

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 16

Editorial Address — Box 842, Shepherdstown, W. Va. 25443

FEBRUARY 1976

REFLECTIONS ON THE ROANOKE CANAL

(Adapted from material supplied by Alden W. Gould)

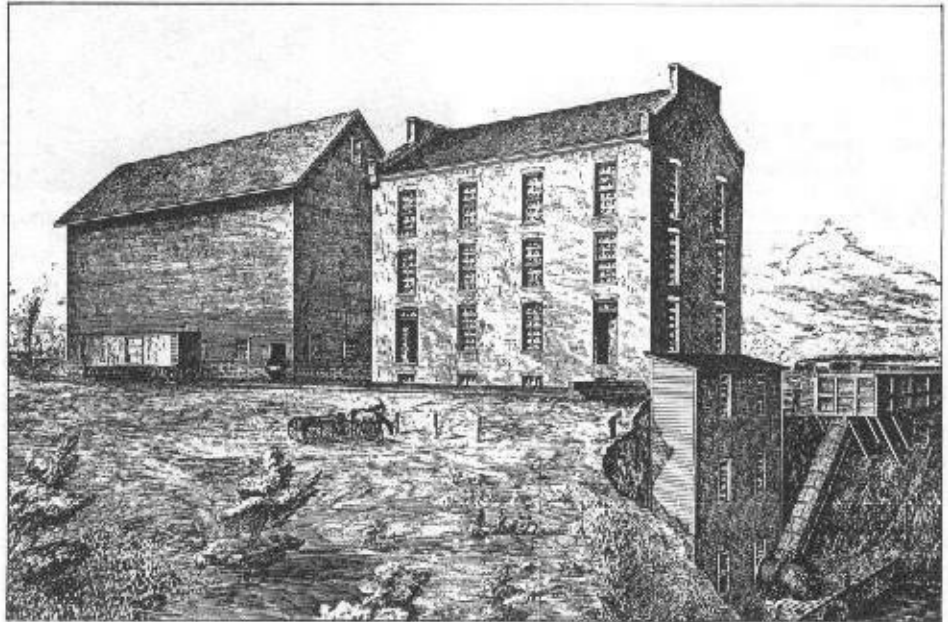
Most of the improvements of the 400-mile Roanoke Navigation in North Carolina and Virginia were sluices and wing dams. However, the most elaborate and costly part of the navigation was the Roanoke Canal built 1819-1823 around the falls of the Roanoke River, between Roanoke Rapids and Weldon, North Carolina. A good deal of the old nine-mile canal is still in existence today, with two two-lock combines at Roanoke Rapids and an aqueduct and old grain mill at Weldon.

The canal started at a point west of Roanoke Rapids near a pond (now a lake). Some distance below the pond a guard lock passed batteaux and barges through the canal to Roanoke Rapids and Weldon. In doing so the boats had to pass through two sets of two-lock combines. The first combine stands on a hill at Jackson Street and NC #48. Built of granite blocks, each lock is 100' long by 16' wide with a 9' lift. The lower lock opens into a canal basin after which the canal crosses under NC #48, where a plaque marks the crossing of the 1834 route. The canal is again lowered by a two-lock combine, the locks of which have the same dimensions as the first. All four locks are in good condition. The combined locks are known as "the upper locks" and "the lower locks" respectively. The difference in elevation between the uppermost lock and the lowermost is 36'. The canal itself was generally 30' wide and 3' deep.

The brick building located beside the top lock of the first combine was a hydro-electric plant which used canal water. This is one of several plants which appeared on the Roanoke Canal after it was closed to navigation. *This historical complex with its well-kept grounds would be a most fitting location for a "Canal Park and Museum."*

Though the old canal is a dry bed today and somewhat grown over with trees and underbrush in some areas, its towpath can be followed generally for several miles from Roanoke Rapids to Weldon. Several stone culverts and stone spillways were located in this section and some structural remains are extant.

