PRESIDENT’S MESSAGE
Due to special income received from our eighteen Life Members; excellent sales of our new book “Best From American Canals”; a bequest from Ted Sherman’s estate; and a considerable cost savings as a result of changing printers — our ACS Treasury (often in and at this time of year) is in very healthy condition. Charlie Derr reports that, as of October 23, 1981, (prior to sending out 1982 dues notices) our balance in savings and checking stood at $4,951.78. Since we are a nonprofit organization we plan to share our good financial situation with all of our ACS members in the form of a dues increase for 1982 and an expanded format in our quarterly newsletter, as described by Editor Tom Hahn. With the continued loyalty and cooperation of our 347 members throughout the world, the 1982 New Year should be our “best ever.” May I also extend my personal best wishes to all of you for a “Happy Holiday” season.

BILL SHANK

OUR CANADIAN DIRECTOR HONORED BY AASLH

We are proud indeed to announce that the Canadian Director of the American Canal Society — Louis J. Cahill, of St. Catharines, Ontario — has been selected from the Annual competition of the American Association for State and Local History (Nashville, Tennessee) for its special “Award of Merit.” The award was granted to Lou “for his personal dedication to the promotion of the local, national and international significance of the historic and modern Welland Canals.” Congratulations Lou! (His complete biography will be published in a future issue.)

INDIANA FIELD TRIP — A BIG SUCCESS!

The “Ben Franklin,” constructed just a year ago, enters the Millville Lock below Metamora, where the boat and its passengers were dropped part-way to the next lower level to illustrate the sluice-gate operation.

By Nancy J. Dice Phillips, Connersville, Ind.

Members of the American Canal Society, Canal Society of Ohio, and the Historic Canal Society of Indiana came to Connersville, Indiana, Oct. 16-17, 1981 for a weekend tour of the Whitewater Canal. The Holiday Inn (Connersville) was the headquarters for tours of the city and the Canal House, and a 34-mile train ride to Metamora, dropping along the way to view locks and the Laurel feeder dams. Fourteen miles of restored canal watershed and locks, preserved by the state in 1946, have given rebirth to the canal town of Metamora. The former stern-wheelers that once served the canal trade of a century ago now house gift shops, craft shops, antique stores and restaurants. An operating grain mill, with a bristling waterwheel, drawing power from the canal flow, as well as a ride on the canal in a replica Amish built packet boat, enhanced the visit in Metamora.

John Droese, organizer for the tour, gave a chronological review of the canal on Friday evening. A visual aid map, shown by Rodney Golding, denoting the locks by number, helped to enlighten the touring canals. Don Dunaway, Historical Society of Broxville, gave a slide presentation of what the canals would be viewing from the train windows. Fr. Dale Pender showed slides of the Cincinnati and Whitewater twenty-five mile branch from Harrison, Ohio to Cincinnati.

(Cont’d on Page 4)
American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

"DEDICATED TO HISTORIC CANAL RESEARCH, PRESERVATION AND PARKS!

AMERICAN CANALS is issued quarterly by the American Canal Society, Incor-pora- ted. 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 minimum ACS dues payment of $8.00. Individual copies may be purchased at $3.00.

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CANADIAN CANALS SOCIETY FORMED

St. Catharines (Oct 31, 1981) - The first steps in the formation of a Canadian Canals Society were taken here today, in the city built around the Welland Canals.

The organization was carried out through the Welland Canals Foundation Inc., the successor to the Welland Canal 1980th Anniversary committee, under the chairmanship of Malcolm Campbell, also vice-president, St. Lawrence Seaway Authority.

Some twenty-five people representing canal groups from throughout Ontario and New York state gathered at the St. Catharines Historical Museum for a day of discussion, films and a tour of the four Welland Canals. The Foundation has previously contacted about 75 marine historians and canal representatives who voiced support for a Canadian Society.

ACS President Bill Shanks was unable to attend, but delegated J. Hayden Moodry and Richard N. Cavagnaro (both of New York State) to represent the state-side ACS membership.

Also on hand for the occasion was William Hamilton Merritt, better known as the "Father of Canadian Transportation." Mr. Merritt, in the presence of actor/playwright David Mee- renzie praised the group gathered, wishing them well in their discussions and future en- deavours and stating that the group was remini- scent of the one he called together in 1918 to discuss the possibility of building what was to become the first Welland Canal.

A Steering Committee was formed to develop a draft charter and to lay down basic operational principals. Dr. Weisley Turner, history professor, Brock University will be acting chairman with other committee members being appointed by the Welland Canals Foundation.

The sub-committees will research and prepare by-laws and background information in the next few months. The first annual meeting will be called in early spring, 1982.

The steering committee has expressed a desire to change the name of the organization to the Canadian Canals Society. The new name will be subject to approval by the annual meeting.

EDITOR'S CORNER

When Bill Trout, Bill Shank and I founded the American Canal Society in 1972, we included Canada within our organization because of the importance of any canal society. Over the years we have worked closely with various officials, private parties, and civic organizations in Canada to publish the im- portance of the rich heritage of the Canadian canals and the utility of their present-day use. For example, several years ago (then President of the American Canal Society) at the invitation of ACS President Louis Cahill, Mrs. Hahn and I traveled to St. Catharines, Ontario, to emphasize the importance of the Welland Canals. In 1979, ACS President Bill Shanks and Mrs. Shanks requested that we set up a field trip for members of ACS along the Welland Canals. It was therefore appropriate that members of the American Canal Society should participate in the formation meeting of the Canadian Canal Society just a few weeks ago. It was particularly fitting that the formation of the Society began on the 150th anniversary of the Rideau Canal.

Some contributors to American Canals may be wondering why the ACS has not com- mitted to publication has not been used, be- cause of a general lack of funds for the past several years it has been necessary to restrict the size of our publication to the number of copies each quarter. With that small number of pages, it has been difficult to cover member organization's activities, canal cruises, canal preservation items, canal industrial archaeology, feature articles, canal histories, etc. Now that we are operating in the black we will increase the number of pages of American Canals to twelve for as long as possible. So be sure to renew your subscriptions for 1982 and you will receive more news about the American Canal Society, and sit back to enjoy an expanded canal bulletin each quarter.

