MIDDLESEX CANAL RESTORATION

New canal bridge, built by Massachusetts Dept. of Public Works for route #125. Towpath will be at left.


The starting gun is fired, to open the Middlesex Canal restoration dedication, October 19th.

View of the restored section of canal from the new bridge. Much work still to be done.

This was the day — one long awaited along the Old Middlesex Canal (1753–1853). The crowd had assembled. A bright sun lighted and warmed the narrow ribbon of water and the even canal banks, newly puddled two inches deep in clay (as was prescribed by Loammi Baldwin in the 1760's for specifications on the canal banks).

The Middlesex Canal was honored in a public ceremony in Wilmington, Massachusetts, dedicating a 1227' section of canal being restored and the completion of the new bridge over the canal, necessitated by the re-routing of Route #129.

The opening address was made by Lt. Col. Wilbar M. Hoxie, President of the Middlesex Canal Association and a Director of the American Canal Society. Col. Hoxie introduced several guests, all of whom expressed opinions as to the historical and recreational value of the restoration, hoping that further sections of the 27 1/2 mile canal between Boston and Lowell would be restored.

The main feature of the program was the unveiling of the Canal Arch (of the new bridge). At the salute fired by the Lexington Minute Men at the cannon, the arch was unveiled and down the canal came a miniature canal barge pulled by a mounted horse — a thing hard to believe in 1974.

A new book was released as a part of the celebration — The Old Middlesex Canal by Mary Stetson Clarke. The Middlesex Canal Association was responsible for much of the impetus behind the restoration. Membership in the association is available at $5 per year, which includes a subscription to Towpath Topics, the Middlesex Canal Association.

(From information submitted from local newspapers by Col. Hoxie using photos taken by ACS Director Alden Gould.)
**American Canals**

**BULLETIN OF THE AMERICAN CANAL SOCIETY**

AMERICAN CANALS is issued quarterly by the American Canal Society, with headquarters at Lockhouse #5, Chesapeake and Ohio Canal, P.O. Box 639, Glen Echo, Maryland 20812. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

Annual subscription to AMERICAN CANALS is $6.00. Individual copies may be purchased for $1.00. ACS President and Editor-in-Chief is Capt. Thomas F. Hude, USN (Ret.), Box 639, Glen Echo, Md. 20812. ACS Vice President, Secretary and Production Editor is William S. Shank, P.E., 500 Railroad Road, York, Pa. 17403. ACS Vice President, Treasurer, Associate Editor and Chairman, Canal Projects Committee is Dr. William E. Truitt III, 39 West Spring Garden Ave., York, Pa. 17403. ACS President, Canal Committee is AC Director, Peter J. Stott, Holmes Road, Mount Kisco, N.Y. 10549. Chairman, Canal Bibliography Committee is AC Director, Harry L. Rinker, 39 West Spring Garden Ave., York, Pa. 17403. Chairman, Canal Boat Committee is Carroll M. Gantzi, 7100 Oxford Road, Baltimore, Md. 21212.

**Indiana Central Canal Park Plans**

Shown here is the section of the Indiana Central Canal (also known as the Indianapolis Water Company Canal) in downtown Indianapolis, being considered for a canal park.

Indianapolis seems to be on its way toward an excellent canal park through the city even though they had to reject the initial engineering study because of the high cost and because the plan would have considerably altered the nature of the historic canal. The study explored the development of the Indiana Central Canal in a way similar to the highly successful San Antonio River Walkway in San Antonio, Texas, called the "Venice of America." Unfortunately, just the lower section of the canal through downtown Indianapolis would have cost $20 million, the recommendation being to lower that part of the canal about 16 feet to provide a pedestrian and bicycle path along the river. Now, this ambitious and costly project is being revised, still with the intention of completion by the magical date of July 4, 1975. The Greater Indianapolis Progress Committee and its Waterways Task Force chaired by Mr. James Doss, are to be commended for persevering in their task to put the Indiana Central Canal to good use in the revitalization of Indianapolis. (From information supplied by the Greater Indianapolis Progress Committee).