Traffic on the canal was considerable; in 1835, the first year of full operation, 6,877 hogsheads of tobacco, 10,648 barrels of flour and a vast amount of other merchandise passed through the canal to the Weldon Basin. The prosperity of the Roanoke Navigation Company was short lived; by 1840 canal traffic slowed to the point where it was hardly profitable to keep the canal open. By the beginning of the War Between the States there were only a few barges in service. During the Civil War the canal was revived, new barges were built and old ones pressed into service to serve the Confederacy. With the resumption of regular rail service in 1867, the navigation company was declared bankrupt, and the canal was out of operation.



The 500-Barrel Mill of the Roanoke Navigation and Water Power Co., at Weldon, N.C.

Weldon Aqueduct

The Chockoyotte Creek Aqueduct, more commonly known as the "Weldon Aqueduct," is the gem of the Roanoke Canal. It is one of the finest structures of its kind in the United States and has been approved for nomination on the National Register of Historic Places by the State of North Carolina. In 1976 this beautiful structure seems nearly as solid as when built in the years 1823-1834.

The aqueduct is 110' long, has a single arch with a span of 30' and a height of 20' above the



Chockoyotte Creek Aqueduct (Weldon Aqueduct) at Weldon, N.C. (Army Engineer District, Wilmington)

normal water line. The channel of the aqueduct is 18' wide, with an overall width of 29', and an overall height of 35'. The structure is built of large cut granite stones and is in excellent condition.

The Weldon Locks

Lift locks were needed on the canal at the lower end of Weldon at the river where there was a difference of 51' or elevation to be overcome. The initial plan called for seven locks, 18' wide and 85' in the clear with an overall length of 121½' and lifts of 7 to 8' each. The final plan called for six wooden locks of the same dimensions and 5' of water over the sills. (This does not necessarily equate to a 5' lift. — Ed.) Construction began in December 1828 and the locks were completed in the fall of 1834; the company therefore declared the canal open for navigation.

Unfortunately, soon after the canal was opened, the Roanoke River flooded, reaching the walls of the lower locks. The canal company refused to rebuild them, stating that all cargo could be carried by land to Weldon for re-shipment from Weldon by canal. So far no one has uncovered documentary evidence or industrial archeological evidence that the locks were rebuilt, or that there are remains of the original six wooden locks. Should any deep excavations occur in the area close to the old mill site or the lower level in the future, the former six locks might be uncovered — hopefully.

(Continued on Page Two)

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

AMERICAN CANALS is issued quarterly by the American Canal Society, with headquarters at Box 842, Shepherdstown, W.Va. 25443. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic canals of the Americas; 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 \$6.00. Individual copies may be purchased at \$1.00.

ACS President and Editor-in-Chief — Capt. Thomas F. Hahn, USN (Ret.), Box 842, Shepherdstown, W.Va. 25443.

ACS Vice President, Secretary and Production Editor — William H. Shank, P.E., 809 Rathton Road, York, Pa. 17403.

ACS Vice President, Treasurer, Associate Editor and Chairman, Canal Parks Committee — Dr. William E. Trout III, 1932 Cinco Robles Dr., Duarte, Cal. 91010.

Chairman, Canal Index Committee — ACS Director, Peter H. Stott, Haines Road, Mount Kisco, N.Y. 10549.

Chairman, Canal Bibliography Committee, ACS Director, Harry L. Rinker, 39 West Springettsbury Ave., York, Pa. 17403.

Chairman, Canal Boat Committee, ACS Director, Carroll M. Gantz, 7100 Oxford Road, Baltimore, Md. 21212.

