

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 95

Editorial Address—968 Chapel Road, Monaca, PA 15061

NOVEMBER 1995

PRESIDENT'S MESSAGE

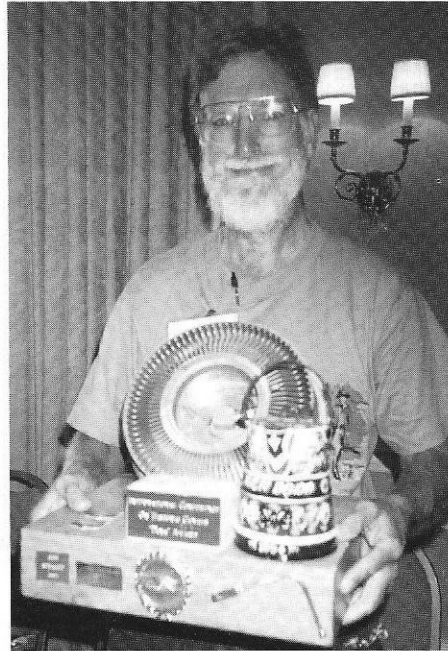
We all had a great time at the International Conference on Historic Canals in Augusta, Georgia, thanks to the conference organizers and to the Augusta Canal itself which we toured by canoe, golf cart, foot, bus, and a "Petersburg Boat" — a replica of the original whitewater freight boats used on the Savannah River and the canal. We even saw an "Archey Dock," the local name for what we up north call an "aqueduct." Also on the program was a visit to the Old Santee Canal museum, one of the best canal museums in the country, and the most imaginative — the entrance is a full-scale replica of a Santee Canal brick lock.

At the ACS meeting during the conference we had a discussion about canals on the Internet. If you have a computer connected to the phone line you can exchange e-mail messages by computer. You can also "cruise" the Internet for the latest canal information — canal society activities, canal history, canal sites and boats — whatever people have submitted so far, eventually even research papers, museum inventories, maps and photographs. There are already enough people using the Internet to make it worthwhile for each canal society including ACS to start putting out useful information. It's free publicity, and it's something that can start small and develop over the years.

Through Dr. Roger Squires, our ACS UK Director, we have learned that Major Bill Davies has established a British canal interest group which uses the Internet, exchanging the latest canal and cruising information by e-mail: call him at Bill@bubbles.demon.co.uk. This system, using words typed onto your computer screen, is cheaper and quicker than regular mail or phone calls. Bill also has a World Wide Web (WWW) canal page you can go to: <http://www.automata.com/users/george/canals>. It is the WWW which can handle photos and maps and all the good visual stuff. For example, British Waterways now has canal information on the WWW, including pictures, maps, list of free information, and links to boat hiring companies. To find it, search for "canals" or "British Waterway." For Irish Canals, try Paul Timon of the IWA of Ireland at <http://www.id.ie/~pt/>. For American Canals? Mark Newell is looking into it and will work up a report for AMERICAN CANALS. Let him know if you're interested. Just type Archeonaut@aol.com!

We also discussed the need for an updated Canal Organizations list, which is being prepared by Bill Sternwell, Savannah-Ogeechee Canal Society, P.O. Box 2165, Savannah, GA 31402. Let him know soon if your society isn't on the last list issued some years ago, or if the address has changed, or if your society would like to exchange publications with him.

A highlight of the conference was the unveiling of the Rails-to-Trails Conservancy's first report on



Dr. Bill Trout, ACS President, made a presentation at the meeting that was so well received that he was given the prestigious "Dink Award". He is shown here with some of the "trophies" he received.

"Towpaths-to-Trails, A Summary of America's Historic Transportation Canals and their Recreation Potential" prepared by Kristine Olka and Rory Robinson. This is a great start, in which a number of ACS members participated, and so can you. Is your canal on the list? Write the Conservancy at 1400 16th St., NW, Washington, DC 20036.

Also announced was the First Southern Canals Conference, to be held in Augusta on October 2-6, 1996 at the Georgia Archaeological Institute, founded by Mark Newell, our ACS Canal Archaeology Committee Chairman. To be on the mailing list or make a presentation (or for announcements of his upcoming canal archaeology reports) write Mark at the GAI at P.O. Box 984, Augusta, GA 30901. The idea is to bring together canal buffs in the South so they can meet each other and discuss common problems and not feel alone anymore. Northerners are also welcome to attend.

In fact, ACS member Val Stegemoen, Millville MA 01529, hopes to organize a New England Canal Conference in 1996, so get in touch with him if you're interested in participating. Southerners are also welcome to attend! Is anyone

CHARLIE DERR IN FREAK ACCIDENT

I regret to report that Charlie Derr, our Life-Time ACS Secretary and Treasurer, suffered a serious and unusual accident while pursuing his duties as Pilot of the Canal Boat Josiah White II at Easton, PA several months ago. A camera crew from a local cable television network was filming the boat in motion. Several hundred yards from the dock, Charlie tried to reverse the motion of the boat but got his left hand caught beneath a rope tethered to the mules drawing the boat. The rope severed two fingertips before Charlie could extract his hand. He was taken to the Easton Hospital where Doctors told him the blood vessels in the fingertips aren't large enough to support reattachment. Fortunately Charlie is right-handed, but this doesn't compensate for the shock and physical pain which he suffered. Our best wishes, hopes and sympathy go out to Charlie and his family...

Bill Shank

CANAL ART BOOK

Here is an elegant gift book that every canal enthusiast would be pleased to receive. It is an address book, divided alphabetically into 26 sections; each 3-page section of heavy, glossy paper begins with a full-page (5" x 8") picture, in color, painted by the British artist, John Constable (1776-1837), who lived during the period of canal development in England. Only three of the paintings in this book are canal scenes; the others are quiet, pastoral landscapes. The front of this hard-cover book is a close-up view of three canal boats (part of the scene at a mill in England). A ribbon place marker, and a gilded stripe on the cover, identify this fine volume as a special item for a special person. Published in 1991 by the Tate Gallery, London, this book may be purchased at many art museum gift shops. Ask for the Tate Gallery Constable Address Book. My wife revealed that she paid \$17 for the book. At that price, I'm glad she bought one for me.

William Dzombak

interested in organizing a Midwest Canals Conference? These regional meetings are meant to supplement, not replace, the annual International Conferences on Historic Canals, where the perspective is world-wide. The next one will be in Birmingham, England, on 26-28 June, 1996. For details write the World Canals Conference, International Convention Centre, Broad Street, Birmingham, B1 2EA, England. Better start planning now, this will be a big one!

Bill Trout

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

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

Annual subscription to AMERICAN CANALS is automatic with A.C.S. membership. Send dues payment (\$15 minimum) to Sec'y/Treas. Charles W. Derr, 117 Main St., Freemansburg, PA 18017. Single copies may be purchased at \$3.00 from the publisher.

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

BACK TO THE UK - 1996 - CANALS, TRAMS & STEAM RAILWAYS

The Canal Society of NJ will return to England for the society's 9th European trip and the seventh run by "Capt." Bill McKelvey. The feature of the trip will be two weeks on narrowboats on the Warwickshire Ring, circling the Midlands, which will include Birmingham, Fazeley Jct., Marston Jct., Hawkesbury Jct., Coventry (& the cathedral), Braunston Jct., Napton, Warwick, Kingswood Jct. and possibly Stratford-upon-Avon (home of Shakespeare). The nearly 100 mile route which is almost totally rural, includes 131 locks and is ideal for novices. We may again use Anglo-Welsh, (Wootton Wawen base) but there are numerous other boat companies available.

Highlights of the tour will be: Friday, 6/21 - West Somerset Railway, Minehead on Bristol Channel, (Britain's longest preserved railway - 20 miles); a horse drawn boat trip on the beautiful Grand Western Canal, Tiverton; overnight in the Bristol area; Saturday, 6/22 - the Black Country Museum or Ironbridge Gorge/Blists Hill Museums (let Bill know your choice); a day, probably 6/27 or 28 - at the International Association for Inland Waterways conference, Birmingham; 6/29 or 30 - the British National Tramway Museum, Crich; and following the canal cruise: Saturday, 7/6 - the Foxtan Flight & Inclined Plane; morning tea & p stop at Nene Valley International Steam Railway, Peterborough; lunch stop at the Bressingham Steam Museum, Diss (one of the most extensive collections of British & European locomotives); and the East Anglia Transport Museum, Lowestoft

(trolleybus, tram and narrow gauge railway services); overnight in the Kent Downs area; and Sunday 7/7 - the Romney Hythe & Dymchurch Light Railway, New Romney (world's smallest public railway - steam, 15" gage, double track), inspect their dozen locomotives and shops at New Romney & early lunch at their station; Volks Railway, Brighton (oldest electric railway in the world); Hollycombe Steam Collection & Gardens, Liphook (steam powered: merry-go-round, traction engine rides, railway, sawmill, fairground organ, road rollers, etc.) and dinner in their cafeteria. Back to a hotel near Heathrow Airport. Monday, 7/8 fly back to US, or stay longer if you wish.