**Canal Boat Committee**

Though there have been several reconstructions of canal boats in the United States and others in the offering, there has not been one single place where one could obtain information on canal boat plans, models, restorations, photos, historical information about canal boats, etc. This lack has been more apparent as we received more and more requests from those requiring assistance. To fill this gap, President Tom Hahn appointed Carroll M. Gantzi, President FIDS, as Chairman of a Canal Boat Committee. Carroll has had much experience in the field of canal design and is known to many canal enthusiasts as the designer and builder of St. Helena II at Canal Fulton, Ohio on the Ohio & Erie Canal. His address is 7100 Oxford Road, Baltimore, Md. 21212. Other committee members at this time are: Charles Deck of Fremansburg, PA; Gale Hero, of Canal Fulton, OH; and John Lamb of Lockport, IL. The purpose of the committee is to collect all available sources and information to aid community efforts in reconstructing authentic canal boats and for the use of canal historians and canal enthusiasts. As a start, the committee is preparing a technical report on the available material. Anyone having information on canal boat plans, photos, diagrams, historical references, boat builders, boat nose or anything pertaining to the building and use of canal craft is requested to provide this information to Carroll Gantzi.

**PART OF OHIO & ERIE CANAL NOW A NATIONAL PARK**

On 28 December, President Ford signed the bill creating Ohio's first national park, including a 30 mile section of the Ohio and Erie Canal. Under the bill, the federal government will spend $35 million in the next six years to preserve the natural beauty and historic value of the Cuyahoga Valley between Cleveland and Akron. Officially designated the Cuyahoga Valley National Recreation Area, the park will be the third urban national park in the country. The others are in San Francisco and New York. "The establishment of this area provides a unique way for the preservation of thousands of acres of unspoiled land for the enjoyment of present and future generations," the President said. The next step is for Congress to appropriate $60,000,000 for planning and the first installment of the $34,5 million authorized for land purchase and acquisition of scenic easements.

(From The Cleveland Plain Dealer, contributed by Terry Woods, ACS)

**CANAL GUIDE CORRECTION FOR CALIFORNIA'S GOLD COUNTRY**

It turns out that the Gas Co. does not have enough maps of the Tuolumne water system to send out on request, and that local residents don't want to have their drinking water supply advertised too much. Therefore we hope that ACS members interested in the hydraulic potential of the gold country will concentrate on the miles of dry canals in the region, and their future, while keeping a protective eye on the still used ones. (Bill Trow)

(Submitted by Bob Fearburg, from the October 1975 Journal of Commerce.)
CANADIAN CANALS - NOW USED FOR RECREATION

(Third of a three part article)

The Montreal, Ottawa and Kingston water route, was originally built on the recommendation of the Duke of Wellington to provide safer lines of communication between Montreal and the new settlements on Lake Ontario in the event of resumption of war with the United States. Happily, that purpose never materialized and instead the route became of considerable commercial usefulness for many years. With development of highway competition on a motorized basis, the commercial usefulness of the canals waned. However, the whole route, particularly between Ottawa and Kingston, is now, in important part, from a tourist and recreational standpoint.

Starting from Lake St. Louis on the Seaway above Montreal, this waterway passes into the Ottawa River at the western tip of the Island of Montreal, by-passing the Ste. Anne Rapids by means of the one-lock Ste. Anne Canal. This lock overcomes a three-foot rise in the river and provides nine feet of water at the sills. The original canal to overcome these rapids was built in the western channel at Vaudreuil in 1816 by the St. Andrew Steam Forwarding Co., providing a 5-foot depth. In the years 1840 to 1843 the first Ste. Anne Canal was built in the eastern channel by the Board of Works to provide 6-foot depth. This was enlarged to its present 9 feet in 1866.

The Royal Staff Corps was responsible for building the first Carillon Canal in the years 1825-33 and the first Grenville Canal in 1832-33. Both these canals provided 6-foot depth and were enlarged to 9 feet by 1882. The first name canal overcame the Carillon Rapids at the head of Lake of Two Mountains and a dam which raises the water level of the river, making it navigable to the foot of Long Sault Rapids which were overcome by the Grenville Canal.

It is claimed that it was near the site of the present Carillon Canal that, in 1660, Dollard des Ormeaux and his companions perished in their heroic and successful attempt to turn back some 700 Iroquois bent on attacking the young settlement of Montreal.