My wife Nathalie and I recently returned for a great trip to the canals of Southern France in the converted Dutch barge PISGAH, along with several other canal enthusiasts. Our canal travel took us along the Canal du Midi where we are now celebrating its 200th anni- versary since opening in 1801. When opened, this canal was the greatest civil engineering work since the days of the Roman Empire. Other waterways we traveled were the Canal du Rhone a Sole, the Little Rhone River, and the Grand Rhone River. I'm sure you will join us in the coming years as we shall share part of this experience with you in the February issue of American Canals.

Tom Hahn

A TRIP TO THE PEOPLES REPUBLIC OF CHINA

by Robert S. Mayo

This Summer I went to China with the American Underground Association as one of the People-to-People Programs. There were 31 people (including seven women) in our party and I must say that the Chinese Authorities treated us royally. We visited all the big cities and all the other tourist attractions such as the Great Wall and many temples and shrines. Since our group was connected with under- ground construction we visited tunnels, subways, underground housing and they showed us dozens of Fall-Out Shelters to protect their population in case of an Atomic War.

We did visit the Grand Canal at Suzhou but only for a half hour. I was fascinated by the dozens of sampans I saw in our visit, scullled along hand by an occasional tug boat which had a working diesel engine. Populating along and touting six or eight other sampans. Tied along the shore were other ancient sampans inhabited by the rice people. Here they were born and here they died.

The "Grand Canal," Suzhou, China - as photographed by Bob Mayo 8/30/81.

One of the members of our group left us early and he wrote me later that he had taken a 3-day trip down the Yangtze River and the boat passed through three tremendous gorges. He said it was magnificent.

At the recent Pennsylvania Canal Society meeting in Lebanon, I asked some of those present if they would be interested in combining any of the various canal societies to sponsor a canal trip to China this coming summer. There was real interest, but we will require a total of 34 (one bus load). I hope amongst all the "Canalers" we can promote such a trip.

(Publisher's Note: I asked Bob for a few more details: He was gone for 26 days; flew from Peeling on Northwest Airlines, via Seattle and Tokyo, and estimate cost of tour is $3,500. Anyone interested in joining a similar trip whose prime objective would be a tour of the Chinese Canals, contact Bob Mayo, P.O. Box 1415, Lancaster, Pa. 17604).
SAM BLODGETT'S CANAL

by R. A. Southworth

From time to time those of us who are "tinto" canals — the real canal buffs — suffer a certain amount of good natured ribbing about the subject. And it is true, of course, that canals are not behind every feature of American life. Nevertheless, it is amazing how frequently they turn up as having made some significant and long lasting contribution to our history.

Sam Blodgett's Canal in Manchester, New Hampshire around the Amoskeag Falls of the Merrimack River is a case in point. Here was a little ditch conceived and executed by one Samuel Blodgett at the end of the 18th century which had a lasting influence on the entire area. It showed the way for the utilization of water power later used by the huge Amoskeag Manufacturing Company, at one time the largest textile mill in the world employing 17,000 people. And it was instrumental in naming the city of Manchester, N. H., current population 91,000.

These times were the beginning of the "canal movement" in America, and Blodgett needed an easy way to get his lumber down the river. He had been living near the Amoskeag Falls and he conceived the idea of a canal around them. Work began on the Blodgett Canal May 2, 1794. Four months before work was to start on the Middlesex. The Manchester Canal was to be completed in five years and to have cost $9,000,000. As with so many other canal projects, the time and the cost were vastly underestimated. The work took 14 years and the canal opened May 1, 1807. It cost in the neighborhood of $100,000,000, a fantastic amount in those days for a one mile project, probably the equal of about two million dollars today.

At first he put up his own money and started the canal. After some of his first projects were washed away he called upon Loami Baldwin (then engaged on the Middlesex Canal) to come up and offer advice. Judge Blodgett eventually ran through all of his own money on the project. He next enlisted the help of the State Legislature and eventually the canal was opened, and Judge Blodgett rode through it in triumph.

Old drawing (circa 1912) showing the north end of the Amoskeag complex and its canals. (Courtesy Alden Gould.)

In 1804 Blodgett was said to have made the prophetic statement, "As the country increases in population we must have manufacturing, and here, at my canal, will be a manufacturing town that will be the Manchester of America." And in 1810, three years after his death, the town, then known as Derryfield did indeed petition the State Legislature to change its name to Manchester.

At the Amoskeag Falls the river drops 54'10" in 14' of a mile, Judge Blodgett's canal was about 9'10" of a mile long and had perhaps six locks. We cannot determine the exact number of locks nor their size, but they accommodated canal boats 75' long by 9' in beam drawing 2' of water. From this we would assume the locks were probably 90' long x 10' wide, and the depth of the canal might have been some 3 feet. Interestingly enough the boats were not towed through, but perhaps because the canal was so short they were pulled through.

Blodgett's canal was a source of water power and mills grew up upon it. However, it was not until 1830 that a group of Boston businessmen purchased the water power for the entire Merrimack River in the area and assembled a 25,000 acre plot of land. This, in turn, became the Amoskeag Manufacturing Company with 84 mills extending for a mile on the east side of the river and a half mile on the west. This mill turned out a half million yards of cloth a week and was in existence for 100 years. And the idea for it, and the first motive power for it, was Blodgett's Canal. The remains of the southern end of the canal may still be seen from the Granite Street Bridge in Manchester.

BOOK REVIEW

"Jamestown Waterway: A History of the Albemarle & Chesapeake Canal" This illustrated history of the Albemarle and Chesapeake Canal traces the varying fortunes of one of America's most heavily used, commercially important, and scenically beautiful man-made waterways. Completed in 1859 this seventy-five mile ribbon of water joining the headwaters of Virginia's Elizabeth River and North Carolina's North River is now part of the Atlantic Intracoastal Waterway — America's thousand mile "Grand Canal." Mr. Brown begins with the initial plans for building the canal in the eighteenth and early nineteenth century. He describes the construction and engineering obstacles encountered in building the canal through the tidewater wilderness. There is a chapter on the role played by the canal during the years of the Civil War and Reconstruction and chronicled are the years of steamboat travel along the canal, its eventual decline as a major channel of transportation. The last chapter serves as a guide for the traveler today who is interested in discovering the beauty and history of the waterway. (By Alexander C. Brown, The University Press of Virginia, Charlottesville, Virginia. 1981. $22.50. 256 pages. Hardcover. ISBN. 0-8139-36-35-6.)