For further information contact:
Bill McKelvey
103 Dogwood Lane
Berkeley Heights NJ 07922

I need to inform you that there is an error in my paper on Zoar that AMERICAN CANALS published in the February 1992 issue. All the standard works state that the Zoarites constructed seven miles of the Ohio & Erie Canal through their lands. They were to have received \$21,000 from the State for this work, which allowed them to pay off the debt on their land and revoke the custom of celibacy that had been adopted as a method of getting all able-bodied members out in the fields.

Recent research of the original contracts for the Ohio & Erie Canal, indicates that the Zoarites originally contracted for four sections of the canal, and later obtained a fifth one. Thus, the "seven miles" of canal constructed by the Zoarites shrinks to less than three. It appears, then, that Locks No. 7, 8 & 9 and the culvert between Locks No. 7 & 8 were not constructed by the Zoarites (as I said in my paper). On the western bank of the Tuscarawas River, the Zoarites built Lock No. 10, a feeder gate (later changed to a guard lock), a road bridge across the canal, and two culverts. Also, the \$21,000 received from the State was actually \$22,867.35. Terry K. Woods

REPORT OF THE NAVIGABLE CANALS COMMITTEE

The roving reporter for the Navigable Canals Committee, *Captain Addison Austin*, gives high marks to two east coast waterways which he explored in 1995. On the *Connecticut River* he particularly recommends the anchorage at Hamburg Cove, just north of Essex, and the scenic back channel at Selden Neck State Park, best undertaken at high tide. The river is navigable from Long Island Sound to Hartford. Order N.O.A.A. charts 12375 and 12377.

Highlights on the *Dismal Swamp Canal* include a side trip (small boats only) on the Feeder Ditch to Lake Drummond in the Great Dismal Swamp wildlife refuge, featuring a self-service marine railway for access to the lake. The two locks on the canal are operated at 8:30, 11:30, 1:30, and 3:30 daily. Below the South Mills Lock, the river run to Elizabeth City is described by Austin as "one of the best trips I know of." He does not advise bathing in the canal. For this and the alternative route between Norfolk and Albemarle Sound via the Intracoastal Waterway, order N.O.A.A. chart 12206.

1996 DUES

You recently should have received an ACS dues statement for 1996. Please pay this promptly. Don't make our disabled secretary send you a second "reminder". Thanks!

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Terry K. Woods, 6939 Eastham Cir., Canton, OH 44708.

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Canal Operations and Maintenance, Charles W. Derr, chrmn.

Canal Parks, Elizabeth L. Hahn, chrmn. - 1453 Grandview Road, Arnold, MD 21012.

Historic American Canals Survey, William Dzombak, chrmn., 621 Spring St., Latrobe, PA 15650.

Navigable Canals, David F. Ross, chrmn., Rt. 1, Box 87T, Savannah, TN 38372.

Other publications: *The Best from American Canals*,

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

William E. Trout III, editor and publisher.

COLUMBIA AND SNAKE RIVER ADVENTURE



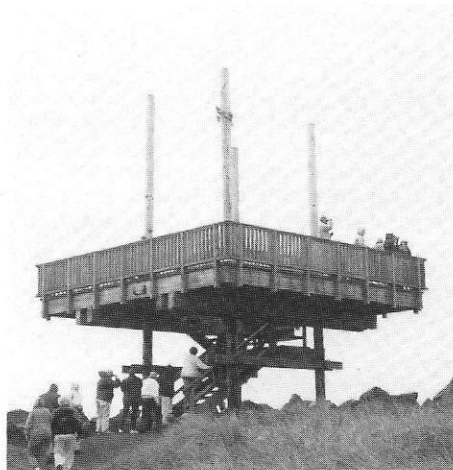
A typical lift-lock on the Snake River as seen from the upper entrance. Note the Guillotine Gate in the closed position at the opposite end. The landscape is typical of the scenery east of the Cascade Mountains. We passed through some of the highest lift-locks in the world on our journey.

By Bill Shank

I have traveled by ship down the locks of the Rhine Canal out of Switzerland; traveled by cruiser down the lower St. Lawrence Seaway; but I was simply unprepared for the size and variety of lift-locks on the Columbia and Snake Rivers. Our vessel rose nearly one hundred feet from one level to the next as we climbed the locks from the Pacific Ocean to the foothills of the Rockies in Idaho! One lock at John Day Dam, with a lift of 105 feet, is said to have the highest lift in the world! A smaller lock on the Dalles Dam, with a lift of 88 feet is equal to the combined lift of all three locking systems on the Panama Canal!

Over the past fifty years the Army Corps of Engineers has moved ever higher with its locks and dams along the 500 miles of water which connect Hells Canyon in Idaho with the Pacific Ocean, permitting goods of all kinds to move in both directions. Although the northwestern states are noted for heavy rainfall in winter, the weather during our October ride on the 70-passenger "SEA BIRD" of Seattle was blessed with bright, sunny weather

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The South Jetty Observation Platform where the Columbia River enters the Pacific Ocean. At this point the wind seldom blows at less than ninety miles an hour. Many ship wrecks have occurred here.

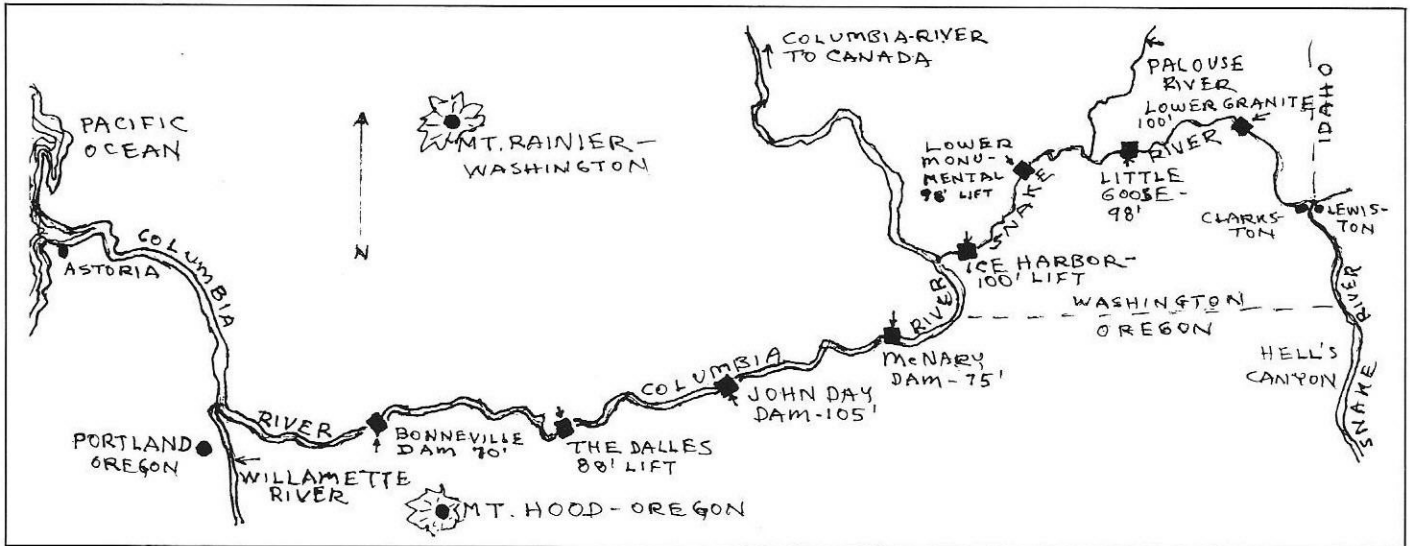


The Author in proper uniform for a "Zodiac" boat-ride. "Safety" was the watch-word on all three of the various water vessels we traveled.



Our jet-boat leaves a powerful wake as we speed over the turbulent waters of Hell's Canyon.

COLUMBIA AND SNAKE RIVER ADVENTURE



The Author's location map of the eight Corps of Engineers Dams which we passed through on our voyage on the Columbia and Snake Rivers.

LIFT-LOCK GATES

During our voyage we passed through the navigational locks of eight dams lifting us a total of 726 feet above the level of the Pacific Ocean. The following are the types of lift-lock gates which we passed through:

Miter gate: the most common gate for the downstream gate. These gates swing like doors and meet at an angle; the angle is always towards the largest volume of water where the pressure of water will seal the doors shut.