A new power development was built at Carillon by Quebec Hydro which necessitated remodeling the Ottawa Canal System. The present Carillon Canal, with one lock with a lift of 65 feet, replaces the old Carillon and Grenville Canals and was completed in 1963. The 123-mile long Rideau Canal, likewise built by the Royal Engineers, took six years to construct and was completed in 1832. Utilizing the Rideau and Champlain Rivers and a chain of scenic lakes, the Rideau Canal forms one connected waterway from the Ottawa River to Lake Ontario and has not been materially changed in the 134 years of its existence. Between 30% and 46% of the old stonework still remains at the locks and dams. Ascending the Rideau Canal, the rise from the Ottawa River to the summit level on Upper Rideau Lakes is 277 feet, requiring a total of 33 locks. From the summit level to Kingston, the descent is 162 feet for a distance of 40 miles and by means of 14 locks.

The Rideau Canal adds greatly to the natural beauty of the Federal Capital of Canada. It commences in a narrow natural valley flanking the Parliament Buildings at Ottawa where eight locks in flight rise from the Ottawa River. Thence it passes through the heart of the city between walls flanked by boulevardaded driveways and past the wide expanses of the Dominion Experimental Farm. At the other end of this scenic canal lies the City of Kingston where the canal drops into the natural channel of the Ganaraska River and into Lake Ontario.

The Trent Canal, extending 240 miles from Lake Ontario to the Georgian Bay, follows in the main the historic Iroquois Trail, the pathway used by the Iroquois in their deadly descent on the Hurons. It was the route followed by Champlain when he discovered Lake Ontario in 1615 and it was also the route suggested by the Duke of Wellington to provide water transportation to the Upper Lakes. From Lake Ontario to the summit level at Balsam Lake, the rise of water is 998 feet while the descent to Georgian Bay is 202 feet.

The canal began in a small way in 1833 with the construction of a few locks in order to connect the small pioneer settlements along the banks and shores of rivers and lakes. Good roads and motor traffic made inroads in the freight-carrying traffic during the 1920's and 1930's but they have also brought about a very extensive development of the route as a holiday and tourist playground in which the canal facilities play no inconsiderable part.

One of the features of this waterway is the world's highest hydraulic lift lock, providing a vertical rise of 65 feet in about seven minutes. Two chambers, 175 feet long and 33 feet wide, are balanced on two huge plungers working in deep press wells. In such a manner that when one chamber is up and opening into the upper reach of the canal, the other is down and opposite the lower reach. Other features of this waterway are the two marine railways overcoming water levels of 47 feet and 58 feet respectively at Smith Rapids and Big Chute on the Severn River between Lake Simcoe and Georgian Bay.

The Richelieu River, Lake Champlain and Hudson River route between Montreal and New York follows the war path of the early Iroquois and of the early whites. Still standing are the well preserved walls and some of the buildings of Fort Chamby, built in those early days of warfare. During the French regime "porlage" roads were built through the dense forests to circumnavigate the rapids on the Richelieu.

The Champlain Canal was built to overcome the long series of rapids which extend from the Champlain Basin to St. Johns. The Richelieu River route between Montreal and New York follows the war path of the early Iroquois and of the early whites. Still standing are the well preserved walls and some of the buildings of Fort Chamby, built in those early days of warfare. During the French regime "porlage" roads were built through the dense forests to circumnavigate the rapids on the Richelieu.

The Champlain Canal was built to overcome the long series of rapids which extend from the Champlain Basin to St. Johns. The St. Ourt Canal overcomes a retaining dam which provides 7-foot navigation to the lower entrance of Champlain Canal. Water borne traffic on this route is limited by the dimensions of the Champlain Canal locks to vessels no greater than 119 feet long and 22½ feet wide. The depth of water is 5 feet 6 inches at the sills. Lake Champlain provides deep water navigation to the northern terminus of the Champlain Canal in the United States with its 12-foot depth and which connects with the Hudson River and at sea level Troy, N.Y., the eastern terminus of the Erie Canal, and thence by deep water to New York City.

Canada possesses two salt water canals on the Atlantic Coast. The St. Peters Canal, built between 1854 and 1869, is 13-foot draught and later deepened to 18 feet, connects St. Peters Bay on the south side of Cape Breton with Bras d'Or Lakes, north of and which is open to the sea. This route is used chiefly by vessels to and from Sydney, N.S., seeking a more protected passage than is afforded by the open sea. It proved particularly valuable during World War II.