Remains of the Hon. Samuel Blodgett's Canal on the east side of the Merrimack River, around the Amoskeag Falls, in Manchester, New Hampshire. (Photo by R.A. Southworth.)
INDIANA FIELD TRIP draws CROWD FROM SIX STATES

First "Lock Stop" on the railroad section of the tour, south of Connersville. Gayle Hartel, President of the Canal Society of Ohio, poses for the cameraman, foreground.

(Cont'd from Page 1)

The nearly one hundred tour participants had optional side trips to visit the site of one of the eight hydroelectric plants that until 1965 supplied electricity for the city in the early AM hours of the day. During the Whitewater Valley Railroad trip, train historian Lowell Sauer regaled the riders with oral history and color of the canal days. The train trip included stops at several locks, and a tour of the town of Laurel, a stop at the Laurel feeder dam before arrival in Metamora.

The "Ben Franklin," a replica of the first packet boat to reach Brookville from Lawrenceburg in 1839, took the canals for a ride to Lock 24, where the gates were opened and locked down, but not through, to give a demonstration of how the lock worked. Enroute, the boat passed through the restored Duck Creek Aqueduct.

A tandem hitch of two horses won the power for the packet.

Leaving Metamora via busses, the four viewed Twin Locks, number 23 and 22. Mr. Dunaway met the tour at Lock 18 and told of a nearby mill that helped to form the industrial base for Brookville.

Returning to Connersville, Henry Bronnell conducted the walking of the canal sites. Touring the Canal House, a Greek revival structure built in 1842 for the housing of the canal headquarters, Robert Gray, restored of the Canal House into a home, and Harry Smith conducted.

Saturday evening, Mr. Blumenn's slide presentation, 'Dred and His Car' (parts for which were built in Connersville), visually portrayed the industrial park concept by John McFarland, Sr. of buggy manufacturing, and later automobile manufacturing.

The Whitewater Canal was part of the State Internal Improvement Act of 1836 that provided for the Whitewater Canal, the Wabash and Erie, and other internal canals along with railroads and macadamized roads in an attempt to open the fertile plains of Indiana to external access. The cost of the Whitewater Canal, the length of seventy-six miles, with seven feeder dams, and fifty locks was estimated at $14,908 per mile for a total of $1.4 million. When the state could not pay the interest on its bonds the canal was sold to a Cincinnati based syndicate in 1872. The canal was finished to the National Road, thus linking central Indiana with the port of Lawrenceburg on the Ohio river. There is a fall of 481 feet from the headwater of both the East Fork and the West Fork of the Whitewater river, from Randolph County to the Ohio River. Devastating floods in 1859 and 1860, proved too much for the canal banks, and especially where the canal was lower than the river, destroying great portions.

For 110 years, the flow of the Whitewater Canal through Connersville provided water-power for local industry. From 1910-1920, Connersville became the largest automobile manufacturing community in the world for its size; hence the name of "Little Detroit."

A trip to Connersville feeder dam and the location of the "town that never was," Lockport, concluded the weekend tour. The fall turns planned by the Canal Society of Ohio brought visitors to Connersville from Ohio, New York State, Pennsylvania, West Virginia, and Illinois. In tour an actual operational canal and to ride a train whose sole purpose is to provide transportation from Connersville to Metamora on weekends. Before the coming of the railroad to the Whitewater Valley, the "canalers" of yesterday were just as avid at the canalers of today; until the laying of the tracks on the town pott, the valley residents were still pleading with the State to keep the canal intact. The towns along the 1840 canal route flourished; some continued to grow, some stagnated, and some disappeared. One major contribution the canal provided was the remolding of the State constitution in 1851 to provide that Indiana will always be and will remain a pay as you go state.

(Whitewater Tour photos by Bill Shank)

IWA PENNANT PRESENTED TO ACS

At the October 17th combined ACS, CSF and CSI luncheon meeting in Connersville, Indiana, Dr. Albert Celley transferred to ACS President Bill Shank the banner presented to him by Dr. Gueffrey de Fretas, President of Inland Waterways Association, in England, August 18th, 1981. (See August issue of A.C.) This was completed the ceremony representing the common bond between the Inland Waterways Association and the American Canal Society.

Albort Celley (left) presents the IWA Banner to Bill Shank during ceremonies at the Connersville, Indiana Canal Meet. (Photo by Louise Celley)

Dr. Celley has submitted a glowing 12-page written report giving full details of the excellent, 16-day, English Canals Study Tour arranged this past summer by ACS Director Roger Squires. Bill Garber has also submitted an enthusiastic five-page report on the same Tour. President Shank expressed regret that more of our ACS state-side members did not take advantage of the dedicated and detailed planning done by Dr. Squires in England to make his American visitors feel so welcome.

Bill Garber, at the present time, is making plans to organize a return trip to England in the summer of 1982, possibly using both bicycles and canal boats to allow participants to gain a wide ranging insight into a significant segment of the British Nation — probably around the Stratford Loop, including the Cotswolds, Stratford-on-Avon, Birmingham, etc. Anyone interested in participating in the tour is urged to contact William E. Derber, 16 Princess Avenue, Chelmsford, Massachusetts 01823.

AMERICAN CANALS, NO. 39 — November 1981
After the Whitewater Canal was abandoned for transportation a century ago, an undershot water wheel was installed in the Metamora Lock to provide power to an adjacent mill. The rebuilding of the Laurel Dam in 1953 has provided water once more to the restored water-wheel and mill (now in full operation), not to mention several long reaches of the old canal north and south of Metamora.

