A SUMMER COOLER

This ice skating scene is on the Rideau Canal in Ottawa, Canada, the Capital City. The spire on the left is the legislative Building. The spire on the right is the Laurier Hotel. Between the Parliament Building and the hotel is the famous flight of eight locks that runs from the Rideau Canal to the Ottawa River. North of the bridge and to the right is the old train depot. In the summer time this area makes a fine ducking and tie-up for overnight camping. There is also a very good museum in the locks area. The City of Ottawa was once known as Bytown (After engineer John By). It is said that that Queen Victoria chose this Indian name over that of Col. John By's. (Rev. Wm. Morant, ACS)

TRANSPORTATION LIBRARIES DIRECTORY

The Special Libraries Association, Transportation Division, 225 Park Avenue South, New York, N.Y. 10003, has published a 390-page directory ($10.75 ppd) but the only canal libraries listed are the Canal Museum in Syracuse, and the Massachusetts Maritime Academy (Cape Cod Collection; see American Canals 17.9). There are also listed a number of libraries with some inland waterways interest but they are missing some good canal collections. Make sure your favorite canal library is listed in the next edition by asking them for a questionnaire.

PRESIDENT'S MESSAGE

Sales of our new book - BEST FROM AMERICAN CANALS - continue. Recently we have been receiving a number of orders and inquiries from the Great Lakes area - as a result of publicity given our book by marine publications there.

We welcome no LIFE MEMBERSHIP in ACS, Dr. Nathaniel H. Wooding of Halifax, Virginia. Our Life Membership fee now stands at twelve - two from Canada, one from England, and the balance from the USA. We encourage other members to follow the example of these special members, not only as an expression of confidence in the future of ACS, but as a hedge against future cost increases. (500.00 will put you on our permanent mailing list.)

Peter Scott, former Chairman of the ACS

Canal Index Committee, has now turned over to me his voluminous files, and I am studying them to determine how much additional work is necessary to complete the excellent job which he began eight years ago. Already I have heard from several of our members who wish to help complete this important work. No doubt we will want to publish the final product for the benefit of all ACS members, as well as individual canal societies, throughout North America.

Our Canal Calendar indicates that there are still many interesting events coming up during the balance of the Summer and early Fall. We encourage all canal societies to keep us informed of their activities - in advance! Best wishes to you all...

Bill Shank

"Soo Locks" Pass 20,000 Ships a Year

Bill Eichberger, of Lebanon, Pa., recently visited the "Soo Locks" at Sault Ste. Marie, Michigan. He sent us the above picture of the largest and newest of the five, parallel locks which raise or lower ocean-size vessels 23 feet of difference in level between Lakes Superior and Huron. The Poe Lock, named for Civil War Engineer-Officer, Colonel Orlando M. Poe, was constructed in 1866, with a width of 110 feet, a length of 1200 feet and a depth of 32 feet. The Soo Locks pass more freight tonnage than any other locking system in the World, with an average of 15,009 ships a year through the four American Locks and 5,000 a year through the Canadian Lock. Coal makes up the bulk of the westbound cargoes, with iron ore and grain making up much of the eastbound shipments. Some vessels carry as much as 60,000 tons of freight in a single cargo.
Knights Complete Third Trip on English Canals

Mr. and Mrs. Ernest Knight, of Raynwood, Maine, used the above photo of their crossing of the Pontcysyllte Aqueduct in England as their 1979 Christmas Card. They spent two weeks in May of 1979 (their third English canal trip) on the narrow boat “William Pitt,” which they hired from Premier at Acton Bridge. They traveled “up and down” on the Anderton Lift, to Chester on the Shropshire Union, to the Harecastle Tunnel, and to the Llangollen.

EDITOR'S CORNER

Congratulations are in order for Editor Sheilds doing the British Waterways Board for their 10th issue in May. I've always looked forward to my copy so many of you. For others, I recommend a subscription at 2.45 pounds per year surface mail or 4.50 pounds airmail payable to the British Waterways Board, Memorial House, Memoriul Terrace, London NW1 8XX, England.

Congratulations also to the Virginia Canals and Navigation Society on the publication of the first issue of their newsletter, The Tiller. Several years ago Bob Bush asked me about the interest in forming a canal society in Virginia. I told him that it was a great idea, and why didn't he do it? He did, and several others followed the challenge, forming their society in 1977, and now Acting President Bob Bush has turned over the reins to George Hotz. One of the goals of their society is to encourage the preservation of the oldest extant canal locks in the United States on the Potomac Canal at Great Falls, Virginia. Over the past 5 years they've included the quarterly newsletter edited by Russ Harding. (Send dues to Virginia Canals and Navigation Society, c/o Mrs. Vivienne Mitchell, 632 Fernhill Walk, Alexandria, VA 22314.)