The other canal in the Maritime, pierces the Canoe Causeway which was built in 1955 to provide highway and railway pas-

(Concluded on Page Four)
Old Welland Canal at Port Maitland

The summit of the Welland Canal as originally constructed was higher than Lake Erie, according to Harlen Hatcher's "Great Lakes Reader." To supply the summit, The Grand River was dammed at Dunnville and a feeder canal ran from there to the summit. Access from the feeder canal to Lake Erie was made by a short branch to Port Maitland with a lock to the lake level.

According to a Dunnville historian, the lock was built in 1829. The first commercial barges passed through the feeder in 1830 bound for Hamilton loaded with flour. The last boat on the feeder carried a load of stone in 1892. The lock walls are built of dazzling white limestone and are in excellent condition, with some of the iron work still in place.

Canadian Canals

(Concluded from Page Three)

The Canals between Cape Breton Island and the mainland of Nova Scotia. The Canico Canal provides navigation for vessels with a draught not greater than 28 feet and a length not greater than 715 feet. The canal is mainly used by coastwise shipping and by fishing vessels.

Three other canals in Canada were built in the last century by the Department of Public Works and are operated by them in connection with other works. One of these cuts through a piece of low land which partly separates Burlington Bay from Lake Ontario and enables shipping to reach the Port of Hamilton. This canal was complete in 1832 and deepened in 1850.

The Department of Public Works also maintains and operates a dam and lock on the Red River at St. Andrews, near Selkirk, Manitoba, by means of which vessels from Lake Winnipeg are enabled to proceed up to Red River as far as Fargo, North Dakota, in the United States. This department also operates and maintains a lock at Pocquogue, Quebec, which connects two stretches of navigation on the Lievre River. This is mainly used for lumbering purposes.

The Ontario Department of Public Works which built parts of the Trent Canal and which operated them before their being taken into the Trent system, also built and still operates three locks which are independent of the Trent system. Two of these are for tourist purposes, one at Port Carling on the Muskoka Lakes and the other at Huntsville. The third lock is on the Magnetawan River and is for the assistance of lumbering operations in the district. There is also a lock in the Arrow Dam in British Columbia.

(Thanks to the Canadian Division of Transport) (Port One was in the August 28 and Port Two in the August 74 issue of American Canals.

CHRONOLOGY OF HISTORIC CANADIAN CANALS

By William Drummond Naffel, ACS

Baillie-Grohman Canal — Constructed 1887-89, abandoned 1902.

Champlain Canal — Constructed 1831, suspended 1835, completed 1840-43.

Chats Canal — Constructed 1868, abandoned, unfinished 1868.

Chignecto Marine Railway — Constructed 1868, abandoned, unfinished 1892.

Culbute Lock — Constructed 1772-74, abandoned 1791.

Desjardins Canal — Constructed 1868-73, abandoned 1874.

Port Francis Lock — Constructed 1875, abandoned, unfinished 1879.


Murray Canal — Constructed 1885-89.

Old Beauharnois Canal — Constructed 1842-45, enlarged 1870's, abandoned 1899, canal used as a feeder for Canadian Light and Power Company from 1908-49.


Rideau Canal — Constructed 1826-37, first Tay Branch constructed 1832-34 and rebuilt 1853-1859 on new alignment.

St. Andrews Lock — Constructed 1874.

St. Francis River Lock — Little is known of this 19th century canal.

St. Ours Lock — Constructed 1840-42, new lock constructed 1930-33.

St. Peters Canal — Constructed 1854-55, enlarged 1879-80, 1912-17.

Shubenacadie Canal — Constructed 1827, completed 1862, abandoned by 1870's.


(William Naffel, 306 Holwood Ave., Ottawa, Ontario K8R 2R3, Canada is the Canadian Director of the American Canals Society. He would appreciate hearing from anyone having information on the canals listed above. A map of the History of Canals in Canada is available from: ACS Treasurer, Dr. Bill Trout, 1932 Circo Rebels Drive, Duarte, CA 91010 for $25 plus 10c mailing, 35¢ for mailing).
THE DELAWARE & SUSQUEHANNA CANAL
The canal that never got off the drawing boards

by MANVILLE B. WAKEFIELD

The 108-mile Delaware and Hudson Canal was under construction in October and November, 1826 when a survey was made and maps drawn for the virtually unknown 83-mile Delaware and Susquehanna Canal.

