Governor and Company of the Massachusetts Bay in New England* (2 vols. In 6, Boston, 1853-1854), 1:158, 173.
7. ibid., 1:24.

This was brought to our attention by Tom Hahn, and is reprinted with permission of the editor, *New England Historical and Genealogical Register*, July 1997, pp. 259-60. Henry b. Hoff, and the author, Jonathan A. Shaw. The article continues for several more pages, but make no further mention of canals.
TOWPATH TIDBITS

Walter Jefferson has contributed a canal boat bell to the FRIENDS OF THE DELAWARE CANAL. It is on display in the Locktender's House in New Hope, Pennsylvania.

The BLACKSTONE VALLEY HERITAGE HOMECOMING COMMITTEE will present a concert at 3:30 p.m. every Sunday throughout the summer at Riverbend Farm, Uxbridge, Massachusetts.

The Maryland Humanities Council has published “History Matters,” a 370-page interpretive plan for the Lower Susquehanna Greenway. It includes history and site analysis, with a section on the SUSQUEHANNA MUSEUM OF HAVRE DE GRACE AT THE LOCKHOUSE. Two museum members are reengineering the miter gate project to fit into the budget; new lock gates are currently being fabricated in Pennsylvania.

Nancy and Bill Trout and volunteers for the VIRGINIA CANALS AND NAVIGATIONS SOCIETY have been busy cleaning and repairing the Richmond Canal Pump House. They have also been digging in the floor of the canal and in the area of the lockkeeper’s house.

The C&O CANAL ASSOCIATION (Maryland) has received a $100,000 challenge grant from the Kimbrough family, through the Foundation of the Carolinas, to assist the park service in restoring a section of the towpath at Widewater.

“Art and Wildness” is the theme of the Nature Drawing Class at the DELAWARE AND RARITAN CANAL STATE PARK (N.J.). In cooperation with the D&R CANAL WATCH, the canal state park will soon install wayside exhibits that show the canal’s impact on the towns through which it passed.

Retired airline captain William Halsey has handcrafted a working lock model for the Griggstown (NJ) Historical Society. The model had resided in the society’s Mule Tenders Barracks Museum until the flooding from Hurricane Floyd, in 1999, devastated the building. Fortunately, the lock was not destroyed. Capt. Halsey has restored the model and it is now on loan to the CANAL SOCIETY OF NEW JERSEY. The working lock model will replace a static model in the CSNJ Museum in Waterloo Village.

Late Editor’s 22-foot Boat for Sale

David Ross, the late editor of American Canals, loved his 22-foot boat, the Rosa Parks, so christened because, like her namesake, she was more mottlesomewhat than glamorous. His beloved vessel must now be sold as part of his estate.

The 1991 Rosa Parks is a 22-foot C-Dory with two 50 hp 4-stroke Honda engines (both less than two years old). The vessel has an enclosed cabin, a v-berth, dining table, 2-burner propane stove, sink, basket shelving, lots of storage space, ship-to-shore radio, compass, and a portable toilet. David, the original owner, modified the top to hold gasoline cans.

The vessel, which includes a trailer, is currently near the Tennessee River in Savannah, Tennessee. The asking price is $20,000. For further information, please contact Mary Reyes at 731-925-0099.

PRESIDENT’S LETTER (continued from page one)

Society asked me to speak to about 120 students at the middle school. I didn’t know how canal history would go over to 11- and 12-year-olds, but I did it. I talked and showed slides of the Ohio & Erie Canal that ran through their town, three blocks east of the middle school. I'm not at all convinced that every one of them was fascinated by my talk, but they did seem to be interested in hearing about and seeing the canal they were familiar with as it appeared during its days of operation over a hundred years ago. They asked questions and accepted handouts, and a fair amount of interest was generated. This may be one way to go. Set up speaker groups in various parts of a state or region to speak to various age groups and “get the word out.” Anyway, it is worth some additional thought and discussion.

I want to mention one more time that our ACS website, www.americancanalsociety.com is up and running, BUT we need YOUR input and effort to keep it interesting and viable. Please contact Mark Newell with additional items of information for the site and offers of assistance.

This is my last President’s Letter! I will no longer be an ACS Officer after the September election, but I hope to remain active as a Director. I want to thank the individual members, Directors and Officers of the American Canal Society for the great support and assistance you’ve provide me during the past five years. I inherited a great organization in October of 1997. I tried very hard to advance the ACS successfully into the new millennium. I did my damndest. If you support and assist the new president as well as you supported and assisted me, the American Canal Society will continue to prosper.

I will continue to update the Constitution and By-laws and write historical articles for American Canals. I plan to become more active in the Engineering Design, Parks, Canal Boat and Publications committees. So I won’t exactly be going away and I hope to continue hearing from you at WoodsCanalone@aol.com and to work with you on many of your favorite projects. Until then, HEADWAY TO YOU!

[signature]

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