Guillotine gate: hoisted vertically overhead. These massive gates weigh over 700 tons, and are hoisted using counterbalances. The guillotine gates were all constructed in the 60's, and were chosen for their cheapness of construction. They have since been abandoned for the old miter design because they cost much more to maintain.

Tainter gate: swings up or down in an arc. (We will welcome comment from our readers concerning the details of the Tainter Gate operation.)

Vertical gate: lifts straight upwards out of the bed of the lock like a piece of toast in a toaster.

Standard lock size: 675' long x 86' wide. Can accommodate 5 standard barges and a tug.

(Continued from Page Three)

and temperatures in the fifties and sixties. Our trip began at Portland, Oregon, on the Willamette River and proceeded upstream to Clarkston, Washington, where we transferred to high-speed, jet-propelled boats for a thrilling 100-mile ride up Hells Canyon in Idaho.

All along the way, the scenery was spectacular, changing from green forests west of the Cascade mountains to arid, glacial hills further East, which seem to be formed primarily of volcanic rock. The significance of the long pools formed by the eight dams along our route is apparent (for irrigation pur-

poses) not to mention their value for power generation and flood control. The importance of Salmon migration upstream for spawning is not overlooked. Every dam has an elaborate fish-ladder, which is carefully monitored at all times. The entire tour, run by SPECIAL EXPEDITIONS out of Seattle, is very well organized and arranged to keep the participants busy with something new each day. We covered four rivers, and three states, using three different types of water vessels, and one rail train to cover a total of more than 1000 miles in seven days! A review of our national history is helpful, when you remember that just less

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Life preserver drill for the passengers in the lobby of the SEA BIRD.



McNary Dam as photographed from the north-side lift-lock.

DAMS OF THE LOWER COLUMBIA

BONNEVILLE DAM was named for the explorer Captain Bonneville. Miter downstream, miter upstream; vertical ascent usually 60 feet but can be as *great as 70*. Until the spring of 1993 it had the smallest lock of the eight dams (being the oldest) measuring 500 feet long and 76 feet wide. The new lock was opened in 1993, and is now of the standard dimensions of the more recent dams. The dam was started in 1934 and completed in 1937.

THE DALLES DAM from a corrupted French word. Roughly translated it means a flagstone gutter, so named because of the narrowness of the river. Downstream miter, upstream tainter; *88 feet lift*. The Dalles was finished in 1957; the dam shares its name with the nearby city.

JOHN DAY DAM is named after a fur trapper. Upstream vertical, downstream guillotine; *lock chamber lifts 105 feet*, and is said to have the highest vertical lift in the world for a single chamber. *The traditional mitre style gate was not used because of the size of the doors that would be necessary, and the probability that the alignment of such large doors would be difficult.* The massive guillotine gate at the downstream side weighs 700 tons and is 113 feet tall. John Day was completed in 1968.

McNARY DAM. Named for the late Oregon State senator, it was the first dam completed after World War II. Upstream miter, downstream miter; *vertical lift is 75 feet*. Finished in 1957.



The SEA BIRD, out of Seattle, provided comfortable accommodations for seventy passengers, and crew, a delightful seven day cruise.

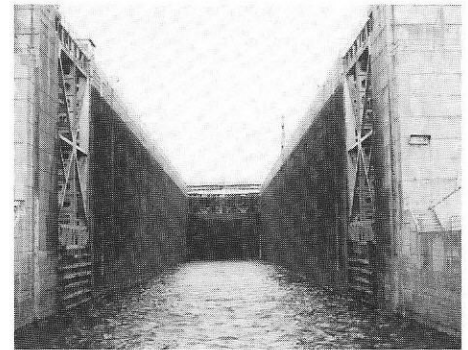
SNAKE RIVER DAMS

ICE HARBOR DAM is named for a geographic area, as are all the dams that we went through on the Snake River. Upstream tainter, downstream guillotine. The *vertical lift is 100 feet*. In this case, the dam was named for a cove in which the Sternwheelers sheltered while they waited for the river ice to break up during the spring thaw. The dam was completed in 1962.

LOWER MONUMENTAL DAM. Named for Monumental Rock, a few miles upstream. Upstream vertical, downstream guillotine. A *vertical lift of 98 feet*. The dam was finished in 1969.

LITTLE GOOSE DAM. Named for an Island which is now under water. Upstream tainter, downstream miter. A *vertical lift of 98 feet*. Finished in 1970.

LOWER GRANITE DAM, the last of our locks, this dam was completed in 1975 and is named for a relatively rare outcropping of granite. Upstream tainter, downstream miter. *Vertical lift is 100 feet.*



One of the smaller locks on the Columbia River, with a vertical lift of only 75 feet. We are entering the lower chamber.

(Continued from Page Four)

than 200 years ago, (1803) President Thomas Jefferson bought the Louisiana Purchase from Napoleon Bonaparte, which was followed by major territorial acquisitions, (by war and purchase,) from Mexico, Spain and Canada. All this extended the United States boundaries from the Mississippi to the Pacific Ocean in less than half a century! One of the first things President Jefferson did was to commission Meriwether Lewis and William Clark of the U.S. Army to explore the new Northwestern Territories all the way to the Pacific.

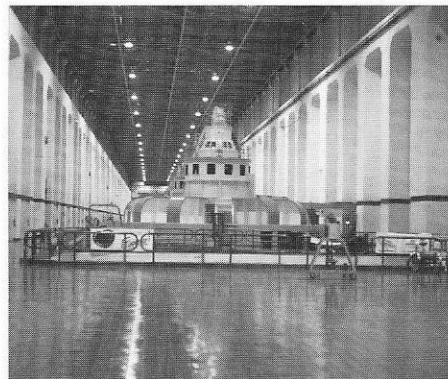
At frequent points along our tri-state tour, we were reminded of the things which Lewis and Clark had done on their 1804-1805 expedition along the Missouri, Snake and Columbia Rivers, including the building of Fort Clatsop near Astoria, where the Columbia joins the Ocean. The explorers found a native population among the most prosperous in North America due to a bountiful Salmon harvest each year. This was only a prelude to the heavy fur trade by the British and American trappers who soon traveled after the explorers.

Due to their many dams on the rivers of Oregon and Washington, the U.S. Army Corps has more recently transformed former barren desert land east of the Cascade Mountains into a breadbasket of apples, peaches, pears, cherries, grapes and

(Continued on Page Six)



We were bused over the Palouse River plateau to have a look at the Palouse River Falls.



One of the hundreds of turbo-generators in the dams, which provide electric power for many sections of Oregon and Washington.

COLUMBIA-SNAKE ADVENTURE

(Continued from Page Five)



One of our fleet of Pontoon-type "Zodiaks" on the Palouse River.

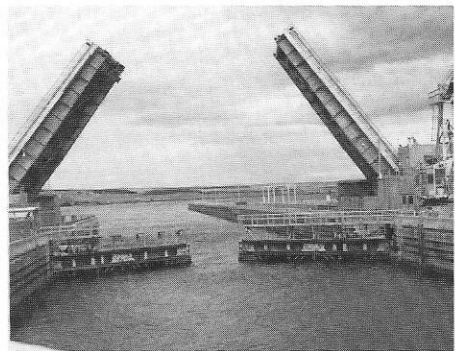
wineries. Also the Corps' navigation locks, with some of the highest lift-locks in the world, have made it possible to transport wheat and wood products from an "inland empire" that extends from the west coast into Idaho.

One thing which was annoying to me as an ardent "canal buff" was the fact that most of the largest locks of the navigation system were transited in the dead of night when all the passengers (except me) were sound asleep! We did pass through a few of them in the day-time and had a chance to tour the power-house and fish ladders at McNary Dam, in addition to the lock itself. On that same day we also visited the Columbia Crest Winery.

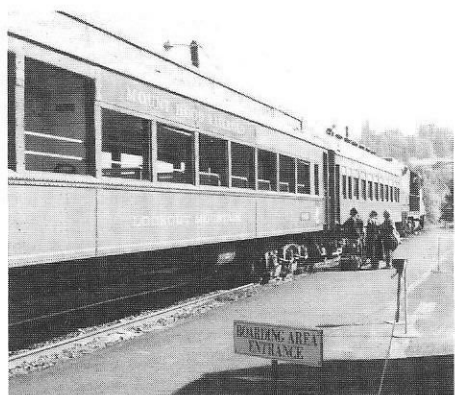
At Clarkston, Washington we were met by a group of jet boats operated by "Snake River Adventures," which took us on a wild 110-mile ride up and back the Snake River Hell's Canyon, between Oregon and Idaho. Here there are no dams to slow the tremendous river current, and we rode "over" the waves — at forty miles an hour!