The route, as delineated on the plans recently uncovered in the dusty archives of the Delaware and Hudson Railway Company in Albany, commenced just above the point where the Delaware and Hudson Canal crossed the Delaware River at Minisink Ford for the Lackawaxen River run to Honesdale, Pennsylvania. The waterway followed the New York shore of the Delaware River, the West Branch of the Delaware, the Oquaga Creek, over the drainage divide between the Delaware and Susquehanna Rivers down the valley of Johnson's Brook to Beltsburg on the Susquehanna River.

This obscure canal project would indeed have been one of significant engineering merit were it not for the fact that the route it covered was to the north of Lock #28 at mile 49 lifted 11 feet and Lock #39 had a minimal lift of 6 feet.

Most unusual was the use of five inclined planes for the elevation of the boats over the 1479-foot watershed between the Delaware and Susquehanna Rivers.

Perhaps most unique was the inclusion of a 10-mile tunnel that carried the boats under the watershed ridge at an elevation of 1862 feet, its approaches through deep rock cuts.

These early 19th Century survey maps reveal some interesting geographical facts.

For example, at today's lonely Tusten Stone Arch bridge crossing of the Ten Mile River a sizeable community existed when the surveyors and their linesmen went through. Known as Ten Mile Village it consisted of the Ferguson homestead, barns, a store, saw mill, grist mill, church, and a pottery on a dead end road running out along the canal.

At Narrowsburg, location of Lock #11, the canal was surveyed through a deep cut in about the same location as the one used today by the tracks of the Erie-Lackawanna.

The village of Cochecton marking the western terminus of the Newburgh-Cochecton Turnpike also boasted the only bridge crossing of the Delaware. The sharp bend of the canal at this point was punctuated by Lock #14. The intersection of the canal and the earliest of Sullivan's turnpikes would most certainly have made Cochecton a canal town of considerable stature.

Teddie Callison was marked by Joseph Craft's homestead mill, canal #16 and, of course, the confluence of "Kalahoon" Creek with the Delaware, nothing more.

Upstream from Callison "signs of coal" was noted on the Pennsylvania side as was reference near locks 18 and 19 of a Susquehannock Mill in circumstances.

At Hancock, known then as Sheheeking Village, the canal crossed the East Branch of the Delaware via slack water navigation.

le; still water in the river created by a small dam, and thence through locks 30, 31, and 32, each looking in very close proximity to one another as lock 16, 17, 18, 19, and 19 at High Falls on the Delaware and Hudson Canal. The canal then proceeded through a rather deep cut through what today would be the heart of Hancock.

The waterway then proceeded up the valley of the West Branch of the Delaware to Deposit where it passed through a guard lock for the sloch water crossing of the Delaware West Branch to follow Oquaga Creek to the first inclined plane. Lock numbering sequence was started anew at Deposit for the Oquaga section much as the Lackawaxen section of the Delaware and Hudson Canal started back at the digit "one" for the locks from the Delaware to Honesdale. The canals routing through Deposit parallels almost exactly the right-of-way of today's Erie-Lackawanna Railway.

The highest density of lockage occurred on the Oquaga section due to the increase of the gradient along the small meandering creek. In fact, within the first 6 miles there was a concentration of thirteen locks, a total of 130 feet vertical lift.

At Lock #17 the canal crossed Oquaga Creek on an aqueduct, then to pass through locks 18 and 19 before encountering the first inclined plane with a lift of 100 feet. These planes would doubtlessly have been patterned after the plans principle used on the Pennsylvania Main Line canal between Hollidaysburg and Johnstown, over the Appalachian Mountain ridge. Here the boats were pulled horizontally upon inclined rail cars and hoisted level to the top of the incline by a stationary engine at which point the canal boat was deposited back into the canal trunk.

On the Delaware and Susquehanna the boats moved out onto a "Summit Level." This lock free level which included a vital feeder stream from the Oquaga ended with the second plane with a lift of 85 feet. At the end of this plane the boats immediately entered a deep cut leading to the east portal of the mile long tunnel.