ACS MEMBERSHIP

As we wind up our tenth year “in business” we thought you might be interested in a geographical breakdown of our membership:

Pennsylvania ........................................ 104
New York State .................................. 81
New Jersey .......................................... 51
Ohio ..................................................... 47
Virginia ................................................. 45
Maryland .............................................. 36
Massachusetts ......................................... 30
Illinois .................................................. 30
Connecticut .......................................... 27
Canada .................................................. 26
England ................................................ 23
District of Columbia ................................ 21
California ............................................ 18
Indiana .................................................. 10
West Virginia ....................................... 8
Michigan .............................................. 8
Wisconsin ............................................. 6
Vermont .............................................. 5
South Carolina ...................................... 5
Minnesota ............................................ 5
North Carolina ..................................... 4
New Hampshire ..................................... 4
Delaware .............................................. 4
Maine ..................................................... 3
Tennessee ............................................. 3
8 States, 2 members ............................... 2
10 States, 1 member ............................... 10
6 Countries, 1 member ........................... 6
Total Membership .................................... 647

ALEXANDRIA CANAL

Following the signing of a contract between the City of Alexandria and Industrial Archaeologist Tom Hahn, archival maritime research began on the Alexandria Canal with the emphasis on the tidelock and basin and the waterfront area. The Alexandria Canal was the 7 1/4 mile link between the Chesapeake and Ohio Canal at Georgetown and the City of Alexandria, Virginia on the Potomac River. Later this month an investigation will be made of the stone work found earlier in the neighborhood of the tidelock at Alexandria (one of the four lift locks of the canal located there) to determine if they are indeed part of the lock wall or the wall of the basin or some other structure. The remainder of the archaeological work will take place next spring. Various volunteers of the Alexandria Archaeological Research Center and the Virginia Canals and Navigations Society are and will be participating in the project. Anyone having historical photos or more recent photos of any part of the canal or archival documents, is urged to contact Dr. Tom Hahn, Box 316, Shepherdstown WV (Tel. 304-875-2464).

ROGER SQUIRES MAKES NEW SLIDE/TAPE

We have just received a new, 45-minute Slide/Tape show on the British Inland Waterways made personally by our ACS United Kingdom Director - Dr. Roger Squires. The 2-inch color slides may be projected, while a small cassette is being played. It is an excellent “show” telling the canal buff’s story to inspect and travel the English canals. Of course, what to do from the time he arrives in London, until he starts his canal trip, can be planned. Join us on a trip around any of the canals of England or Wales. Information can begin, short or long canal tours, boats for hire, “pubs” and the most interesting towns along the canals - everything you could wish to see or do, is included. The Slide/Tape show is available to ACS members only. If you have a local canal group who would enjoy such a show, get your reservation date in at once to Bill Shank, 808 Rathaus Road, York, PA 17403.
The "Lorena"—an Arkansas stern-wheeler, brought up the Ohio and Muskingum for chartered tours through the locks of the upper Muskingum. The vessel is shown in its winter quarters, north of Zanesville. (Photo by Bill Shank.)

By Theophilus W. Kasper

The City of Coshocton, Ohio, is a "Three Rivers" city, although not as well known as Pittsburgh, Pennsylvania, where the Ohio River is formed, it is in fact the place where the Muskingum River joins the Ohio. The Tuscarawas River of Summit County flows through the counties of Stark, Tuscarawas, and Coshocton and meets the Walhonding River (which is formed by the Kokosing and Mohican Rivers) up in the hills of Knox County. At the confluence of the Tuscarawas and the Walhonding, the Muskingum River is formed.

It is the largest river lying wholly within Ohio, and it is almost 112 miles long. The elevations are: at the source 738 feet and at the mouth, in Marietta on the Ohio River, 88 feet, which makes that an average fall of 1.3 feet per mile. While the Tuscarawas drops 3.1 feet, the Walhonding has a fall of 4.2 feet per mile. The Licking River, which is the largest tributary stream and joins the Muskingum at Zanesville, has an average fall of a whopping 3.1 feet per mile.

It would appear that the Muskingum with its gentle descent would be ideal for navigation. But unfortunately an average figure is just that, an average. It does not show that at times for miles the river is almost level, and the average fall of 1.3 feet accumulates tenfold and drops down all at once over rapids, thus making navigation impossible. Even so, there is an 1872 account noting that the steamboat "Hope," out of Marietta, went up river to Dresden some 83 miles. But it was a small boat and the river was extremely high.

The answer to the dilemma of an unnavigable river is found in the river improvement. This involves construction of dams and locks in the river itself. The dams raise the water level and create navigable back water pools above them, thus actually making the river "deeper." The difference in height between the level above the dam and the one below is then overcome by passage through a lock which lifted or lowered the water to the level ahead. Too many rapids or falls in the waterway are bypassed by means of a side-cut canal, with the head of the canal just above the falls, thus the dam diverses some water into the canal. At the end of the obstruction the canal terminates at the upper gates of the lift lock which makes up for the difference in levels. A guard gate is added to the head of the canal as a safety device for times of flood, or simply to shut off the water when required for operations in the canal or in the lock itself. Sometimes, temporary streamers entering the navigable river were camouflaged just to have control over the entire reaches of floodings. These streamers and the dams in the navigable river were utilized to create valuable water power for manufacturing purposes. Therefore we find many old mills at these dam sites, not only grist mills but also sawing, wood, saw, and paper mills.

During the early 1830's the canal age was at its peak. The construction of the Ohio & Erie Canal was commenced, the Miami & Erie Canal was almost finished, and several others were being constructed or on the drawing board. While the Ohio & Erie went from Cleveland (on Lake Erie) to Portsmouth (on the Ohio River) a different route was yet to be selected. The Licking Summit (part of the Ohio & Erie) and the outlet lock into the Ohio River were to be built. The first had at times not enough water and the outlet too much. The Board of Public Works decided to make the Muskingum River navigable and connect it with the Ohio & Erie Canal at a lock where a lock that was the beginning of the Dreher Side Cut and the Muskingum River Improvement.

ACS LIFE MEMBERS

John Barratt, England
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Charles E. Davis, Pennsylvania
John A. English, New York
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William H. Shanks, Pennsylvania
William E. Trout, Michigan
William C. Treadway, California
Herbert F. Verity, Ohio
David J. Williams, Maryland
Nathan D. Wood, Ontario

(Note: To become a member of this important group, a "one-time" payment of $100 will put you on our permanent mailing list.)