In May Bill Shank, Bill Trout, and I discussed ways of increasing the amount of information contained in American Canals. As printing prices preclude increasing the number of pages we decided to include less costly inserts whenever possible, such as Charles Haffield's trip on the American waterways in the May issue. Other inserts will follow when appropriate. I'm sure you'll appreciate them.

We are always interested in hearing your comments on our work. As always, we encourage your contributions on these and other canal-related subjects.

Capt. Tom Hahn

AMERICAN CANALS, NO. 34 - August 1980
REVERSIBLE HEAD LOCKS

by Alexander C. Brown

(An article in American Canals No. 30 (August 1979) entitled “A Footnote to Champlain to Chesapeake” started a set of correspondence between the author, Alexander C. Brown, and ACS Member Jim Wilson concerning reversible head locks on canals other than the Albemarle and Chesapeake Canal. In this article, Mr. Brown discusses reversible head locks with which they are familiar. Readers are encouraged to comment on these or other reversible head locks. Ed.)

Although the Albemarle and Chesapeake Canal Company’s presumption that their 220-foot reversible head lock was the first ever constructed might well have applied in 1959 when it opened, subsequently other reversible head guard locks have been built along Atlantic Seaboard waterways as well as some such structures on the lower Mississippi. Apparently, however, the present Albemarle and Chesapeake Canal lock at Great Bridge, Virginia, built in 1932, is still the largest to be equipped with double sets of gates at both ends of the lock for daily operation, which was the claim made for it in AMERICAN CANALS, August 1978, p. 6. The existing Great Bridge lock measures 600 feet in length and its original 75 feet in width was narrowed only slightly to 73 feet when a replacement north wall was constructed inside the original one in 1974. The original 1932 lock at Great Bridge survived until 1977 when the canal was widened. Then, for a 15-year period, there was no lock at the current lock site north and south in the canal unimpeded. But with boat operators and local residents bitterly complaining, the present lock was provided by the United States government in 1932.

Since reversible head locks are comparatively rare, the following are listed here. Another tide control lock in active service today is the Shinnecock Canal lock in Suffolk County, New York. This lock is 1,000 feet long and 75 feet wide and is located on the Long Island Sound. The present concrete guard lock which replaced a smaller wooden one is located about midway in the canal. It measures 273 feet long by 41 feet wide with a depth of 12 feet over the sills. In summer, the canal serves a large and enthusiastic clientele of local motorboats, but little through traffic. The present 1956-built concrete guard lock which replaced a smaller wooden one installed in 1938 is located about midway in the canal.

Another reversible head lock with a more commercially oriented reason for being is on the narrow St. Peter’s Canal at Cape Breton Island, Nova Scotia. This waterway connects Bras d’Or Lake with St. Peter’s Bay not far from the coal export city of Sydney. The canal is about a third of a mile in length and the tidal lock midway along measures 270 feet by 46 feet by 18 feet over the sills. As at Great Bridge, Virginia, four pairs of mitered gates handle tidal fluctuations of about two feet.

Other locks in the United States capable of handling a small amount of reverse water head are presently found on the lower Mississippi and become navigable when occasionally the river is unusually low, for generally the river is higher in elevation than the surrounding navigable waters. These locks do not have two sets of gates for normal reversing with each change of tide, but rely on a pair of sector gates which, turning on a partially circular track, are capable of being opened during a slight reverse head. The locks, however, are comparatively large.

An aerial view of the Albemarle and Chesapeake Canal lock at Great Bridge, Virginia, built in 1932. The photograph was probably taken in the early 1940s. (Corps of Engineers photo)

The Inner Harbor Navigation Canal, or Industrial Canal, connects with the Mississippi by a 840-foot long, 75-foot wide lock situated along the New Orleans riverfront. The Harvey Lock on the Harvey Canal, and the Algiers Lock where the Intracoastal Waterway enters the Mississippi, are of similar width, 75 feet, and measure 425 feet and 797 feet in length respectively. Both are of considerable industrial importance. The Vermilion Lock in the Gulf Intracoastal Waterway west of Morgan City, Louisiana, 56 feet wide by 1,200 feet long, has drop gates which can be wedged against the heads of water in either direction.

This whole area is a maze of both natural and artificial waterways and locks are needed at several points, and under varying conditions. Apparently, however, the Great Bridge Lock is the largest of the reversible head locks regularly serving diurnal tidal variations the year round.

We have in hand an article on the Shinnecock Canal Lock dated 1968. We would be pleased to have someone update this article. Write to Editor, American Canals if you are interested in the task. Ed.)