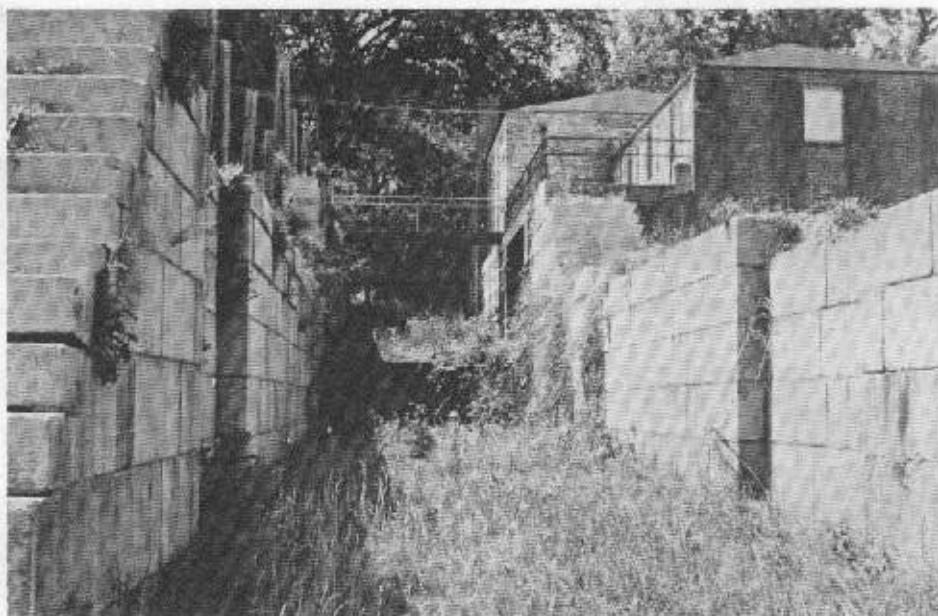
CAPTAIN'S CORNER

Our space is so limited, I am going to restrict my remarks for the time being. There is one thing I would like to know though, and that is, are we giving you the kind of articles and information you want in *American Canals*. Unless I hear differently from enough of you, the editorial policy will be to emphasize good solid canal historical and technical information and to minimize coverage of canal organizations and the publicity sort of thing except where it relates to canal preservation. I rarely hear from any of you, and won't promise an answer if you write as I am a full time student at the present time as well as maintaining a business, but rest assured that I do read every letter and carefully consider each suggestion as it comes in, and try to relate to those suggestions and letters as I put together each issue of *American Canals* as well as in the general policy of the American Canal Society. Tom Hahn

AMERICAN CANAL GUIDE

Draft copies of the *American Canal Guide* are available for Tennessee, Alabama and Louisiana for anyone planning to visit those states who could look at some canal sites for us. Write: Dr. Bill Trout, 1932 Cinco Robles Drive, Duarte, CA 91010 (Copies of the Guide, Part 1, *The West Coast* [50c] and Part 2, *The South, North Carolina to Florida* [\$1] are available at the same address.)

THE ROANOKE CANAL



The "Upper Locks," a Two-Lock Combine, at Roanoke Rapids with a Disused Hydroelectric Plant at the Upper Lock. (Alden Gould)

(Continued from Page One)

The Old Weldon

One of the most interesting structures on the Roanoke Canal is the old grain mill near the basin and the site of the old wooden locks in Weldon. The fine old etching shows the Weldon grain mills as they looked in the mid-1800s. The brick building still stands and was at one time

(before the great flood of 1940) Weldon's Community Center. The etching also shows the railroad spur and the view of the Seaboard RR bridge as it crosses the river.

From the column, "Weldon 33 Years Ago" in the 25 July 1879 issue of *The Roanoke News*, the following appeared: "Fifty-two years ago, in 1827, all the streams dried up during the long drought and the mills had to stop grinding. There was no place to get meal or flour in this section of the state but from the Weldon mills which were run by water from the canal. People from distant neighborhoods and surrounding counties came to Weldon to get their corn and wheat ground. So many came that they had to camp out along the canal banks after all available rooms in town were taken. It was often necessary to wait two or three days before their turn came."