At the Palouse River, we visited the beautiful Palouse River Falls, and then climbed into 8-passenger "Zodiaks" (pontoon type boats) for a more leisurely ride up the gorge of the Palouse River itself, as far as its shallow water permitted.

At the Dalles Marina we boarded buses and then had a ride on the Hood River Rail Road. Later, we passed the Bonneville Dam and the Columbia River Gorge, before proceeding to the Columbia River Maritime Museum at Astoria, Oregon. A visit to Fort Clatsop, where Lewis and Clark spent the winter of 1805 to 1806, was followed by a trip to the South Jetty, close to the mouth of the Columbia, where the winds were blowing at nearly 100 miles an hour — the scene of many a ship-wreck!



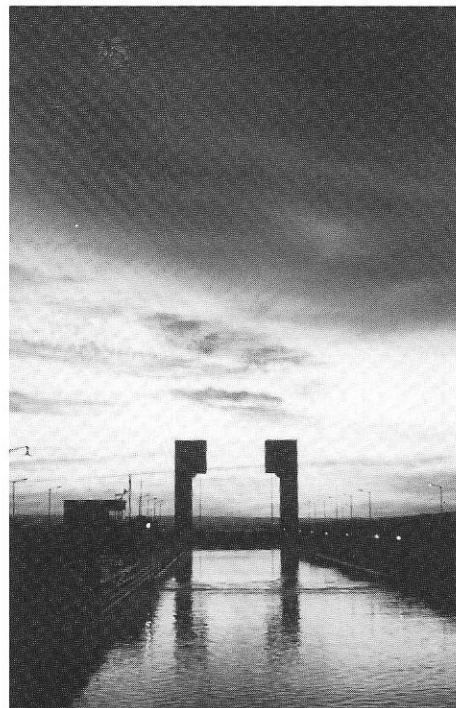
As we exit a lock going upstream, the lift bridge interrupts local highway traffic.



Our train to the base of Mount Hood, Oregon.

INFORMATION

Write Special Expeditions, 750 Fifth Ave., New York, NY 10019 or 1415 Western Ave., Ste. 700, Seattle, WA 98101. Ask for the brochure: "In the Wake of Lewis and Clark".



A beautiful sunset as seen through the Guillotine lower gate of a Snake River lift-lock. Note the drop-type upper gate sinking into the water just ahead of the bow of the SEA BIRD.

TAMAULIPAS-TEXAS BARGE CANAL

An intercoastal canal connecting the state of Tamaulipas with an existing intercoastal canal in Texas is a 30-year old plan whose time has come. Within President Ernesto Zedillo's Federal government decentralization plan, he has given the governor of the state of Tamaulipas, Americo Villarreal, the authority to carry out the canal on the plans best suited to the needs of the state. Normally, an important border-linking canal like this one would be handled by the Federal Government.

According to preliminary plans, Gov. Villarreal is planning on awarding the construction and management of the waterway to private enterprise. Auctions are set for the end of this year. If carried out, the canal would automatically join the state of Tamaulipas to the 45,000 kilometers (27,945 miles) of inland commercial waterways in the United States, making a direct link with New York and Toronto.

Initially, the canal is expected to link the ports of Tampico and Altamira to Texas, but then it would be expanded to the port of Veracruz, and even further to cover the entire Gulf of Mexico basin to the Yucatan Peninsula.

Gerhard Loecken, corporate director at the Mexican petrochemical subsidiary in Altamira of the German industrial giant BASF, says that "If Mexico can connect with this, the cheapest form of transport will become available to the country."

Salvador Fernandez, Tamaulipas State Undersecretary for Industry and Trades and the man responsible for the upcoming auctions for the canal, says that the Tamaulipas coast is relatively simple to work with, "nothing like the geology of the Panama Canal." However, he would not give details as to the auctions, nor costs for the construction of the waterway.

An intercoastal canal of this nature would be a remarkable plus to the state. As it is, 50% of all land cargo traffic between Mexico and the United States crosses through Tamaulipas at main ports of entry such as Nuevo Laredo, Reynosa, and Matamoros. On the sea, Tampico and Altamira also have a hefty share of the bulk of traffic. Tamaulipas finds itself at the center of NAFTA's "Avenue of the Americas."

For centralist non-believers in Mexico City, the construction and management of the intercoastal canal by the state of Tamaulipas is seen as a "pipe vision" of Gov. Americo Villarreal a man who openly preaches the mystical virtues of Transcendental Meditation, and forces the state bureaucracy to practice it.

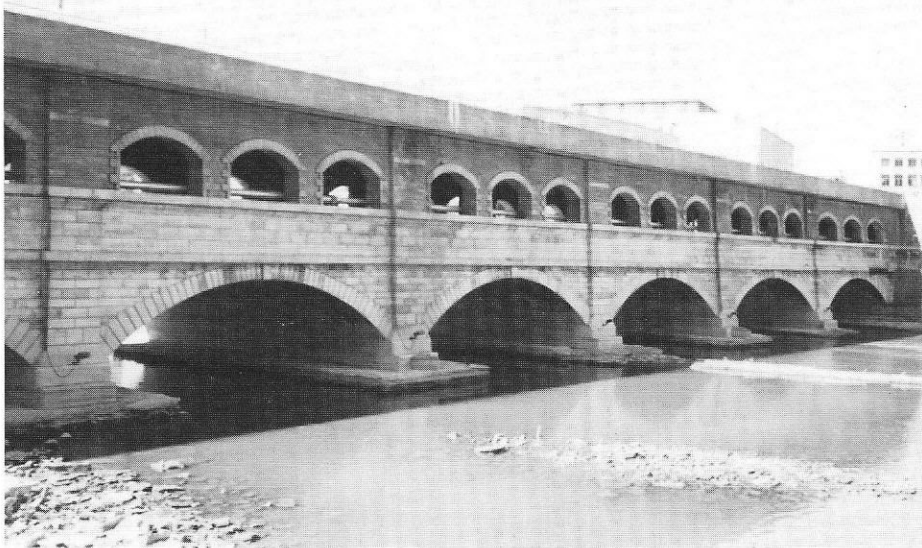
But for the state of Tamaulipas, it is a challenge which may open up the way in the process of taking away from the federal government the power over transport, and put it into the hands of local investors, a place many feel is where it should have been to begin with.

In terms of plan developments, about the only move missing in the project right now is the customs facility—an exact point of connection in the Brownsville, TX and Matamoros part of the Rio Grande. "This," says Antonio Moreno, the port engineer for the Mexican government, "is still the missing link. Once this problem is solved, the project is go."

Submitted by Bill McKelvey (From the September 1995 Issue of *Transportation and Distribution Management*.)

CANAL SOCIETY OF NEW YORK SPRING FIELD TRIP - PART II

By Bruce J. Russell - Contributing Editor



The multi-use Aqueduct at Rochester, New York, where the original Erie Canal crossed into downtown Rochester. After it was abandoned as a water carrier in 1920, a trolley car line was installed in the old canal trough, which was used until 1956. Subsequently a city street was constructed at an even higher level.

Saturday May 20 dawned bright and sunny, perfect weather for a CANAL SOCIETY of NEW YORK weekend field trip. Many of those who boarded the two chartered motor coaches had participated in the previous day's "Early Bird Special" covering the Rochester Gorge and its surviving mill races or power canals, the Great Embankment of the NY State Barge Canal, and Lock 32 of the Genesee Canal. These activities were described in Part 1. The Saturday and Sunday trips were carefully scouted in advance and were in the best traditions of this growing organization of canal and inland waterway enthusiasts. Each registrant was given a copy of the field trip guide authored by THOMAS GRASSO, a professor of geology at Monroe Co. Community College in Rochester where he teaches this subject plus a course on canals. He is also president of the CS of NY. The guide listed all of the points of interest the tour would stop at and more importantly provided history and background data. Extremely well researched and overflowing with historic photographs this booklet is worth the entire cost of the two day affair. Dr. Grasso was in charge of one of the buses while CRAIG "BULLHORN" WILLIAMS rotated duties with DAVID KIPP, KEITH KROON, and DAVE BEEBE on the other coach. A hallmark of CS of NY field trips is well informed guides and leaders who are able to explain exactly what's being viewed by the participants.