Detail of the west end gates of the Albemarle and Chesapeake Canal lock at Great Bridge, Virginia in 1973. It appears that it was low tide in the Southern Branch of the Elizabeth River, and high water in the lock and the Virginia Cut of the A&C Canal. (Photo by Alexander C. Brown)
Cruising New York State's Inland Waterways

The Emira II enters Lock Number "C-3" on the Champlain Canal, headed downstream for Albany. The sign-board at the Champlain locks clearly indicate the number and location of each lock, the water elevation above and below, and the mileage to the next lock.

by Bill Shank

The State of New York is perhaps the only place in the Northeast where inland commercial waterway traffic still exists over nearly the same routes followed by the historic canal system of 150 years ago. In the early 1800's the State sought federal help in building its first canal "The Erie Canal" didn't get it and went ahead on its own. It has been going it alone ever since. The State of New York is one of the few places in the United States where the Corps of Engineers (except for one, lone, tidewater lock at Troy, N.Y.) is not in control of the waterways. The State is maintained and operated by the Waterways Maintenance Section of the State Department of Transportation at Albany. It is known officially as the "New York State Barge Canal System." It includes the Erie Canal, from Troy to Buffalo; the Champlain Canal, from Troy to Whitehall; the Cayuga and Seneca Canals, from Montezuma to Geneva; and the Oswego Canal, from Three Rivers to Oswego.

The entire 527-mile system is still open to commercial traffic, now consisting primarily of industrial fuel-oil barges. (Still no locks with inches to spare.) In recent years, however, passenger traffic has been limited to small pleasure boats and a few tour boats, running for short distances out of major cities along the waterways.

About five years ago, the Mid-Lakes Navigation Company, Ltd., with headquarters in Skaneateles, N.Y., set about to offer charter "Packetboat Service" on various sections of the Barge Canal System. They began with scheduled three-day trips between Syracuse and Albany on the "Emira II," a former ferry boat. In 1978 they decided to extend their coverage to the western section of the Erie Canal, from Syracuse to Lockport. To do this, they had to make drastic alterations to the "Emira II" to pass under the extremely low bridges in the Rochester area, cutting off much of the superstructure, including a portion of the pilot house.

A few minutes later, the Emira II casts off its lines and prepares to move out of Lock Number "C-3" as the lower gates swing open. Captain Peter Wiles is visible in the left center.

A year ago, they extended their charter trips to include the Champlain Canal (3-day trips), as well as the Oswego Canal (1-day) and the Cayuga-Seneca Canal (2 days).

Having just returned from my third trip on the Emira II, along the Champlain Canal, I highly recommend any of these trips to canal buffs (and others) who wish to visit the largest lake in New York from the deck of a 50-passenger packet boat — not to mention the experience of "looking through" countless of the efficiently operated locks of the New York State Barge Canal System.

Don't expect to "dress for dinner" on board the Emira II, the atmosphere and relationship between Captain Peter Wiles, his crew and passengers is most informal. All meals are served, either on board, or in the shade of a convenient beer on shore. At night, the crew moves your luggage to a motel, hotel, near the convenient docking point. From time to time the Captain makes a "P-A" commentary on points of interest on shore, and is quite approachable to answer any questions, about almost anything, historical or current. He is a most knowledgeable and interesting personality. After twenty-four hours with passengers and crew on the Emira II, you begin to feel like "family" and can appreciate the close relationships which must have developed on the canal boats of 100 years ago.

For further information on the Emira II and its sailing schedule, write Mid-Lakes Navigation Company, Ltd., P.O. Box 61, Skaneateles, N.Y. 13152.

Some Bibliographic Notes About Locks, Dams and Canals.

Every time I visit a big city library, I head for the main card catalog and, by key words CANALS, LOCKS, and DAMS. My fingers are calloused and scarred by paper cuts, but I have reached some conclusions. Everybody seems to have several locks on the Erie Canal, mostly written for "popular interest" with little data. The many similar canals built, and long abandoned, elsewhere are commemorated only in nearby regional libraries. And the most difficult material to find is about canalized rivers, locks and dams built to improve river navigation. Many were so improved in the nineteenth century, but little has been written about these early public works. Especially when the improvement has since been abandoned, the written record seems to vanish with it.

Here are a few notable exceptions which canal buffs can have fun searching for:


Every canal buff in New York State knows about "Whitford's Books," but somehow their existence is not well known elsewhere. Volume 2, pages 1465 through 1475, are large pullout sheets tabulating detailed information about all canals, existing or abandoned, as of 1895. About 20% of the entries list lock and dam information about canalized rivers.
IS THE JUNCTION CANAL A MYTH?

By Dr. Bill Trout

One of the unsolved mysteries of Virginia’s pioneer canal system was whether there really was a Junction Canal between the Roanoke (Staunton) River and the Appomattox at Farmville. Such a canal is clearly shown on several maps of the last century, but no boats have been found in it or on it, and there was no report of its being used. There were a “Junction Canal Company,” incorporated in 1825, but no evidence that it ever existed. In the course of a search through the state library, it was found that the Junction Canal was anything but a mystery. The facts are contradictory to a great extent. It is hoped that this article will encourage someone to do some good field work and research to discover the truth about the Junction Canal.