"OLD LOCK" ON THE D. & H.



Old Lock No. 21 between Allgerville and High Falls in New York is unique in that it is one of the few remaining "Old Locks" of the Delaware and Hudson Canal. In recent years it has been used as a dumping area and has been in danger of collapse. Dorothy Spar (ACS) has been active in the D & H Canal Society. When she and her husband moved into the locktenders cottage at Lock 21 they realized the uniqueness of the lock and took steps to clean it out and preserve it, partly through a small grant from "Unique New York". Money is still needed for preservation. Through the works of the Spars, this remaining old lock (which saw millions of coal from coal fields in Pennsylvania pass through on the way to the seaboard, via the Hudson River) is on its way to preservation. Money, ideas and volunteer work are needed. Contact: Dorothy Spar, Berme Road, High Falls, NY 12440.

(The American Canal Society is greatly interested in the industrial antiquities at Weldon and Roanoke Rapids and urges both communities to continue with the preservation of the structures which are of concern and interest to all people of the United States and elsewhere. Weldon has made the headlines already — we urge Mayor Oakley and others to press forward in the preservation of the treasures under their care. This article is adapted from material provided by ACS Director Alden W. Gould, who acknowledges the cooperation of *The Roanoke News*, Mrs. Ida H. Vick, E. G. Clark and Mayor Oakley. For further information on the Roanoke Canal see *The American Canal Guide*, Part 2 — South: North Carolina to Florida, edited by and obtained from W. E. Trout, III, 1932 Cinco Robles Drive, Duarte, CA 91010 for \$1.00. Editor.)

CAHILL NEW DIRECTOR

The American Canal Society announces the appointment of Louis J. Cahill of the Ontario Editorial Bureau (P.O. Box 745, 215 Ontario Street, St. Catharines L2R 6Y3, Ontario, Canada) as a Director of the American Canal Society, the second Canadian to be so-named. Mr. Cahill is a public relations consultant who has been particularly active in the effort to preserve the historic Welland Canal. Mr. Cahill's area of responsibility will include canal coverage in the Province of Ontario and neighboring areas. Welcome aboard, Mr. Cahill, we shall now all have to pay a visit to St. Catharines to see what you have up that way!

CORPS OF ENGINEERS FLOATING MUSEUM



The *Sergeant Floyd* as a Floating Museum. (Corps of Engineers)

The tow and survey boat SERGEANT FLOYD will be cruising the nation's inland waterways this year as a Corps of Engineers Bicentennial exhibit, and ought to be interesting to canal people. Built in 1932, the boat was a workhorse on the Missouri before retiring to its present job of taking visitors for a ride on the barge MARK TWAIN. Appropriately, it is named after Sergeant Charles Floyd, an engineer-soldier who was the only casualty on the Lewis and Clark expedition into the Pacific northwest in 1804, dying of a "Bilious Chortick" according to Clark's diary. Watch for the SERGEANT FLOYD as it makes stops going down the Mississippi from Arkansas to New Orleans, during January and February; to 15 April on the Gulf Intracoastal Waterway in

Texas; 1 June-15 July, in Illinois and Missouri; the rest of July, and August, on the upper Mississippi (?); September and October, on the Ohio River; from above St. Louis down to Louisiana, November 1-14; along the Ouachita, November 16-28; then in the Mississippi delta the remainder of the year, closing December 21-28 for Christmas. Contact the local Corps office for specific dates and places. The Corps goes back to Bunker Hill, and included such notables as Robert E. Lee. You would be surprised at the number of old locks, and operating ones, which have been made into Corps of Engineers parks; this information will be revealed in future sections of the American Canal Guide.