The thought behind the combination of river and canal navigation was that at the head of the navigable river steamboats would pick up the canal boats and tow them downriver to their point of destination. This method was used on the Erie Canal in the State of New York where canal boats from Buffalo were towed by animals to the Hudson River, and from there they were towed by steamers to New York City.

It is difficult to find concrete evidence regarding how much of this type of transportation was really done on the Muskingum River, but the Zanesville Republican recorded the traffic on the Muskingum River Improvement. For the first two weeks of June in 1839, 120 canal boats arrived from Cleveland and nine canal boats departed for Columbus. It is also reported by a different source that the goods were exchanged from canal boats to river boats at Dresden, the head of the river navigation.

It should be pointed out that on these two waterways, the size of the locks determined the size of the watercraft. On the canal the locks were 16 x 80 feet and on the river the size was 36 x 174 feet. The difference was in the propulsion of the vessels. Along the whole length of the canal a towpath was constructed. Draft animals were used to tow the boats from lock to lock. But on the river the boats were self-propelled, and the steamboats were built as side or stern-wheelers. The width of the lock determined the width of the boat, and so the stern-wheeler was born out of necessity. While it may have been better for navigating the craft to have side wheels, the compensates to the self-propelled boats had to be made to use the locks to their fullest.

During its 140 years of existence the Muskingum River Improvement has seen many changes. It was built by the State and completed at a cost of nearly $50 million. The locks and dams, twelve lift locks and five side cut culverts. The dams were numbered using the same system as the State applied to the Canal locks. The first lock is at Lock No. 1 located at Symmes Creek and down at the level of the Ohio River at Harmar opposite Marietta was No. 11. Lock No. 2 at Zanesville was a double lock. This explained the apparent discrepancy of having twelve locks and only eleven dams. (Today the lock sequence is reversed, with Lock No. 2 at Marietta and Lock No. 11 at Ellis—north of Zanesville.)

While in the early years after completion the improvement was successful and traffic hour by hour increased until the amount of cargo carried on the river rivaled the tonnage of the State had expected. This experience certainly was not new to the government running in the canal business where the revenue was just the opposite.

The emergence of the railroad, the deadly enemy of all water transportation, put into cargo and passenger service. The war and fear of the heavy, wooden lock gates, the maintenance of the stone works, constant flooding and above all continuous dredging of the waterways made it a heavy burden on the State. Therefore the entire Canal system and the improvement was leased to private enterprise.

On June 2, 1861, the newly formed company, "The Owners of Public Works," began operating the canals and the improvement. Seventeen years later this lease was broken and again the State was in the canal business. But not for long, at least not right away.

The U.S. Government realizing the great importance of the navigable river, took over the improvement. The State sold the property to the Federal Government. General H. F. Devol was the first steamboat to go down the river toll free. The U.S. Army Corps of Engineers undertook the necessary rebuilding, repairing and new construction projects on the river. The fruits of this expense and labor was...
KANSAS CANAL PROPOSED
WASHINGTON—In order to rebuild water stocks in the High Plains, the Corps of Engineers has proposed tapping the Missouri River and pumping water uphill across Kansas in a $10-$100 billion, 295-mile canal.

The waterway, 30 feet deep and 180 feet wide, would cut a diagonal swath from St. Joseph, Mo., to reservoirs in western Kansas and western Texas.

Along the waterway, the Corps envisions 28 pumping stations and three hydroelectric plants.

The Kansas route is one alternative in a controversial proposal to transfer water from one state to another and replenish various degrees of water shortages in Kansas, Oklahoma, Texas, New Mexico, Nebraska and Colorado.

(Submitted by Florence Hahn from Topeka Capital-Journal)

C. & D. CANAL — 1851

"A new canal feeder which is in progress of construction at Chesapeake City, at a cost of about $50,000, will, the Civil War started, be in operation in about a month. It is intended for lifting the Chesapeake and Delaware Canal, and consists of a large wheel, 36 feet high, driven by steam. The water is raised at its circumference and escapes through the shaft, and the quantity may be sufficient to keep the canal at good running height during the driest season."

(Courtesy Edith McVey from the Cleveland Herald, 6 Aug. 1861, p.2.)

LATEST MINDERMAN "ORIGINAL"

This is the latest canal painting done by Earl Minderman of Bethesda, Md., showing Absar Cloud House on the Chesapeake and Ohio Canal.

In 1837, long before the C & O Canal was started (1828), a settler by the name of Absar Cloud assembled fifteen stone masons and other artisans and had them fashion this stately house overlooking the Patuxent River about three miles west of Washington.

Cloud and his family lived in the house until his death in 1872, using the basement (seen in this view from the Canal and River side on the ground floor) for the storage of grain from his nearby mill. Since Cloud's death, the house has had various occupants and has suffered from storms, floods and aging, but it has withstood them all to claim the title of the oldest structure on the entire Canal.

The Park Service now uses the ground floor as a Visitor Center with informational materials, services and facilities.

The upper two floors (the main entrance is on the opposite or Canal Road side) are used as the headquarters of Washington Chapter No. 3 of the Colonial Dames of America.

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George Wills (standing) was the lecturer at the Friday evening session, October 23rd, Lebanon County Historical Society auditorium.

The Fall Tour of the Pennsylvania Canal Society, October 24th, along the western section of the Union Canal, and the Pine Grove Feeder, was enjoyed by many busloads of canal buffs from the Pennsylvania and New York State area, as well as another bus filled with members of the Canal Society of New Jersey, which caught up with us Saturday morning.

The Tour was preceded Friday evening by a meeting at the Lebanon County Historical Society, during which George Wills showed Union Canal slides, and early arrivals enjoyed the many displays at the new LCCHS Museum. The Committee included Earl Lieby, George Wills, Miss. Frederick Humphrey and Bill Freibergen.

Bill Moss, President of the Canal Society of New Jersey addresses members of PCS and CSNJ during the Saturday evening banquet, at the Treadway Inn, Lebanon.