Tunnels on canals are not totally unheard of. One of the nation's earliest, the Union Canal in Pennsylvania had a 729 ft bore opened to traffic June 12, 1827 and the venerable Chesapeake and Ohio Canal had a 3,118 ft. tunnel built in the 1850's. Certainly had this mile long entry been built it undoubtedly would have put the town of Sanford in Broome County on the map of engineering marvels.

Emerging from the west portal and associated deep lock cut, the boats were lowered down three inclined planes of 80 ft, 130 ft, and 100 ft respectively to Beltsburg on the Susquehanna, here the river current was stilled by a dam below the confluence of the river and the canal.

There can be little doubt that the boats would then be towed north to Binghamton at which point the Chenango Canal would be oriented for the haul to the Mohawk Valley and the pioneer of them all, the Erie Canal.

Most assuredly this projected canal did not get past the imaginative managers of the Delaware and Hudson Canal Company. In fact so little is known about this waterway that it might have been a quietly executed periphery project of the Delaware and Hudson Canal founders. It was obvious that a connection of this type would open up the market heartland of New York State to the benefits of anthracite coal.

Who can prophesy what the fortunes of the Delaware and Hudson Canal Company? (Now in 1973 celebrating their Sesquicentennial, might have been had they not only tapped the markets of New York City, but also the Central and Western New York State markets.)

MANVILLE B. WAKEFIELD, Box 399, Grahamsville, N.Y. 12740. "Wake" to his many friends, the Historian, Sullivan County, N.Y. and author of COAL BOATS TO TIDELWATER.

AMERICAN CANALS — February, 1975

Page Five
FLASH LOCKS ON THE WILLIS'S RIVER

Sketch of a lock on the Willis's River as it may have been in early 1800's.

Much attention has been given Josiah While's ingenious "Bear Trap Lock" designed for coal boats descending the Lehigh Canal in the 1820's. However, nothing seems to have been written about more primitive locks of this type in the U.S., variously called flash locks, staunches, or water gates in England (See Flash Locks on English Waterways, Industrial Archaeology, August, 1968). These barricades in a dam or across a stream, and are normally closed to maintain the water level when opened the flood of water is used by boats ascending or descending. They are generally referred to as "locks" in the record so are confused with the more familiar pound locks which essentially consist of two flash locks with a boat-sized chamber or pond in between.

In Virginia, flash locks were in use on the Willis's River Navigation, beginning some time between 1790 and 1820, and were probably also used on other small rivers in the state. The sole description of a Willis's River flash lock comes from a Virginia Board of Public Works report in 1826, when a stream was being considered for similar "improvement": The Willis's River locks consisted of "lattices extending from both shores towards each other, leaving a passage for the passage of boats, which are either carried down by the rush of the current; or, if ascending, must be raised up against it, when the first impetuously has somewhat diminished. This mode of improvement suits only rivers which afford but a small body of water, such as can flow from a sluice that may be closed by a light gate. The scarcity of water in such streams requires that several should be held ready to rush at the same time through the sluices, during the temporary flood and swell produced by the water that had been accumulated while the gates were up. This system of navigation is evidently applicable only to a descending trade, and it seems to be the most expedient that can be accepted for the present on Buffalo Lake, which is well calculated for it, and where it promises to be as advantageous as it has proved on Willis's River.

These flash locks were maintained in a manner similar to the public roads, by the citizens of Cumberland County, for poling bateaux about 60 foot long and 6 feet wide, carrying tobacco, hogheads and other farm products downstream to market. It continued in use late into the last century. Some signs of one of the flash locks has been found, but they have not been studied. Surely Virginia was not the only state to have flash locks. Are there any records or signs of anywhere else?

UNUSUAL VIRGINIA CANAL LOCK FOUND

Archaeological work in the Salt and Gila Valleys in May and June, 1973, resulted in the discovery of a hidden irrigation canal that fed the historic irrigation system of the Saltbrush Project. This system, based on the modern distribution system of the Salt River Project today, was much more advanced than was thought earlier. Dr. Emil Haury, the original organizer of the irrigation work, was working on the project. The findings are extensive and the project is considered for similar "improvements". The Salt Project covers an area of 1,000 square miles of Salt River on the Superstition Highway corridor, revealing the secondary and tertiary canal system. The main canal is 12 miles wide, while the four lateral canals are 3 miles wide. Estimated main canal depth is 6' and secondary canal depth 3'-2'.