There is no doubt that a Junction Canal was a highly desirable link in Virginia’s early navigation system, from Revolutionary War times, because the settlers in the Roanoke River valley were in a difficult situation. The trade between the Shenandoah and the Tidewater area was by brush water bateaux, large flat-bottomed boats, 60 feet long and 5 feet wide, covered with canvas. The trade was mostly tobacco, grain and other products. As soon as settlers moved inland, above the fall line, the most important product was iron ore, which was transported to Petersburg, Fredericksburg and Georgetown. Unfortunately for the people on the Roanoke, however, there was no route through the Blue Ridge to the coast. The most prominent of these was the Roanoke-Albemarle Sound, which was cut off from the sea by coastal sandbars so there was no port to speak of. People of the region were forced to send their produce to the James River or the Appomattox, on roads which often left heavy loads to rot in the mud. The preferred method of transportation was by boat, down the Roanoke either with Petersburg, via the Appomattox, or with Norfolk, via the James.

The efforts of the Norfolk merchants, led by Patrick Henry, did in fact result in the construction of the James River, starting about 101 miles and the trade of the Roanoke, Dan and Albemarle Sound to that city. But even so, a Junction Canal to the Appomattox was still seriously considered.

The Junction Canal was the shortest connection between the Roanoke and the Appomattox, about 40 miles long, following two streams misleadingly called rivers on some maps. The route would have been much shorter, about 10 miles, if the route began on the Roanoke near Randolph, in Charlotte County, followed the Little Roanoke River (sometimes called Roanoke Creek) up past the town of Drakes Branch, and Charlotte Courthouse, to the junction of present-day county roads 904 and 951, at Little Roanoke Bridge, where according to one map there was a ford over the divide to the headwaters of the Buffalo River (at Buffalo Creek) in Prince Edward County, near the county road 667 bridge. From there the Buffalo descended to Farmville, which was at the head of the Upper Appomattox Navigation, one of the earliest navigations in the country, from the 1740s, which took boats the 100 miles down to the port of Petersburg.

It is reasonable that the Junction Canal route was used by settlers of the Roanoke River valley from the earliest times; they probably poled their boats up and down the Roanoke and the Buffalo when the water was high enough, and portaged in between. Perhaps even in these times some navigations were carried on in the Roanoke, Roanoke River, and the Buffalo River, though there is no evidence of this. The Roanoke had been a navigable stream for at least 100 years at the time of the Roanoke-Albemarle Sound, a major port, to take the trade away from Virginia. The further stimulated interest in the Junction Canal, which would bypass the Roanoke, and in 1818, in response to a petition of the citizens of the counties lying between the Appomattox and Roanoke Rivers, a survey was carried out by the State Engineer. However, the Upper Appomattox Company, which was interested in the construction of the canal, declined to do so. Finally, in 1825, the Junction Canal Company was incorporated especially for this project, and another survey was made in 1826, but the field notes are in the State Library.

Unfortunately for canal enthusiasts, however, North Carolina decided that at this time to give up trying to stop the trade at Plymouth, and Virginia decided that in any event the Junction Canal would not ever receive enough trade to make it worthwhile. Also the Roanoke had by then become navigable around the falls at Weeden, by a canal with locks and a magneto pump, and could still be seen there; and the Roanoke itself was almost navigable by then to its maximum extent, for 54 miles up to Salem. In his annual message at the end of 1825, Governor John Tyler recommended that the Junction Canal project be abandoned, and that any navigation improvements be limited to the Buffalo River. In his continued requests, that apparently was the end of the Junction Canal project.

The question remains, what if any navigation improvements were ever made along the Junction Canal route, and what can be seen today? It seems clear that in spite of the old maps, there was never a continuous canal linking the Roanoke and the Appomattox, not even to mention a proposed 6-mile tunnel. Instead, they canoes and bateaux used the route when the water was right, with a portage over the divide and some navigational improvements were made by local efforts, so were never mentioned in the State records. A report in 1827 mentions several cuts on the Buffalo, made by local landowners. Where are these cuts? Are they the ones recommended by Governor Tyler in 1825? Are they any mentions of such improvements in the county court records or other local records? Are any locks noted on old plats? On any sign remain on the ground of navigation improvements, or of portaging over the divide? The topographic maps of the Little Roanoke show suspiciously straight channels. Are these descendants of early navigation improvements, or are they recent drainage projects? We know that in 1833-34, Spring Creek, a branch of the Buffalo, was channelized for drainage purposes, so it is a modern development and prevents us from learning if, as according to rumor, boats once kept on Spring Creek to a mill there.

If there were any locks along the Junction Canal route, they were probably made, as described by the State Engineer in 1826.