On Saturday approximately 125 people participated in the guided bus-tour, which began at the Union Canal Tunnel and continued westward, including an inspection of the old brick-side feeder (which conveyed water to the summit level of the canal from the old Waterworks on the Susquehanna), a visit to a restored 18th Century farmhouse along the canal, lunch at Camp Disey, and a trip along the Feeder Canal, north to Pine Grove. Much of the latter area will shortly be converted to a State Park, with a dam for an artificial lake, which will hide some of the Feeder Canal Locks and piers. Rules of the highest lift locks on the entire Union Canal system are located in this area.

Saturday evening the entire group returned to the Treadway Inn where they enjoyed a banquet and lecture by Richard Pawling, author of "A Historical Review, Susquehanna State Park." Mr. Pawling's lecture dealt with the history of the entire Union Canal System, 1792 - 1955.

John Millar, PCS President opens the Saturday evening meeting. To his right are Denver Welton, PCS Bulletin Editor, Earl Heydingter, PCS treasurer, and left, the speaker Richard Pawling and Mrs. Pawling.

WABASH AND ERIE CANAL RESTORATION

"The Carroll County Wabash and Erie Canal, Inc. is alive, well and growing. A non-profit corporation established in 1974 with the purpose of working toward restoration of part of the old Wabash and Erie Canal lying within the city of Delphi (Ind.) and part of Dear Creek Township, the association has embarked upon a fund-raising program with hopes of success in their ultimate goal of a large recreational area along nearly a mile of the old canal bed." (INDIANA WATERWAYS, October 1981) Officials of the corporation are: Dennis McDougal, President; G. Jerry Boone, Vice President; David Harms, Secretary; and Joseph Peterson, Treasurer. Mailing address: P.O. Box 285, Delphi, Indiana 46923.
Vacations used to be much more fun; possibly because they were more trouble, and certainly because they were much, much different from our dull doings in the old today. Man will arise from his easy chair in front of the tube, turn it off, go to his car in the attached garage, climb in and drive a few hours to his lakeside cottage. Here he will spend the rest of the vacation, primarily on the outside of the house. This continues on the same channel. This is now called a vacation.

It was 1912, two years before World War I, that I took the trip to Lake Huron, an absolutely fabulous, one of the highlights of my life. Without electricity, without telephones, with cameras, ice water, and trout and bass asking to be caught. But getting there, from Louisville, Kentucky, where the train was available, and little are more than half the fun. It took a good twenty-four hour day to get to Toronto, changing trains, and stations, etc., of Cleveland and Buffalo. From Toronto we took a sleeper northward for the overnight run to the little town of Beds, where we arrived shortly after sunup. At this point the Magatannan, a river, rose out from the railroad and there, too, was the town of Beds, and not a lot of it to speak of. We arrived, and I was busy checking out the pilot's house, which was a small, white building, and a little steamboat, by name "Jumlin," a lazy plume of smoke and steam rising from the top stack. Her foredeck was open to the pilot's house, with a carpeted second deck atop this, and with the lower deck here enclosed to the rounded fantail. As I recall, she seemed huge, but in all probability was on the order of fifty feet overall by maybe eighteen foot beam. A small boat must be about the boat house was aboard with flags and festoons, but the most distinguishing feature of the boat was an enormous funnelless, side-mounted boiler, tipped with a massive, gilded crow's nest. Surely a ship capable of any journey in and out of the harbor. This was to be our ship for the fifteen miles or so into Lake Huron. This was to be our means of transport; it had to be, as there were no roads. No roads at all.

The train parted on, leaving us and our luggage and a number of other vacations on the wharf, where there were much hustle and to do getting everything and everybody aboard. Finally, with a great ear-splitting blast of her whistle, the lines were cut off, and with much tinkling of engine room bells she moved cautiously into the stream.

The Magnatannan River was not very wide, but there seemed to be plenty of water, and we were fascinated to watch the sail on the water's edge. We were well joined to the right side, and then flattened toward the shore of the river, and then turned and turned and turned and turned the course of the Canadian forest. At an hour or so, the ship's engines stopped and we went back to the upper deck to investigate. My father explained that this was a lock, which would lower our vessel so that it could proceed on the stream below, and continue our journey. We were tied up to a well-furnished wall, and ahead of us was the lock basin, with the gates open. With much jingling of bells, the captain hitched the ship to the basin, and the crane made her fast. Then, with great dignity, the captain set ashore, at the same time informing all the male passengers, including me, aged eight, to discard their shoes and haul on the great balance beams to close the upper gates.

While we were at work, the captain mounted the gate and deftly twisted the sluice-gate wheel to close the valve tightly. The gates were sliding into place, and the lock was completely filled with water. The great balance beams were lifted, and the gate slid into place, and then the matealla, the mate, the mates in the little gate at the bow, called out, "One, two, three, gate up, gate up!"

The ship slowly descended until it had met the lower deck, maybe eight or ten feet below. To me this was an astounding feat, and I proudly joined the other male passengers in waving open the lower gates, whereupon the captain caused "Jumlin" to move out to tie up along the lower pier while the passengers climbed down the wooden stairs to get back aboard.

After a short stretch of river we came out into a sparkling bit of water, a small lake called, as I remember, Long Lake. Here, a signal to the engineer caused "Jumlin's" gentle throb to quicken, and we glanced only through the wake, and stopped now and then at a pier to offload freight, or parcels, or mail. After two or three miles of Long Lake we went back into the river, twisting and turning with the quiet stream. At one point a whirling sound ahead, which was answered with a deafening blast from "Jumlin," and then there appeared around a bend another little steamer parked in widening of the stream provided for that purpose. There was much waving and shouting and bellowing as we passed, and there was a gentle churning of the engine as we continued in the twisting stream.

Finally, about four hours after leaving Beds Falls, we came to a village and another lock. This was Magnatannan, where the river spills over a steady rapids into Lake Huron. This time we had much longer at the upper pier while the boats were unloaded for the general store - post office, but finally, with a short blast of the whistle, and a jingle of bells, "Jumlin" moved on. Again the previous procedure was repeated, with the captain occluding at the sluices, and the passengers leaning heavily into the balance beams to close and open the gates. This time I had not done my dirty on the gates, as I wanted the third descending with the vessel, and a thrill it was.