The first stop was NY STATE BARGE CANAL LOCK #32. Prior to reaching it DR. GRASSO explained some of the history of Pittsford, the point of origin for the buses. A hotel called the PHOENIX HOUSE was pointed out which predated the canal era which began in 1825. It had been a stop on a late 1700s turnpike running through the state. Once the first ERIE CANAL or "CLINTON'S DITCH" was finished it served the needs of canals. Remnants of the "ditch" were identified by mounds of earth which once formed part of its bank. During the tour we would see a few other surviving pieces of this first trans-state waterway which had a depth of only 4 feet, which revolutionized transportation and opened much of upstate New York for settlement. Pittsford later

became an important coaling point for the steam tugboats and other vessels which were used when the NY STATE BARGE CANAL opened in 1918, replacing the old towpath waterway. Large piles of this solid fuel were transported to Pittsford by train and set in huge bins along the dock. Coaling of vessels occurred in Pittsford until the 1940s when diesel power took over from steam.

The first stop at Barge Canal Lock #32 was routine for many on the buses. Nevertheless what was unique is that it was designed to receive electrical power from nearby Lock #33. When both were built about 1915 they were situated in a then remote area. It was vital for them to be self sufficient in terms of energy requirements. Thus Lock #33 had its own turbine which produced direct current using the water of the canal. This electricity was also transmitted by wire to nearby Lock #32 which used it to open and close its gates. Lock tender Charles "Chuck" Solfrank explained how in recent times the BARGE CANAL has ceased generating its own current and now purchases it commercially. This requires a motor generator set which converts commercial AC power into direct current needed to run the various parts of the lock.



Thomas Grasso, holding the Mike in the foreground, explains some of the structures on the two older Erie Canals. His book, which explains all this in writing, is held aloft by another member of the CSNYS Guide Team.

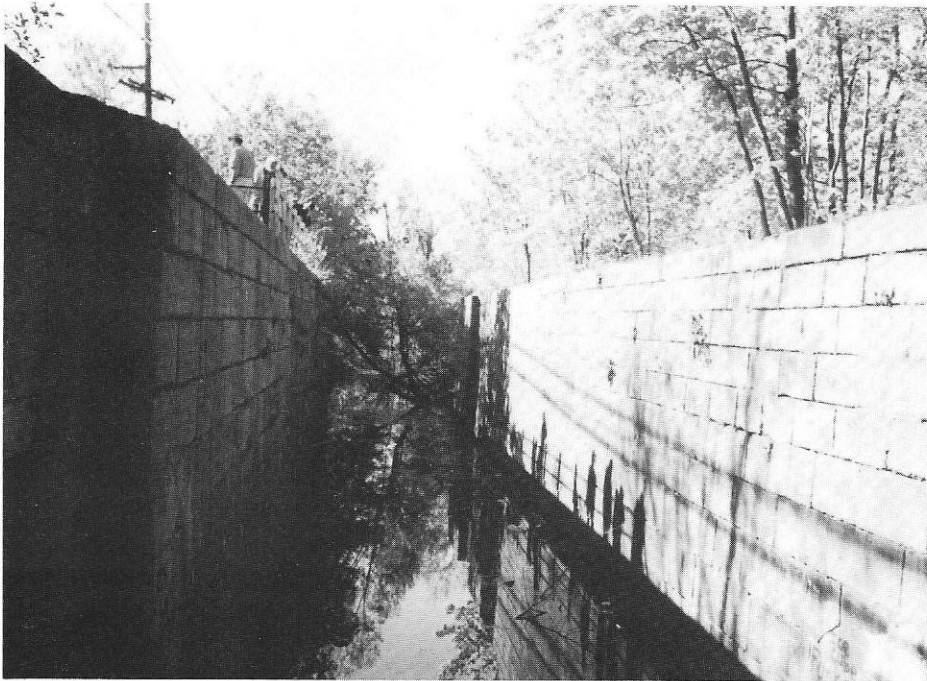
He showed the group pictures of several interesting vessels which have passed through Lock #32 and stated that during the busy summer the canal authority hires seasonal employees. During the winter full time people such as himself do maintenance work including disassembly of all moving parts of each lock for cleaning and inspection. Likewise he discussed how school groups from time to time visit the site and are given working demonstrations. He further illuminated many on the tour to the fact that while the technology of his chamber is 80 years old it's still completely reliable. Until the 1950s the N.Y. STATE BARGE CANAL carried grain eastbound from Buffalo and oil and petroleum products westbound. The St. Lawrence Seaway captured the former in the 1960s and pipelines the latter in the 1970s. Today there is no longer any commercial traffic yet pleasure boating has increased dramatically in the past two decades. It's the primary means of getting yachts and other craft from the Great Lakes into the Hudson River and hence points south along the Inter Coastal Waterway.

The visit to Lock #32 of the N.Y. STATE BARGE CANAL was interesting and educational and after a half hour the group reboarded the buses which proceeded west toward stop number two of the tour.

This was Lock #62 of what's known as the ENLARGED ERIE CANAL. For those not familiar with the history of New York State canals the original waterway from Albany to Buffalo which was completed in 1825 was only 4 feet deep and contained many twists and turns. Known as "CLINTON'S DITCH" because it was built during the administration of Governor Dewitt Clinton this waterway quickly proved inadequate to handle the amount of traffic which rapidly materialized. Soon thereafter the New York State Legislature voted to enact funding to construct a wider, deeper, and straighter canal which would in certain instances deviate from the alignment of the 1825 version. In other locations it would occupy the same right of way, with the original "ditch" being widened and deepened. Thus there are places where an 1825 era canal prism or bed can be seen as well as one excavated several years later. Hence Canal #2 was a major improvement over CLINTON'S DITCH. It permitted larger boats to be handled and also reduced total journey times. In our era of railroads and highways it's difficult to comprehend how much transportation costs were lowered once goods could be shipped on canal boats rather than by wagons running over primitive dirt roads. By wagon it might cost \$20 per ton to send a product from Rochester to Albany where it would be transferred to rivercraft for the journey to New York City down the Hudson. This same ton if transported by canal barge cost only \$2. Consequently there was a tremendous incentive to increase the dimensions of the boats and barges using the waterway. The most practical means of accomplishing this was to excavate a larger prism which was done between 1835 and 1862. Hence the so called ENLARGED ERIE CANAL came into being with this name to distinguish it from the original 1825 CLINTON'S DITCH. Naturally the second Erie Canal contained larger locks, wider aqueducts, and a 7 foot depth versus 4 on the first waterway. This meant much bigger boats capable of carrying four times as much tonnage could now be handled. The ENLARGED ERIE CANAL was finished just in time for railroads to begin siphoning away its business but it survived until 1918

(Continued on Page Eight)

CANAL SOCIETY OF NEW YORK SPRING FIELD TRIP - II



Lock Number 62 of the Enlarged Erie Canal in Pittsford, NY. This lock was doubled in length in 1865 to permit double-boat teams to pass through. Limestone locks, abandoned in 1918 are still in excellent condition.

(Continued from Page Seven)

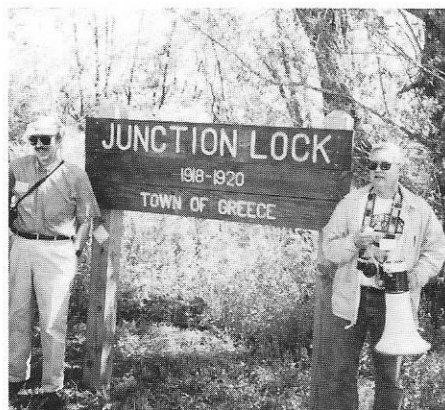
when the modern NEW YORK STATE BARGE CANAL, sometimes referred to as the THIRD ERIE CANAL, supplanted it. Most of the abandoned Erie Canal visible today is that of the ENLARGED ERIE rather than the initial 1825 version.

Upon arrival at the site of Lock #62 DR. GRASSO explained that it was originally built in 1855 as part of the upgrading process of the first canal. Like all of the lock chambers on the ENLARGED ERIE it is composed of neatly formed and dressed stone blocks quarried locally and transported to the site using barges on the existing CLINTON'S DITCH. While other canal's featured lock chambers made of crude "rubble stone" lined with wooden planks those of the second Erie were done using the finest materials and workmanship. The 1855 built #62 consisted of two separate chambers, one for eastbound traffic and one for westbound although they could be used interchangeably. This feature reduced the time it took to make a passage since no waiting was required. Until railroads began to eclipse it the number of boats passing through a set of locks such as #62 was about 200 per day. This was very heavy traffic. In 1877 one of the two chambers was doubled in length. DR GRASSO stated that this was to permit "doubles" to pass through, meaning two barges hooked together creating one large vessel with twice the carrying capacity. By 1877 the parallel NEW YORK CENTRAL RR was a real competitor and the canal boatmen responded by operating bigger vessels, thereby lowering their rates for bulk commodities such as grain, gravel, sand, and fertilizer.