The Carterville Connection may sound like a slow moving version of the very moving movie. The recently "rediscovered" link between the James River and the Kanawha Canal in Virginia has been called one of the most unusual locks in a country because of its double chamber construction by its "discoverer", William E. Trout, a PhD geologist in Dubois, California. The lock, built in 1857, is still in excellent condition, located beside the James, a short distance below the historic Carterville Bridge. (Photo by Michael Bagken)

Work on the Carterville Connection began in August 1874 and was completed in October 1874. Five months later the James River & Kanawha Canal Company was informed, to its embarrassment, that the lock was too short for a canal boat. To rectify this "rare engineering mistake", the company spent $1,500 to lengthen the lock. When extending the walls of the lock chamber, the contractor constructed a new row of gate recesses, giving the lock three places for gates instead of the usual two. Hard work at the center of the gates was never used and the case was considered a failure. The lock remains as an example of the overgrowth of nature and mudslides of ravaging floods. (The Farmville Herald)
BEAN SHOALS CANAL

Three cheers to the state and county Bicentennial commissions in North Carolina, which are seeing to it that old canals are regaining their rightful place in society. One of these canals is at Bean Shoals in Pilot Mountain State Park, part of the Yadkin River Navigation. Here there was a canal two miles long, following the north bank of the Yadkin. Much of the canal itself, built between 1820 and 1825, has been covered by a railway bed, but what remains is most of the stone buttress wall between the canal and the river, originally up to 15 feet high, and almost a quarter of a mile long. This wall cost so much that the company ran out of money, and it is still not known if they ever completed the intended flight of three wooden locks at the inner end of the canal, or in fact if the canal was ever used at all. The canal played its part in the August 3-11 Yadkin River Extravaganza #1, intended to focus attention on the Yadkin River as an irreplaceable historical, recreational, and environmental resource. Contact the Yadkin River Association, c/o Northwest North Carolina Historical Association, Government Center, Winston-Salem, NC 27101.

(From information supplied by the North Carolina Bicentennial Commission.)

PHOTOS NEEDED

We urgently need photos (particularly historic ones) of every canal in North America. It would be very useful to have prints which we could keep or negatives from which we could make prints. Also needed is someone who has the ability to donate his time to making prints for the American Canal Society Library when we have the opportunity to borrow a print or a negative.

ON THE ERIE CANAL IN 1916

This picture was taken at Durhamville, N.Y. on the Erie Canal in 1918 of my wife before we were married, which was 1917 here in Brooklyn. She is standing on the dock alongside the Steam Canal Boat MASSAGA whom her father owned. There was a dry dock and boat place there. It was owned by W. Doran, (Submitted by Frank Baker, ACS).

RICHMOND BICENTENNIAL CANAL PARK

The city of Richmond is proceeding with the design and development of a Bicentennial Park on the historic James River and Kanawha Canal. The park is to be located at the Great Ship Lock at the downstream entry to the canal. With luck, the park could be open to the public by July 1975. The Great Ship Lock is operable and may some day have a canal boat ‘locking through’ it.

Virginia River Navigations

(The following are excerpts from letters written by ACS V.P. Dr. Bill Trout on behalf of ACS.)

Rivanna River Navigation—"The Rivanna is of special interest to me and the canal society because of the extremely well preserved locks and canals which are scattered along its length through Fluvanna County. In fact, the Rivanna River Navigation is the best preserved of all the canals and river navigations in Virginia, every lock being in almost perfect condition. Efforts are being made to use of the canals, called the Rivanna Connection, as the focus for a park and the canal is being written up for the National Register of Historic Places, to represent the whole navigation. Scenic River status for the Rivanna would nearly supplement and support this park project."

"The Rivanna is Thomas Jefferson's river. One of his early projects was to begin navigation improvements on the Rivanna. Now the river has returned to its natural state... but the stone locks are still there. I urge you to see that the Rivanna through Fluvanna County is declared a Scenic River while it is still ideally suited for such a role. The American Canal Society is willing to help in any way it can."