The locks were to be similar to those used on the Wetumpka River, consisting of “jettes extending from both shores towards each other leaving between them a sluice of suitable size and convenient to be closed by a gate turning round a horizontal hinge the opposite end of which is fixed to the bottom of the water of the stream, a let down for the passage of boats, which are either carried down by the rush of the current or, if ascending, must be pushed up against it, when the first impetuously has somewhat diminished. This mode of improvement suited only rivers which afford but a small body of water, such as can flow through a sluice that may be closed by a light gate. The scarcity of water in such streams requires that several boats should be held ready to rush at the same time through the sluice, during the temporary flood and with produced by the water that has been accumulated, thus the gates were up. This system of navigation is evidently applicable only to a descending river, and it seems to be the most elegant and that can be adopted for the present on Buffalo River.”

On the Wetumpka River, in Cumberland County, one can still see, at low water, sparse remains of the low rock cliffs or ‘jetties’, and wooden posts of the drop-gate frames. Is there anything similar on the Buffalo or Little Roanoke? Look carefully at low water, and search through the old records. If you find anything, we would like to know.
The Canal was purchased by the Federal Government in 1919 and responsibility for its operations and maintenance was given to the Army Engineers' Philadelphia District. Three modernization programs by the Engineers have transformed the Canal into a lock-free waterway: 450-foot wide and 35-foot deep from the Delaware River entrance at Reedy Point (two miles south of the original entrance at Delaware City) to deepwater in upper Chesapeake Bay.

The Canal, one of the busiest in the world in terms of tonnage, transits 300 miles from the trip between Philadelphia and Baltimore. More than 40 million gallons of fuel oil are saved annually by commercial vessels using the shortcut provided as the waterway.

The Engineers operate the Canal from their office on the south bank at Chesapeake City. Twenty-four hours a day, seven days a week, a dispatcher uses both radio and closed-circuit TV to maintain lock with ships using the waterway. Visitors to the Museum are welcomed to walk the few feet to the Dispatcher's Office and take a look at the way traffic is controlled.

Beginning Sunday April 13th, 1980 the Museum will be open seven days a week from 8 a.m. to 4:15 p.m., through late November. The Museum will be closed however, on Thanksgiving, Christmas and New Year's day.

When you visit the Museum and walk through the doorway between the exhibit area and the steam engine room, lock up. Never mind why, just lock up. (U.S. Army Corps of Engineers News Release, dated 4 April, 1980)

**Roger Squires Visits Canada**

Our enthusiastic U.K. Director, Dr. Roger Squires, has just returned to England from a tour of the Canadian Canals, including the Frontenac Canal, the Muskoka Locks, the Rice Lake and parts of the St. Lawrence Seaway. He visited the coming IWA Rally in London, and has also given assistance to Keith Kroon, of Rochester N.Y., and Bill Gaster of Chelsea, Mass., in their canal trips in England. Roger is also eying a possible group French canal trip.

(Roger W. Squires, Daliffs Cottage, 4 Manor Way, Bockenham, Kent BR3 3LU ENGLAND)
Water Projects Funding

President Carter has signed into law the 1980 Appropriations Act for the Army Corps of Engineers. The legislation allocates $3.6 billion to the Corps so that it can carry out a variety of projects essential to the economic well-being of the U.S. Included in the legislation are provisions to construct nearly $490 million dollars worth of navigation projects on the inland waterways and in the coastal harbors. There are over 50 separate navigation projects listed in the legislation, the most prominent of which are Locks and Dam 26 at Alton, Ill., and the Tennessee-Tombigbee Waterway in Alabama and Mississippi.

More than 100 miles of the Tennessee-Tombigbee Waterway were open to navigation in March from its southern end at Demopolis, Alabama, north to Columbus, Miss., pending the raising of the water level at the Alcoa Lock and Dam. Almost $1 billion of the estimated $1.67 billion Federal cost of the entire project is now under contract.

The first stage of construction at Locks and Dam 26 near Alton, Ill., is the building of a cutoff canal on the Missouri shore extending 1,000 feet into the Mississippi. Completion in 1981 of the $341.7 million contract will restrict the river to a 700-foot width along the Illinois shore.

(Alden W. Gould (ACS) from the Seafarers Log and the Fort Myers News Press.)

ROEBLING AQUEDUCT ACQUIRED BY NPS

John Roebling's 1848 Aqueduct, on the Delaware and Hudson Canal, was converted into a highway bridge when the canal was abandoned.

The Delaware Aqueduct between Lackawaxen, Pennsylvania and Minisink Ford, New York, the oldest existing suspension bridge in America and one of the few bridges still privately owned, was recently purchased by the National Park Service and became part of the Delaware River Scenic and Historic District. Built in 1848 by John A. Roebling, who later built the Brooklyn Bridge, the aqueduct was originally a link in the Delaware and Hudson Canal. In 1894 it became a vehicular bridge when competition from the railroads bankrupted the canal company.

The bridge has weathered its 130 years remarkably well. Tests show the tensile strength of the 3/4-inch-diameter cables and masonry, and the massive masonry piers, designed to support 125-ton barges laden with coal, are barely taxed by the 50,000 cars that now rumble over the roadway of 14-inch timbers each year.