The group spent time exploring the now abandoned chambers of Lock #62 located in Pittsford. The double chamber was especially fascinating in comparison to its neighbor which was never given the same treatment. Had canals not begun to lose business to railroads there is no doubt that such a lengthening would have occurred, prob-

ably in the 1880s. However in 1888 the typical canal type miter gates of Lock #62 were replaced with newer style "drop gates" which descended into the floor of the chamber when lowered. Furthermore in 1890 a hydraulic system of turbines was also installed which was housed in a compact space between the two chambers. Water from the canal was permitted to enter this area where it moved a turbine which in turn was connected to cables that raised and lowered the drop gates. This ingenious system, a minor mechanical marvel, saved labor since the lock tenders didn't have to turn giant cranks to operate the heavy gates. The rationale behind these innovative improvements was to reduce transit time through the locks and thus make canals competitive with railroads for carrying bulk freight.

DR. GRASSO described how after the ENLARGED ERIE was closed in 1918 following completion of the parallel NY STATE BARGE



Two of the Guides explain the function of the Junction Lock of 1918, connecting the Barge Canal with an older section of the Enlarged Erie, still in use.

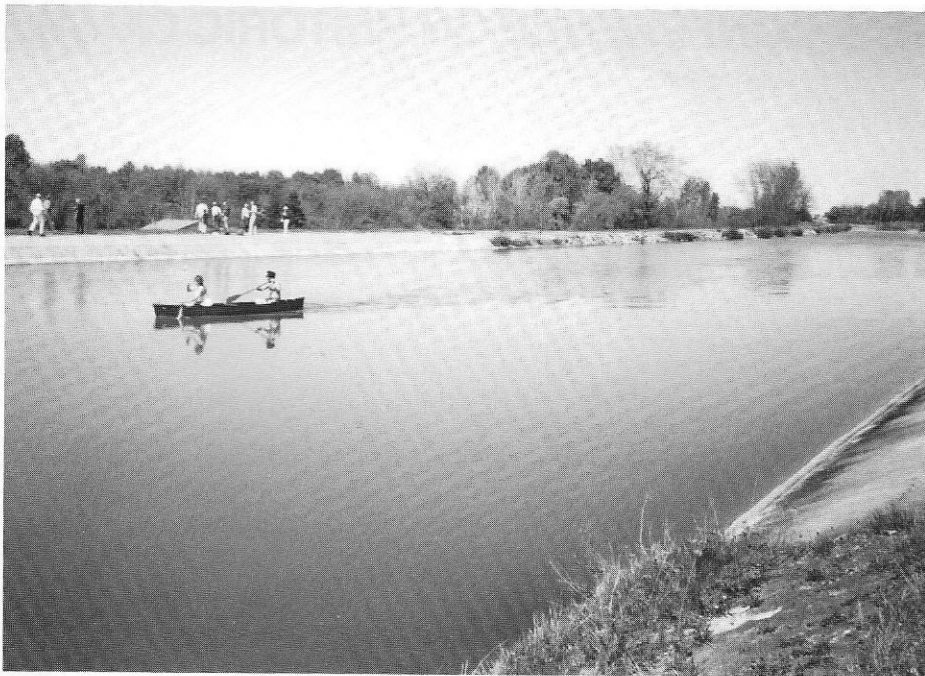
CANAL a short segment in the Pittsford area was retained with water in it. This was because a local boat builder had a large factory and wasn't about to relocate to a new site along the BARGE CANAL. Consequently for a few miles the old waterway was retained from a point where it merged with its successor to just below Lock #62 which our group visited. An earthen dam was created to separate the watered section from the rest of the prism which was drained after 1918 leaving Lock #62 sitting on dry land. During World War II the boat builder produced LST landing craft for use by the Navy. They traveled down this remaining segment of the ENLARGED ERIE CANAL and then via the BARGE CANAL to the Hudson River. After the war in 1946 this firm went out of business and the aforementioned portion of the ENLARGED ERIE was drained. Today trees are growing in it. Throughout New York State there were instances of small pieces of the 1850 era waterway remaining in use after 1918 for canalside industries which had not yet relocated onto the BARGE CANAL. Once they went out of business or finally moved to the banks of the newer canal the various segments were abandoned and the prism either filled in or permitted to remain as a ditch running across the landscape. Other much longer portions of the ENLARGED ERIE continue to exist today but not for navigation purposes. Instead they are used as "feeders" to bring water to the BARGE CANAL from either lakes or mountain streams.



Entrance to the Junction Lock at Greece, NY. It was created as a temporary structure only, in concrete.

Reboarding our two buses we left Lock #62 and proceeded in the direction of Rochester. Along the way we passed the SPRING HOUSE RESTAURANT which was originally built in 1822 to serve the crews digging CLINTON'S DITCH. Because at this point the ENLARGED ERIE occupies the same right of way as the former it likewise served its workers and boatmen. If one could travel on a time machine back to the 1870s its likely that several barges and boats would be seen tied up adjacent to this tavern and eatery. Inside the canals would be having a rousing good time. Although trips run by groups like the CS of NY concentrate on the physical remains of the state's waterways it's important to realize that there was a human side to canaling. Men worked the boats to earn money to support their families spent hours walking along towpaths dreaming of the time when they had enough money to retire and live comfortably. Because the canal froze in winter they knew that they had to make a certain number of trips during the regular boating season.

Heading into Rochester, a city which grew and became a manufacturing center because of available water power plus its location on the Erie



The Barge Canal, directly above the highway tunnel, is carried in a huge concrete trough along the Great Embankment. (See Issue Number 94, August 1995.)

Canal, we passed the site of ENLARGED ERIE CANAL Lock #66. It no longer exists but an adjacent wide watered depression in the form of a noticeable depression in the landscape which is now a park. Lock #66 was the beginning of a long level segment which extended for almost a hundred miles to Lockport. (By level segment is meant a portion without locks since no elevation is gained or lost). The aforementioned section contained a basin or holding area where boats tied up.

Arriving in Kodak City we visited the 1843 era aqueduct which once carried the ENLARGED ERIE CANAL over the surging water of the Genesee River which furnished the city with power to run machinery until the widespread usage of steam and subsequently electric power. DR. GRASSO pointed out the location of the original aqueduct which carried the 1825 era canal across the river. Constructed of red Medina sandstone quarried nearby it was only 17 feet wide, permitting passage of just one vessel at a time. It always had a problem with leakage and was constantly being repaired. In 1842 it finally collapsed. Adjacent to it was a place where passenger carrying packet boats once locked. A regular Rochester-Utica line offered daily departures until the early 1850s when railroads captured its business. There were many fights at this narrow aqueduct. Boatmen pushed and shoved to insure that their vessel had the right of way. Many of these men, often burly and gruff, were transporting cargo under contract and delivery times were often factored into compensation scales. In the same manner as today's trucking companies bid for long term assignments to haul goods yesterday's canal captains also competed for traffic.

Construction began in 1837 on the present seven arch structure. Instead of red Medina sandstone the building material came from the Syracuse area. Known as ONONDAGA LIMESTONE it's stronger and capable of withstanding greater stress. Instead of a 17 foot wide channel it was 45 feet across. Its trough was 7 feet deep and it included a towpath and walkway for pedestrians. It was considered an especially beautiful structure when it opened in 1843 with a length of 802 feet. Its completion came just about

the time its predecessor collapsed. The red sandstone from the 1825 crossing was quickly salvaged by local citizens who used it as building material for their homes. The 1843 aqueduct survived as a waterway for boats until 1920 when it was drained. About a year later substantial reconstruction occurred to enable it to carry streetcars and a roadway called Broad Street. The trolleys utilized what formerly was the water carrying trough and the street was situated atop of it. This arrangement lasted until 1956 when the trolley line was abandoned. What's amazing to this writer is the fact that the original 7 arch aqueduct was built so sturdily that it was able to support the weight of two additional levels added over 70 years later. Upon departure from this well preserved artifact we passed the site of the weighlock building,

Unfortunately this structure, almost identical to the one still surviving in Syracuse, was torn down in 1923. The reason was that it was in the way of the streetcar line which also traveled across the old aqueduct. This trolley route utilized 8½ miles of the right of way of the ENLARGED ERIE CANAL through downtown Rochester and provided efficient public transportation for over 30 years.