Staunton Scenic River Proposal—"The section of the Staunton under consideration for Scenic River Status between Long Island and Brockwell is not only scenic but unusually historic as well, with its own system of waterways and a thriving local history dating back to the early days of settlement. Efforts to improve navigation improvements were constructed about 1827 by the Rocknac Navigation Company, which encouraged local farmers to build and operate on the Staunton before Madison was incorporated. The old holds were reactivated in 1867 to maintain a link to Madison. This was an important chapter in the settlement of Virginia, and important people were involved."

Rappahannock River Navigation—"On behalf of the American Canal Society I would like to offer our assistance and encouragement in your study of the future of the Rappahannock River. This river is no longer threatened by the Salem Church Dam, but is now endangered by urban sprawl and development. Please act soon to assure its preservation as a scenic river or park. We would be glad to assist in the exploration and evaluation of the many locks and canals still remaining of the historic Rappahannock Navigation."
The Canada Post Office honored William Hamilton Merritt (1793-1862) "the father of Canadian transportation" on the 150th anniversary of the start of construction of his greatest project, the Welland Canal, with this stamp, issued on 29 November 1974. This "first-day" issue was sent to ACS with the compliments of Robert F. Legget, author of the "Rideau Canal", Ottawa.

**CANAL ARTICLES**


Two canal feature articles published in national magazines are worthy of reading and saving: One is "How They Built the Erie Canal!" in THE AMERICAN LEGION MAGAZINE, June 1974. Every member of the American Legion receives this magazine and would very likely share it with you; the other article is, "Exploring England's Canals" in the July 1974 issue of NATIONAL GEOGRAPHIC.

The Autumn 1974 issue of the Geocichon County Historical Society Magazine has two articles of interest to canalists: "Memories of the James River & Kanawha Canal" by John J. Houchins and "The Tuckahoe Creek Navigation" by Bill Trout. This issue is available at $2.00 from the Geochichon County Historical Society, Geochichon, VA 20106.

**MANVILLE B. WAKEFIELD**

Sullivan County (N.Y.) Historian 1924-1975

Just as we were going to press, we received (via Dorothy H. Sanderson) the shocking news that our good friend Manville Wakefield had died of a blood clot on the brain in Hamilton Avenue Hospital, Monticello, N.Y. on February 5th. "Wake" had written me last March to say that he was grateful to be alive after delicate "open heart" surgery on February 12, 1974. Apparently trouble recently developed in one of the heart valves, which caused him to re-enter the hospital about a week prior to his death.

"Wake" will be sorely missed by his many friends in the American Canal Society, the Delaware and Hudson Canal Historical Society, and many other historical and community organizations in which he was active. In his book, "Coal Boats to Tidewater" he combined his extremely gifted talents as an artist, with his equivalent talents as an historian and writer, to produce the finest documentary on any canal now extant, anywhere. Second only to "Coal Boats" is his excellent self-illustrated history of the New York, Ontario and Western Railroad, entitled "To the Mountains by Rail". We call your attention to this fine article on page 6 written by "Wake". It is typical of the careful research he has always done on any historical project.

Our heartfelt sympathy to his wife, Barbara, and three children — Andrew, Lisa and Deborah.

Bill Shank

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**CLASSIFIED ADVERTISEMENTS**

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**LEHIGH COAL AND NAVIGATION COMPANY COMMON STOCK CERTIFICATES**. Imprinted seals. Green or Orange. Excellent condition. $4.00.


**WATERWAYS WORLD**, International canal magazine, published in UK. 48 pages. Featuring:

- September: Thamos Bywater, Journey into the Thirties, Canals on the Calmer $1.00.
- October: Vive la Navigation (French Canals) Roundhouse, Caledon Cruise $1.00.
- December: Impressions of the Potomac, Lockhouse, Haddock Narrows $1.00.

**CHESAPEAKE & OHIO CANAL CALENDAR 1975**. Beautiful B & W photos by Dave & Marie Kelsey. $2.00.


**CANAL COIN (1795)**

1 1/4 diameter bronze. Commemorative Canal Coin. First history of canal era. Reverse side $1.75.


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AMERICAN CANALS — February, 1975