NPS plans to install an interpretive exhibit at each end of the bridge, describing its function as part of the D & H Canal. (Dott Venly (ACS) from Americana, Sept-Oct 1979)

ANOTHER MINDERMAN "ORIGINAL"

This painting is a re-creation of the Francis Scott Key Mansion in Washington, D.C. as the artist envisions it may have appeared in the heyday of the Chesapeake & Ohio Canal seen in the rear of the house. The painting, a watercolor, is the latest in a series by Earl Minderman, Washington area artist, entitled "Vistas and Vision - Today and Yesterday on the Chesapeake & Ohio Canal."

This mansion was built in 1802 and was in the possession of Key and his heirs from 1805 to 1843 when it was sold. The house was on "M" Street, just west of Key Bridge which connects the District of Columbia with Virginia across the Potomac River.

The author of the words for "The Star Spangled Banner" lived in this house for many years and his nine children were born there. He greatly resented the disturbance caused by the construction and operation of the C & O Canal in his backyard. The Canal was started July 4, 1828. Key also opposed the construction of an aqueduct designed to carry canal boats over the Potomac to Virginia and carried his case all the way to the United States Supreme Court where he lost. (The Chief Justice, Roger Taney, was a brother-in-law.)

In its latter years, the Key Mansion was allowed to deteriorate badly. In 1907, Admiral George Dewey, "The Hero of Manila Bay," led a group seeking to purchase and restore the Mansion but they failed to raise the necessary funds. The end of the historic Mansion came in 1949 when it was torn down to make way for a freeway.

Maritime Reporter/Engineering News
Mike Handford's "Machine Navigation"

Our English member Mike Handford published Volume 1 of THE STROUDWATER CANAL in 1976 (now available complete in one volume), little was known about a possible early variant of this canal which he calls the "KREM MATT NAVIGATION" after its principal promoter, to avoid confusion in September 1973. Mike led the first field trip in living memory, and the first American, along the navigation's four-mile length.

The navigation was intended to carry coal from the Severn River up to the prosperous woolen industry in Stroud (which even provided the essential cloth for Turkish keffies), a distance of 16 miles along the River Frome (or Stroud Water). The river was too long, and locks installed at the 14 mile dam along the route. But the Stroud Water is a tiny river and the mill owners absolutely refused to allow water flow to be used for navigation, so the solution was a "Machine Navigation"- instead of a lock at each mile dam, a platform was provided, with a patented double crane to transfer contaminated cargo from boats on one level, to boats on the next. Construction began in 1759 but ceased in 1769 after work had progressed on perhaps 5 mile dams over a 4 mile stretch, because it was soon found that the hot of labor, to make the terraces and the bridges unprofitable was unfeasible. You may still find (with the help of sketch plans of Mike's book) the probable locations of the "machines" at some of the mile dams, and you can see remnants of the fields, cut off by the two centuries ago when the river was straightened and navigated. Fortunately, by 1770 the STROUDWATER CANAL- a proper cut with locks - was completed to Stroud and later, with the THAMES & SEVERN CANAL, it formed an important navigation route across England which lasted into the 1940's.

Thomas Bridge's patented machine for lifting containerized cargo from one canal level to another. The bucket, below, was filled with water, lifting the cargo via the two, wheeled cranes on the platform above. The ratchet and crank, at the center, is a safety device.

The fate of the Kremmatt Navigation was similar to that of our own State River Navigation in Virginia, which was abandoned in 1789. The Kremmatt Navigation was used to some extent by transferring cargo from one boat to another across the mile dams, but evidently no one thought of installing permanent cranes or "machines" to do this. Perhaps readers know of other examples of navigations actually began but stopped by mill owners, or with interesting consequences.

For the Kremmatt Navigation may still have a part to play, as part of the route of a restored Stroudwater Canal, which will be partly relocated to avoid the disruption of a modern highway interchange. Since 1753, the Stroudwater, Thames & Severn Canal Trust (with Mike Handford as a founder) has been restoring, bit by bit, the Thames & Severn Canal and has now begun work on the Stroudwater, completing a valuable crossing link across Britain. Anyone interested in joining the Trust and receiving their bulletin, THE TROW, is welcome to send 5 pounds to the Secretary, M. S. Bowles, 1 Rivermead, Frome, Glos, England. If you can't get over to work on the restoration you can at least read about Captain Horatio Hornblower's trip along the canal, reported in HORNBLOWER AND THE ATROPS (the late C. S. Forester was one of the early canal enthusiasts, and spent three months on a trip from London to Birmingham and back).

Last of New Jersey Barges

The year 1979 marked the end of an era. When the last two surviving canal barges from the New Jersey canal era became no more. The M/V J. B. WRIGHT (77 x 21') was donated to the Powder Mill Canal and dismantled. (See photo in Feb. 1980 American Canals.) However, the M/V J. B. WRIGHT was still in the water at the Eclipse Park Canal in Paulsboro last summer. The former was built in 1919, the latter, in 1923. A few salvaged parts of the J. B. WRIGHT are now displayed at the museum of the Canal Society of New Jersey at Watervliet, New Jersey.