Proceeding west from Rochester we drove along the now filled in prism of the ENLARGED ERIE where several old warehouses which once fronted on the waterway were pointed out. All were constructed of stones neatly assembled into walls. Occasionally a lifting hook bracket could still be seen which was used to hoist cargo from boats docked below. Until 1918 these devices were presumably still in daily use. One can only speculate as to how many similar 1850s vintage buildings once associated with the canal were demolished with scarcely a thought given to their historic significance.

Stop number four was the site of the JUNCTION LOCK which was built in 1918 to connect the new BARGE CANAL with a six mile portion of the ENLARGED ERIE running into downtown Rochester as far as the aqueduct over the Genesee River we had just seen. In 1918 the terminal facilities for the BARGE CANAL in Rochester were not finished, and a lot of industries dependent on water transport were still situated along the banks of the older waterway. Consequently it was necessary to permit them to retain access to the new canal for a couple of years. Since the BARGE CANAL had a depth three feet higher than the 1840 era waterway (10 feet versus 7) a lock was required at the point where the two were joined. Because it was viewed as a temporary expedient the least expensive materials were utilized. Its entrances were made of poured concrete while its sides were of dirt with a wooden wall as a liner.

Our group spent a half hour exploring the JUNCTION LOCK. Although its cheaply constructed side walls have collapsed and eroded the concrete entrances remain. A look at a map showing both waterways reveals that while the ENLARGED ERIE passed directly through downtown Rochester the NY STATE BARGE CANAL utilizes an alignment south of the city. To reach the downtown area a short segment of the

(Concluded on Page Twelve)



The CSNYS Tour Group disembarks from The Emita II at Fairport, NY. Note the Lift Bridge in the background. (To be described in the next installment of this series.)

THE 1995 INTERNATIONAL CONFERENCE ON HISTORIC CANALS

By Carolyn & Bob Schmidt

A warm southern breeze blew across the canal. Tree limbs trailed their leaves in its waters. Water hyacinths bloomed along its berms. A Great blue heron took flight along its side where turtles basked on logs. Canawlers glided down its glistening course aboard pontoon boats, canoes, and a replica of a Petersburg boat, the "Fort Augusta," or rode along its tow path in golf carts. No matter what form of transportation they used, everyone experienced the beauty of the Augusta Canal from the Columbia County Overlook to the Augusta Water Pumping Station.

The Augusta Canal was first used in 1845 and celebrates its 150th anniversary in 1995. As part of this celebration, the Augusta Canal Authority hosted The 1995 International Conference on Historic Canals whose theme was "Exploring the Canals of the Old South." Ninety Canal enthusiasts from the U.S., Canada, and the British Isles gathered in Augusta, Georgia on October 2-6 for this five day event. Roger Squires, ACS Director from London was also present. Each day was arranged to give their guests a taste of true southern hospitality including fantastic southern food and local history and a better understanding of southern canals.

Jeanie Allen and Marsha Downing, co-chairs for the week's events, made sure that every canawler had a pleasant visit to this historic city and canal town. The Graniteville company gave each participant a denim bag in which to carry his tour literature. Registration and an opening night reception was held at the Radisson Riverfront Hotel where previous conference attendees chatted with old friends and made new ones while sampling hors d'oeuvres from a lavish buffet.

Tom Robertson, Chairman of The Canal Authority, which is seeking to get this historic waterway a National Heritage Area designation, opened the first day's session. Mayor Charles A. DeVaney addressed the conference telling how the city, which once turned its back on the canal and the Savannah River, is now focusing on both for recreation and natural restoration. Augusta has just completed a beautiful brick walkway, appropriately called the "River Walk," along the Savannah River



Augusta Canal. 13th Street Gate House at the first level of the canal.

in the downtown area. The Radisson is part of redevelopment of this area.

Historian Edward Cashin said Augusta was established by James Oglethorpe in 1736 at the fall line of the Appalachian Plateau as a trading site with the Native Americans. As agriculture developed in the antebellum south, a need arose to bring cotton from the upper south to port cities such as Savannah and Charleston. The Augusta Canal was established to take boat traffic around the natural barrier of the falls and into the center of Augusta. The Petersburg boats carried cotton to a basin at 13th street where it was loaded on



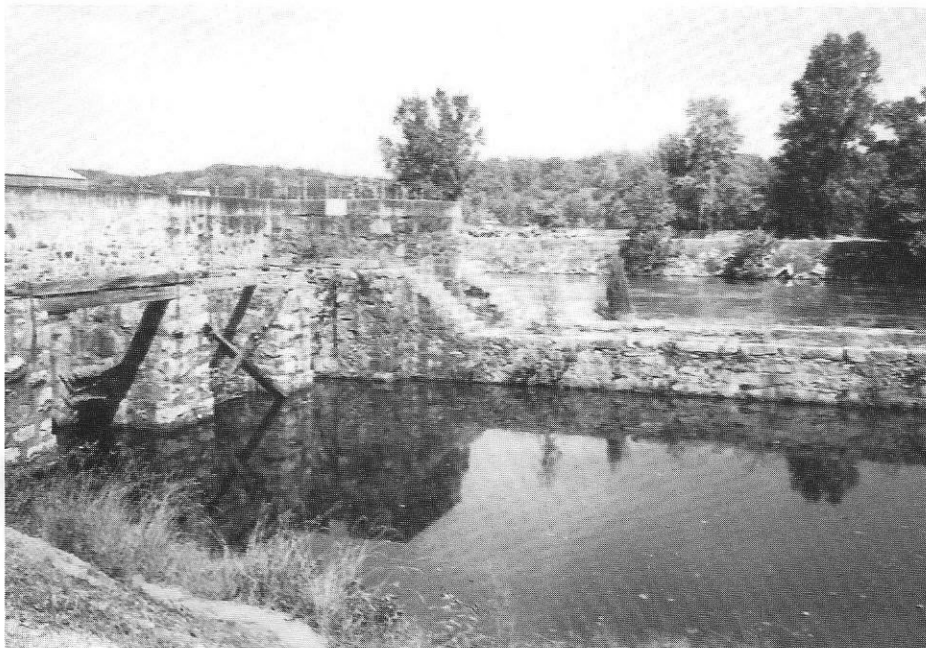
Rae's Creek Aqueduct, with its double-arch opening. Masonry in excellent condition.



Augusta Canal Headgate Lock.

wagons. It was then taken to market on cotton row, Reynolds Street, and thus Augusta became the second largest inland cotton market in the world. The old Cotton Exchange is nearby where black chalk boards still show the prices for different qualities of cotton.

The Augusta Canal was a lateral canal that began with headgates and a lock at the falls in the Savannah River and flowed for seven miles into Augusta. It was originally 5 feet deep with a prism 40 feet wide. In 1872-1875 it was widened, dredged, and lengthened to today's width of 150 feet, depth of 11 feet, and length of 9 miles. Augusta receives its entire water supply from the canal. Canal water drops 35 feet from the canal to the Savannah River, passing through 4 water turbines. These turbines pump water from the canal to the city's reservoir and water treatment plant 4 miles away in Augusta.



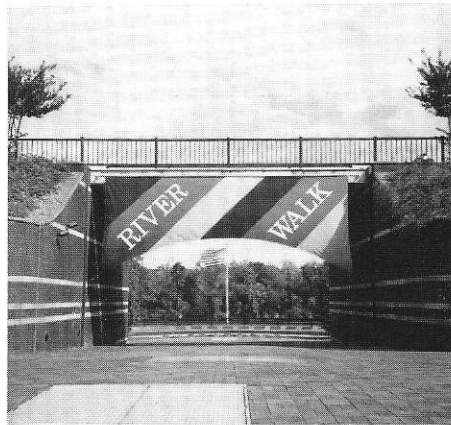
Headgate locks of the Augusta Canal.

Once the Augusta Canal reaches the city it breaks into 3 levels. Along the first level stands the chimney of the Confederate States Powder Works which was left as a monument to the dead heroes of the South. Augusta was chosen for the South's largest gunpowder plant because of its canal transportation and water power, its railroads, and its security from attack. The Powder Works operated from 1862-1865. In 1872 it was destroyed to make room for textile mills. The Sibley Mill, built at the site, still uses canal power to manufacture denim. Nearby is the King Mill which produces cotton textiles for hospitals. The Enterprise Mill, Granite Mill and Sutherland Mill as well as the Ezekiel Harris House and Meadow Garden, the home of George Walton who was the youngest signer of the Declaration of Independence, are interesting to see. The second level of the canal has the Augusta Iron and Steel Works Mill and the Crescent Mill, a grain mill, but both no longer operate on canal power. Much of the original second level has been filled in. The third level has gates that are important for city rain drainage and flood control.

Dr. Mark Newall, who was responsible for the 57-foot Petersburg boat replica, explained his archaeological research project into this famous



Old Santee Canal Museum.