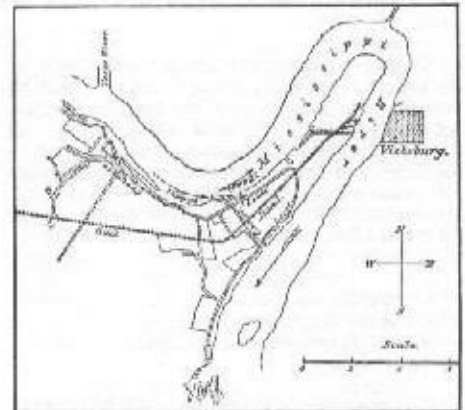
MAHANTANGO LOCK WELL PRESERVED



Lock 13 of the *Susquehanna Division of the Pennsylvania Canal* at Mahantango Creek, Pennsylvania is one of the best preserved locks in the state, though frost and vegetation are beginning to take their toll in dislocating some of the stones. The lock is located just south of the Mahantango Creek Bridge on Routes 11-15 between Harrisburg and Sunbury and can be seen by taking a short drive down a dirt road. (Submitted by ACS Member Charles F. Snyder.)

GRANT'S CANAL

Grant's Canal was a famous unsuccessful attempt during the Civil War, to make a cut-off across the base of De Soto Peninsula, a bond 10 miles around, of the Mississippi River but only 1¼ miles across at its base, at Vicksburg "The Gibraltar of the Confederacy". A canal here, out of the range of the Vicksburg guns, would have let the Federal forces bypass the defenses at Vicksburg, which had bottled up all river traffic. The canal was first attempted by Gen. Thomas Williams in 1862, who with the help of 1,200 negroes managed to dig a ditch 18' wide and 13' deep, but the river level kept going down and never entered the cut to scour out a proper channel. Six months later Gen. U.S. Grant took it up again, reexcavating the canal, but this time high water impeded the excavation work, breaking through the coffer dams, and Confederate gunfire drove off the dredges brought in for the occasion. Ironically, D. F. Bastian, in "Hydraulic Analysis of Grant's Canal" (The Military Engineer, July-August 1974, pp. 228-9) has calculated that if Grant had only removed the coffer dam at the lower end of the canal, the river would probably have scoured it out, making it a success. Curiously, only 14 years later, in 1876, the river made its own cut through the De Soto Peninsula, a mile east of the canal route, known as "The Centennial Cut", and today Vicksburg is on a backwater. Some evidence of Grant's canal is still visible.



Civil War Map Showing Position of Grant's Canal (Permission of the AMERICAN MILITARY ENGINEERS)

Another Grant's Canal was 50 miles above Vicksburg, between Lake Providence and the Mississippi, and was also never completed. This was to give access to the Tensas River and Baxter Bayou, parallel to the Mississippi 90 miles below, near St. Joseph, La. The last remnants of this canal were covered by the Mississippi River Levee in 1953. (This extract is from the forthcoming section of the *American Canal Guide* which includes the Lower Mississippi - Ed.)

C.S.O. BOARD MEETS

Our Ohio Reporter, Terry K. Woods, tells us that the Board of the Canal Society of Ohio met February 7th and elected the following new officers: Frank Trevorrow of Oberlin, President; John Droege of Columbus, First Vice President; Jim Kuth of Cleveland Heights, Second Vice President; Joan Kamper of Olmstead Falls, Treasurer; Herb Verity of Cincinnati, Corresponding Secretary; Edith McNally of Parma, Editor of "Towpaths"; and Terry Woods of Canton, Historian.

Terry also tells us that the C.S.O. Spring Tour will be held May 7, 8, and 9, 1976 on the Beaver and Erie Canal, in western Pennsylvania, in cooperation with P.C.S. Their Fall Tour is tentatively scheduled for the southern portion of the Miami and Erie Canal.