(Bill McKeveley from Ripples)
ITEMS OF INTEREST TO CANAL ENTHUSIASTS


THE PATH BETWEEN THE SEAS by David McCullough originally published at $17.95 is now available from Barnes & Noble, 126 Fifth Ave., NY NY at $5.95 plus $1.95 shipping, total $7.90.

The following is from the manuscript catalog of The Western Reserve Historical Society: Harvard University, Graduate School of Business Administration, Baker Library, Account books of canals, New England and Ohio, 1821-1876, 4 v.; Ledger of the Walter Quecscle Canal, Vermont (1821-1837), recollections and abstracts (1821-1875) from the Laws and Act of Incorporation for the Cumberland and Oxford Canal, Portland to Lake Sebago, Maine; 1 vol. (1825-27) of rules and specifications relating to construction of Ohio Canal; and 1 letter book (1835-39) of the Blackstone Canal, Pawtucket, R.I. containing letters relating to regulation of flow of water through canal. Gift of Mrs. Howard Corning, Thos. A. Jenckes, Jr., Phillip I. Milliken and Richard S. Russell, 1932 and 1938. MS 60-3000.

BARGE TALK, the newsletter of Floating Through Europe, published four times a year at $5 to Barge Talk, Floating Through Europe, 501 Madison Ave., New York, NY 10022. Consists mostly of advertising for the firm.

CRUISING THE ERIE CANAL, a 6-page article by Pales, appeared in the Jan. 1980 issue of SEA magazine.


This is one of those rare occasions when a Government publication becomes an enjoyable reading experience! It is one of a series by the Historical Planning and Research Branch, Province of Ontario, and its subject matter is first-class material.

The document is a complete chronology, 1839-1979, of the history, development, construction, improvements, bridges, tunnels, locks, bypasses, feeders -- in fact, the evolution of all four of the canals to date.

The quality, quantity and choice of photographs is excellent; these are complemented by a detailed assortment of maps, sketches, drawings, diagrams and charts. All the graphics are tied in with a well-written text, and the presentation is in large format, an 8 x 12 inch volume of 175 pages. It is noted that steps are being taken to preserve certain areas of the canals as historical and/or archaeological sites.


Insert for AMERICAN CANALS, August 1980
Many of us have experienced the confusion of traffic accidents and have had to summarize correctly what happened in a few words on insurance or accident forms. The following responses would have been typical during the American towpath canal era:

*Coming home, I took the wrong path and fell into a canal that wasn't there before.
*The canalboat collided with mine without giving warning of its intentions.
*I thought the drop gate was down, but I found it was up when I ran my boat thru it.
*I collided with a stationary boat coming the other way.
*The rudder backed thru our cabin wall and into my wife's face.
*A swimmer hit me and went under my boat.
*The work boat was all over the canal; I had to swerve a number of times before I hit him.
*I pulled away from the side of the canal, glanced at my mother-in-law and headed over the berm bank.
*In my attempt to kill a horsefly, I smashed into the miter gate.
*We were heavily loaded with containers of merchandise. As I reached a curve, a box sprang up, obscuring my vision. I did not see the other boat.
*I had been running my boat for 13 years when I fell asleep at the tiller and had an accident.
*I was on my way to the boat yard with stern trouble when my rudder gave way, causing me to have an accident.
*As I approached the lock, a stop signal suddenly appeared in a place where no stop signal had ever appeared before. I was unable to stop in time to avoid the collision.
*To avoid hitting the tender of the boat in front, I struck the berm bank.
*My boat was legally tied up as it drifted into the other canalboat, sinking it.
*An invisible canal packet came out of nowhere, struck my vessel, and vanished.
*I told the canal police that I was not injured, but on removing my hat, I found that I had a skull fracture.
*I was sure the old fellow would never make it to the other side of the bridge when I struck it.
*The New York boatman had no idea which direction to go, so I ran into him.
*I saw the slow-moving, sad-faced bridgetender as he bounced off the bow of my boat.
*The indirect cause of this accident was a little captain of a small boat with a big mouth.
*I was thrown from my boat as it left the aqueduct. I was later found in a ditch by some stray cows.
*The bridge abutment was approaching fast. I attempted to steer out of its way when it struck the front of my boat.

Insert for AMERICAN CANALS, August 1980 (Courtesy of Bill McKelvey)
Have Bridge, Will Travel

Along a canal, historic preservation sometimes calls for unusual measures. Such was the case this past summer when two metal truss bridges that had spanned the Hennepin Canal were moved intact by the Illinois Department of Conservation.

When the U.S. Army Corps of Engineers built the Hennepin between 1890 and 1907, they spanned it with more than sixty bridges, and when, in 1976, those bridges began to be replaced, it was agreed that at least one example of every bridge construction and truss type would be preserved. Fourteen of those bridges were preserved and restored on their original sites, and in 1978 one bridge was disassembled and moved in pieces, which proved impractical.