Entrance to the Augusta "River Walk".

boat's construction. George Barrett, the boat's captain, told about funding the project. This type of narrow boat, although eventually brought into the canal, was originally designed to bring cotton from upriver where it negotiated the rapids using a long sweep for steering.

At the Columbia County Overlook, Dr. White Gibbons told us about types of wildlife found in this unique ecological area. The alligator and rattlesnake demonstration made a lasting impression on the visitors.

Canawlers everywhere seem to have good appetites. During our stay we were treated to all kinds of southern delicacies. From a Sconyer's southern barbeque and lawn party at the home of Nancy and Hugh Connolly, to a fried chicken picnic by the Graniteville Co., to a "Low-Country Boil" at Stony Landing, we had it all. No visit to the south would be complete without mint juleps which we sipped while touring the Morris Museum of Art on the "River Walk."

Wednesday was our day to visit another southern canal. Buses took us to the Old Santee Canal State Park at Monk's Corners, South Carolina. This was the nation's first summit level canal. It was 22 miles long. Today one of the best canal museums in the U.S. is located there. The visitors center has state of the art exhibits of the

canal and the flora and fauna of the area. It also has a replica of the Civil War submarine, "Little David." A large scale model of a lock shows how these structures were built and used commercially.

The entry to the museum is through brick walls with water trickling down their sides giving the impression of being in a Santee brick lock. Built on the edge of a swamp, visitors can look out a massive three story tall glass wall and view the swamp or exit the building and wander along boardwalks through pristine natural areas to the point where the Old Santee Canal enters the park. Museum curator, Mary Bell, was our hostess.

Hurricane Opal tried to rain on our day, but we gathered beneath an old plantation house that was built 8 feet above ground to provide ventilation and that served to keep us dry as we enjoyed our "Low Country Boil." A few down pours drenched the hardy souls who wandered into the swamp without their umbrellas.

Thursday Dr. Mark Finlay and Bill Sternwell told about the work being done on the Savannah-Ogeechee Canal near Savannah. This canal of 16.5 miles connected the Ogeechee River with Savannah. The canal with six locks is being restored by a dedicated group of canawlers who are clearing out a growth of brush to uncover the beautiful brick locks of this antebellum canal.

Dr. Bill Trout, in bateau dress, spoke about the James River bateau excavation and gave a humorous account of the perils and adventures along the James River during the Bateau Festival. The festival has grown from a few boats to a flotilla of craft with names such as the "Ice Maiden," "Maiden's Adventure," and the "Lady Slipper." Due to the perils of river travel some of the boaters have had lots of experience at building and rebuilding their crafts. Bill's presentation was so clever that he won the prestigious "Dink" award for his interpretation of the Bateau Festival.

Other speakers were Kristine Olka, Rory Robison and Paul Labovitz. They presented the results of a study to make "Towpaths to Trails." The results of this study showed that there is a substantial amount of activity underway throughout the country to reuse old canal paths as recreational trails. The national initiative of historic corridors has sparked local groups to develop their own areas

(Concluded on Page Twelve)



The "Fort Augusta", a 57-foot replica of a Petersburg Boat, loaded with participants in the International Canal gathering in Savannah.

CSNYS SPRING FIELD TRIP (Conclusion)



One of the 1850 stone culverts of the embankment of the Enlarged Erie Canal near Holley, NY. A well-built structure made of cut limestone blocks.

(Concluded from Page Nine)

Genesee River is used as far as a dam which regulates its flow over the falls and into the gorge below. In effect the river has been converted into a branch of the canal for about 2 miles. Major terminal facilities including a concrete warehouse were constructed for use by the BARGE CANAL. Unfortunately these 1918-1920 vintage structures are no longer being used for their intended purpose since freight traffic on the NY STATE BARGE CANAL has now completely vanished. As we stood at the point where the old Erie used to diverge from the BARGE CANAL it was explained that from Lockport to Rochester water from Lake Erie flows eastward at a steady rate. Although the portion from Lockport to Rochester is considered "level" there is actually a loss of elevation of one inch per mile. This was done deliberately to keep water moving. Without such a flow it would stagnate.

Reboarding our buses we proceeded towards Brockport where lunch was served at the Captain Cooks Inn. Running parallel to the BARGE CANAL we could see new development along its banks including luxury condominiums plus an occasional marina. This waterway has a definite future for use by private boat owners.

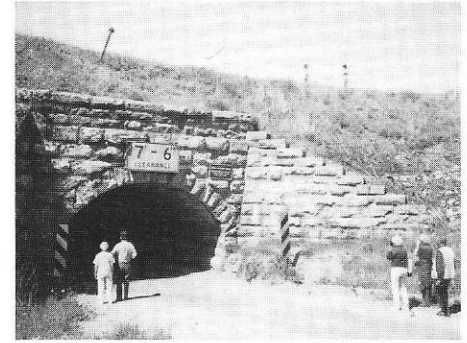
(Publisher's Note: Robert Southworth, ACS Member from North Hampton, NH, contributes the following points, both Good and Bad, on the Importance of Canals in U.S. History:)

I cover this in articles I have written as follows:

- 1) They were the first public works projects in US history.
 - 2) They produced the first engineers in the US - West Point didn't start turning them out until 1845.
 - 3) They were of major importance in opening the west.
 - 4) They were the first development for mass transport of freight.
 - 5) Very important for both sides in the Civil War.
 - 6) They created the need for and development of under water cement.
- And on the down side:
- 1) They ran on rum and sex - whiskey 5¢ a glass.
 - 2) They spread disease and cholera.
 - 3) They all cost at least double their estimates, - many, *more*.

Stop #5 following lunch was the town of Holley where two prominent points of interest were examined. The original CLINTON'S DITCH and the successor ENLARGED ERIE CANAL made a horseshoe loop through a valley near town. When the BARGE CANAL was constructed in 1908-1918 a new embankment similar to the GREAT EMBANKMENT at Pittsford was created to form a direct routing. In effect the earthen fill cut across the loop. Such civil engineering schemes had the practical effect of making the route shorter. The group hiked into the brush where DR. GRASSO showed us one of the few surviving culverts of CLINTON'S DITCH. This was on a portion which was bypassed in the 1840s or 50s when the ENLARGED ERIE took a slightly different alignment through the valley. Fashioned from red Medina sandstone it appeared tiny. Basically structures on the original Erie Canal used this red stone which was quarried in and around Medina. The 1840-1860 reconstruction made use of ONONDAGA LIMESTONE from the Syracuse area since it was stronger. After looking at the 1823 vintage culvert we examined the new embankment which was used for the BARGE CANAL. Also present was another embankment dating from the 1860s which carried the ENLARGED ERIE across a ravine. One of its limestone culverts was still present with a small stream flowing through.

Leaving Holley we traveled further west as far as the outskirts of Albion. Here is situated the only place on the BARGE CANAL where a road passed beneath using a culvert. At this spot all



A road passes beneath the BARGE CANAL through the Great Embankment.

three waterways sat in the same alignment. In 1825 the first culvert was installed through which horse drawn vehicles passed. In the 1840s the waterway was made much wider and a new culvert constructed. The stones from the 1823-25 era structure were salvaged by local farmers and used for building materials. An adjacent farmhouse incorporates one which retains the date 1823 and our group was given permission by the owner to take a close look plus photos. This answers the question as to the fate of the locks of many of America's abandoned towpath canals. Their stones were swiped!

(To Be Continued)

INTERNATIONAL CONFERENCE (Conclusion)



The huge chimney of the old Confederate Powder Works was preserved as a war memorial. The original building was replaced by the Sibley Mill shown here.

(Concluded from Page Eleven)

along canal routes. The survey pulled together information from 46 canals or about 4,000 of the 5,000 miles of canals built in our nation.

The final night banquet was in grand style at the Radisson where our normal meeting room was transformed into "Emma's Piano Bar." The program featured Emma Kelly, whose fame has grown since a chapter in the book *Midnight In The Garden of Good and Evil* was devoted to her, and who was a good friend of Johnny Mercer. She is said to know 6000 songs. She entertained us by singing and playing our requests, many of which

dealt with the south or Georgia. A few "happy" canawlers also got into the act.

Friday's "How To" session included discussions on The Augusta Waterways Forum, ISTEAF funding, choosing a planning team, the Augusta Canal Master Plan, and the National Heritage Areas. Questions were answered by experienced planners as to how communities or groups might achieve what has been accomplished in Augusta.

As the conference came to a close, Tom Brock, Head of Special Initiatives for British Waterways, extended an invitation to all of us to attend the 1996 International Historic Canals Conference in Birmingham, England.