With one more scream from the whistle we slid majestically out into the lower remaining stretch of the Magnatannan River into Lake Huron, at which point another jangle of bells caused "Jumlins" pulse to quicken. Fl Marc speed (possibly all of seven knots) now "Jumlin's" head into the little chop, sending shimmering spray both right and left as we plowed our way toward our destination, some four miles beyond, where we disembaried at a rambling inn in the piney wilderness of Canada. As the little steamer moved on, I had a moment of sadness at losing it, and then a thrill of excitement at the new. But then, several times each day "Jumlin" or her sister ships appeared plying the lake, and, presumably, the canal-river as a symbol of the life we lived, the door, the smoke, the "civilization" we had forsaken for a month. But those four weeks in the forest without roads, without electricity, without telephone, but with the little steamers passing, and sometimes stopping, were as happy as any I remember from my childhood.

William Davises, 840 Hillsboro Court, Muncie, FL 32086 wrote this piece for his two year old grandchildren's "part of a continuing series for them to dip and some of the very particular ideas which they have about how things were in the "Olden Days.""

NEW YORK CANAL MUSEUM

The Canal Museum at Syracuse, New York was on 26 October the 13th Anniversary of the Opening of the Erie Canal with an open house. Special events included the unveiling of their new Erie Lake Boat and the dedication of the Hopper Room in the Whigstock Building of the museum.

This 1793 drawing by Gilbert Imlay of a proposed canal to circumvent the rapids of the Ohio River between Louisville, Kentucky and Clarksville, Indiana was published in London as part of Imlay's "Topographical Description of the Western Territories of North America." Imlay was an American Army Officer and Deputy Surveyor for the Western Territory. The map remained a landmark to navigation until the building of the Louisville and Portland Canal, 1826-1831. (Courtesy "Antiques Magazine."
"GOOD NEWS & BAD NEWS" AT SALTSBURG

SALTSBURG CANAL PARK
SITE OF PA. MAIN LINE CANAL

The "Canal Days" sponsored by Historic Saltsburg at Saltsburg, Pennsylvania on the site of the Main Line Canal was a success in spite of heavy rains early in the morning of June 6. (Photo courtesy of George L. Core, Historic Saltsburg)

Saltzburg, Pa., Nov. 16, 1981 (AP) - A fire of suspicious origin Sunday swept an historic house in this tiny Indiana County community, stirring new fear about the wave of arson fires in the borough since January.

The vacant, 10th century house, the former home of the lockmaster of the old Pennsylvania Canal, was destroyed by flames, officials said. No estimate of the damage was immediately available.

Authorities were awaiting the results of a state fire marshal's probe to determine whether the blaze was deliberately set.

The 150-year-old house was on the National Register of Historic Places, according to Mayor-elect Gary Taylor. The local historical society had planned to renovate the two-story, wood frame structure.

CROSS FLORIDA BARGE CANAL

The Barge Canal is still operational for small craft, but limited as to the days and hours that locks will be available for traffic. The Buckman Lock near Peletee, Fla., will be in operation daily, from 8 a.m. to 5 p.m.

At Inglis, Florida, the Ingles Lock will be operational Saturday & Sunday ONLY by demand. If cruising in Lake Rousseau, care should be used extensively due to water level and depth. The Lake continues for the next 10-15 miles to Dunnellon, where the Lake meets with the Withlacoochee River. This lock operates from 8 a.m. to 5 p.m.

If any cruising is to be made in the Oklawaha River area, due care should be used as to water level and debris.

CLARE SWISHER 1907 - 1981

We were saddened to learn of the passing, September 30, 1981, of Clare Swisher, Editor of the ERIE STORY MAGAZINE, Erie, Pa. Clare was an ardent canal buff and historian and had written many articles about the Erie Extension Canal System in his own publication, and others. In editorial and newspaper work for years, not to mention a tour of duty as a TV newscaster and the hosting of his own TV series entitled the "Erie Story," Clare in 1983 extended the latter enterprise into his own local publication of the same name serving industry and business in Erie. The Erie Story" now continues under the editorship of Maurice Shoup. Clare had written a book entitled "Raymond on the Heart," his final, major editorial effort, which will be in print shortly. It is a salute to lifestyle in the country in a less complex age. We have already extended our sympathy to McHenry, his partner and helmsman of many years. We will sorely miss him, as a long-time personal friend.

Bill Shank

The DPM DPhiX, which we have sunk
BY Matthew Hogan

The depths to which we have sunk.

After two years of work the study of sunken canalboats is ending. The project included underwater archaeology and the review and organization of relevant historical materials. The goals were to provide access to the materials, especially those located at the museum, and to stimulate the documentation of canalboat remains.

Three publications were planned to disseminate our findings. The first was a crew's manual on canalboat construction; it has been published. The second describes the scope and content of relevant historical materials. The third, a canalboat primer, gives a brief view of the canalboat building industry using some of the project's findings.

Underwater archaeology has the potential to answer many of the questions unanswered by traditional historical research. The archaeological work conducted by Patti Hynes and the Underwater Archaeology Association diverts brought to light new facts about the physical structure of canalboats, information not available elsewhere. Discoveries come from the careful measuring and photographing of the sunken boats, some of which contradict previous theories on canalboat design and construction. Thus, with these discoveries, some uncertainties about canalboats have been altered or new evidences.

The sheer volume of information held by the state archives, historical associations, private owners, and the museum itself, demands a renewed effort to analyze and interpret these documents. It is time for canal historians to get together, share their knowledge, and in reviewing the findings of this and other similar projects. Although the project has formally ended, the work will continue through independent groups and individuals to expand knowledge and understanding of the canalboat building industry.