That was why the Illinois Department of Conservation hired Jeffery Builders and House Movers, Inc. of Wyanet to move intact the last two bridges to be saved. The first bridge (pictured above) was moved from its original location at Tiskilwa to Wyanet—a distance of about ten miles. The 98-foot, pony Warren truss bridge drew some stares as it rolled along the road, but spectators would have been even more impressed had they seen the delicate process of lifting the bridge from its abutments and sliding it onto the roadway. The second bridge—a 110-foot, through riverbed Pratt truss bridge—was moved in a similar manner, traveling from the vicinity of Mineral to a spot near Sheffield.

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Federal Maritime Grant to Help Finance Restoration of Lock 14

Did you know that Illinois has a maritime heritage? Most of the eighty-four Maritime Heritage Preservation Grants recently awarded by the U.S. Interior Department this year went, logically enough, to California, Massachusetts, and other coastal states. But one of those grants, for $113,555, was awarded to the Illinois Department of Conservation. It will be used to reconstruct, restore, and rehabilitate an operable nineteenth-century canal lock on the Illinois and Michigan Canal.

Funds from the federal grant will be matched by state funds to finance the reconstruction of Lock 14 at LaSalle. Designed in the 1830s, that lock was one of fifteen numbered lift locks on the main line of the I & M Canal, which was completed in 1848 and extended ninety-six miles from the south branch of the Chicago River at Bridgeport to the Illinois River at LaSalle.

Chicago, Ottawa, LaSalle, and Joliet—those are four of the Illinois cities that might never have amounted to much without the I & M. The canal placed Chicago on a continuous waterway that stretched from New York to the Mississippi River, making the city a transportation center and contributing to its growth as a livestock and grain market. Other cities along the canal, including Joliet, Ottawa, and LaSalle, also grew and prospered, and by 1855 the state's demographic balance had shifted northward. But as the nineteenth century drew to a close, canal traffic declined, and when the Illinois Waterway opened in 1933, the I & M was closed to navigation.

Plans for the Lock 14 project, which is scheduled for completion in two years, provide for an accurate reconstruction of the lock's four wooden gates, as well as the restoration of its walls and oak floor. The four gates are entirely missing and will be rebuilt in accord with research done by Conservation Department Assistant District Historian Peter Rathbun and DOC's Canals Interpreter Mary Rathbun. The lock's stone and masonry walls and its wooden floor, which are structurally sound, will be stabilized, and deteriorated sections carefully repaired or restored, work that will necessarily require the recovery and use of nineteenth-century building techniques.

When fully restored and operable, Lock 14 will become part of the interpretive program on the I & M Canal State Trail. The State Trail includes the western end of the canal's towpath between Joliet and LaSalle (roughly sixty-two miles) and is being developed by the Conservation Department, which oversees the old canal, as a hiking and bicycling trail and as an outdoor museum, one of the few places where Illinoisans can still see an important part of their maritime heritage.

Lock 14

Archaeological excavations on Lock 14 at LaSalle began on October 18, according to Alan Downer, Acting Staff Archaeologist for the Illinois Department of Conservation's Historic Sites Division. Those excavations are the beginning stages of a project that will restore, reconstruct, and rehabilitate the nineteenth-century canal lock, which was one of fifteen numbered lift locks on the old Illinois and Michigan Canal.

This fall, two or three shallow trenches will be dug perpendicular to the lock on the canal's south side in an effort to locate the canal towpath, said Downer. The path, which was probably ten or fifteen feet from the canal, is no longer visible. Downer has already begun two, and plans to begin two or three more, shallow pits roughly ten meters square on the canal's banks. He is looking for information on the location, nature, and dimensions of canal fittings such as the snubbing posts to which canal boats were tied or the footings of the footbridge that once crossed the canal. Likely sites for those test pits were identified by project consultant Thomas F. Hahn, a canal specialist and past site supervisor of the Chesapeake and Ohio National Historic Park.

Although winter weather will interrupt this fall's excavations at the canal, archaeologist Downer plans to resume work next summer. Dewatering the lock, he will then excavate within the lock's chambers and at both of its ends.

Information uncovered by archaeologists will be used to guide the restoration, reconstruction, and rehabilitation of Lock 14, a project being funded, in part, by a $113,555 Maritime Heritage Preservation Grant awarded to the Conservation Department by the U.S. Department of the Interior. Funds from the federal grant are being matched by state funds to finance the project.

Completed in 1848, the I & M Canal extended ninety-six miles from the south branch of the Chicago River at Bridgeport to the Illinois River at LaSalle. It reached its peak in the mid-nineteenth century and was closed to navigation in 1933, when the Illinois Waterway opened. Today, the I & M is under the care of the Illinois Department of Conservation, which is developing the old canal as an outdoor maritime museum and a recreation area.