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For passing boats from one level of a canal to another, locks have been and are far more generally used than any other contrivance. The ordinary canal lock was, in all probability, derived from the old-fashioned "staunch", which still exists on some of the rivers in this country, which have but a slight fall, and it is frequently found in the East. A "staunch" is usually constructed by placing a wall on each side of the river, so as to prevent its flowing away, and between these side walls is placed a transverse sill protected on its upper side by the necessary sheeting and pilings. Across one of the channels a beam is placed immediately over the sill, whilst on the side wall of the other channel is fixed an apron, upon which turns a beam which, when placed across the channel, bears against a stop fixed to the central wall, and is immediately over the sill. When it is required to raise the water level of the channel above the staunch, the planks are placed so that they extend from the sill to the fixed and movable beams above mentioned, bearing, of course, against their supports. In this way a sort of sluice gate is formed, which checks the flow of the water through the staunch. The manner of working this arrangement is as follows: Suppose a vessel to be going up stream, the planks and beams would be removed from the one channel of the staunch and the vessel passed through it; the planks and beams would then be replaced, and the level of the water above the staunch thereby so raised that the vessel would be able to proceed up the river to the next staunch, and so on. It will be seen by the above description that the staunches form a series of rude locks, of which the length is equal to the distance between two successive staunches. The waste of water incurred by the use of this system is very great; it may however be considerably reduced in some cases by keeping each staunch closed except just at the time when a vessel is to pass through it, the vessel being in this case supposed to be equipped with sufficient tractive power to enable it to pass up through the channel of the staunch against the descending current without much loss of time. In such cases the ascent of the vessel from the lower to the higher level would in reality be accomplished by the tractive force applied to it, dragging it up an inclined plane of the water, the staunch merely serving the purpose of reducing the length of the inclined plane to the length of its own channels, at the same time, however, staunches are only adapted for working slight inequalities of level, such, for instance, as 12 or 15 inches for greater rises or falls, other arrangements must be adopted.

The arrangement of an ordinary canal lock is so well known that any description of it will be quite unnecessary. It can be worked with the least expenditure of water if it is used for an ascending and descending boat alternately, the full lock left by the ascending boat being available for the descending boat, and vice versa. Unfortunately, however, the demands of traffic seldom allow of such an arrangement being regularly carried out, and the consequence is that the quantity of water which would serve to pass two boats, one up and the other down, is expended in passing one.

Generally speaking, it may be assumed that in ordinary locks, of about 6 ft. or 6 ft. fall, the consumption of water will amount to about three times the weight of the merchandise worked through them. To reduce this expenditure of water, side ponds, or reservoirs, have in many cases been applied, and double locks have been also constructed with the same object. In each of these systems the intention is to economise the water in a manner that the water which is to be emptied into the adjoining lock or side reservoir, the water to stand in said reservoir, for partially refilling the lock, but without drawing upon the upper level of the canal.

In July 1983, the Broward County (Florida) Historical Commission in partnership with the Parks and Recreation Division dedicated Lock Number One at the Broward Memorial Boat Lock Park. Lock No. 1 was first completed in August 1982 as part of an effort to utilize the Everglades. The lock will be completely restored as shown at the artist sketch above. (Bollie, '78) and hand-operated as in original group for demonstration purposes. In addition, the lock-keeper's house will be restored and outfitted as a Florida Canals and Water Management Museum. Access to the park will be provided from State Road #84 and the Port Everglades Expressway (I-75). (Alden Gould, Director, ACS)
ILLINOIS' HENNEPIN CANAL MAY BE RESTORED
by Joe Taylor

Based on public support shown at an Oct. 19 meeting, the Illinois Department of Conservation (DOC) is expected to support funding for the total rehabilitation of the Hennepin Canal.

Over 300 people turned out for the meeting arranged by David Kinney, DOC Director, to determine what course the department should take in seeking future funding and redevelopment of the canal.

One speaker asked all those who supported total rehabilitation of the Hennepin to stand and the overwhelming majority responded. The estimated price tag of total rehabilitation is $23 million.

The other two management options included total decommissioning of the canal (i.e., draining) at a cost of $10 million and major rehabilitation/ moderate decommissioning at a cost of $19 million.

Under the option approved by the public, the entire Hennepin Canal, which stretches across the eastern half of Illinois from Bureau Junction to Rock Island, would be rehabilitated as a recreational waterway. The canal would be managed as a land and water-based state trail with an optimal variety of outdoor recreation. Those activities would include hiking, fishing, boating, canoeing, camping, and picknicking.

Of significance to American Canal Society members is the DOC's plan to restore a four-mile section of the canal for its historical significance. The section would become an outdoor museum and would represent a slice of the great canal era. Locks, dams, buildings, and other canal features would be restored and heritage interpretation would result.

The Hennepin Canal may be the best preserved, nearest operable, and most complete representative of the later canal boat era left in the nation. Constructed between 1880 and 1907, the canal had been designed as a short cut from the Illinois and Michigan Canal (from Chicago to LaSalle) to the Mississippi River.

I. & M. CANAL LOCK "FACE LIFTING"

This unsightly, circa 1926 non-operating canal era concrete bridge and approach walls mar the aesthetic and historical view of Lock 14 of the Illinois and Michigan Canal at Lockport, Illinois. Fortunately, it now appears that funds and permission have been received to remove the bridge and to relocate the road to a less conspicuous location. Other plans underway under Phase One include the construction of a bofferdam, the de-watering of the lock, and the removal of the sediment inside the lock under the supervision of Illinois Department of Conservation archaeologists. The Second Phase will include restoration of the lock walls, the hardware, and the lock gates of Lock 14.

Earlier this year, the National Park Service held a series of public meetings concerning the proposal to create the Illinois and Michigan Canal Heritage Corridor. Under the proposed plan the Park Service would stabilize other canal structures of the Illinois and Michigan Canal and would renovate portions of it. On 29 October Senator Percy of Illinois received the support of U. S. Interior Secretary Watt.

BILLY EITCHBERGER - INTERNATIONAL "WORKING-CANAL" PHOTOGRAPHER


Here is one of Bill's photos of a large, commercial vessel passing the upper gates of the Eisenhower Lock on the St. Lawrence Seaway, near Massena, New York.

William F. Eitchberger of Lebanon, Pa., an ordaint canal buff, is particularly interested in visiting and photographing present-day inland waterways in North America. He has visited many of the major canals, locks and waterways from the Pacific Coast to the Maritime Provinces in Eastern Canada. Here are a few samples of some of the dramatic photos he has taken. We will be publishing more in future issues - the Soo Locks, the Welland Canal, and other inland waterways of interest to ACS members.

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