GEORGES RIVER CANAL



Remnant of the Georges River Canal at Warren, Maine. (Courtesy Gordon A. Reims)

Canals for navigation on *Georges River* had an important influence on the development of the Valley. Early townships in the District of Maine were granted on favorable terms, but almost impossible obstacles were encountered in expansion of the settlements, during the years of peace following the War of Independence. Settlers were dependent on water transportation to market the products of their industry; namely, lime, timber, staves and shingles. Without roads, the rivers served to connect the seaports with the upcountry sources of local industry. *Georges River* was early used for access to the rich forests in its watershed, and mills were built at its upper falls.

A charter was secured from the Massachusetts General Court, on March 9, 1793, by Charles Barrett, to erect locks and a navigation system from the upper part of Barretts town (Hope), with power of eminent domain, to build bridges for the convenience of the public, and authorized tolls of one shilling six pence per ton or per 1,000 board feet of timber. Under this authority, Barrett built locks at Upper Falls and Hart's Falls in Warren and conducted navigation through Seven Tree Pond to Union.

After retiring as Secretary of War in 1794, Major General Henry Knox purchased the locks from Charles Barrett and also a sawmill at Hart's Falls from Miles Cobb and William Lermond. He moved the mill at Upper Falls and rebuilt Cobb and Lermond's Mill with multiple saws. He also raised a grist mill and two houses nearby.

Knox's French engineer built locks of sod and wood. A freshet badly damaged all the structures, and Life Wilson was employed in 1796 for repairs using timber. The dam was raised at the Upper Falls of Warren to eliminate the lock at Hart's Falls. With this system, boats ran through the river and Seven Tree Pond to Union. Boats were owned by General Knox and most of the cargoes were his property. At his death in 1806, the canal was abandoned, and without maintenance a few years' decay and freshets destroyed the locks.

Lumber out of Maine supplied the coast shipbuilders and supplied a worldwide market, and speculation in Maine pine lands reached a stage of frenzy. In the midst of this, Hall's survey was prepared in 1837 for a canal on *Georges River*,

The panic of 1837 ended all talk of construction until 1845 when estimates for construction of locks and canals 28 miles upstream from tidewater were published for under \$50,000, and dividends were confidently predicted. The legislature of Maine enacted Chapter 334, approved July 2, 1846, authorizing *Georges Canal Company* to be built from tidewater to Steven's Pond in Liberty, capitalized at not more than \$100,000 in \$50.00 shares.

Locks were to be made of wood, all wood and iron to be furnished by the company at the sites. Earthwork, excavation and embankment was established at 53,000 cubic yards. No rock excavation was required. The canal was opened in the spring of 1847 with traffic between Quantabcook Pond above Searsmont and tidewater at the Lower Falls in Warren. *Georges River* departed from the usual canal practice in using no horses or mules on the towpaths. Boats were poled by men in shallow water, and provided with sails to be used in crossing the ponds.

Maintenance costs for the wooden locks and for repairing washouts by the turbulent *Georges River* consumed the earnings from the tolls. The canal was not a financial success, and shifting of trade and population caused a decline in its traffic. Unlike other canals, the *Georges River* was not replaced with suddenness by the railroad, which was built from Warren Station on the Knox and Lincoln Railroad to the Union end until 1892. Freshets washed out embankments in Searsmont and Appleton and traffic was continued only to Sennebec Pond.

With increasing leakage from washouts and decay causing more frequent interruptions to traffic, the last boat down the canal was in 1850. A number of court judgements and attachments harassed the company, and the Legislature in February 1856 sounded the death knell for the canal - "no more right to improve or maintain the canal."

In the 28 miles of the canal route, several miles crossed ponds through which the waters of the *Georges River* flowed. Several miles were used in the river channel improved by removal of snags or deepening bars. A canal prism, originally intended to pass through Round Pond, was abandoned and the beaver dam at its north end remains to this day. Several stretches of

KING'S WATERPOWER CANAL

Waterford, New York is a community familiar to most canal enthusiasts, it being steeped in Canal Americana since 1823 when it became the southern terminus of the Champlain Canal. As of 1915 the old Champlain was abandoned, but Waterford was made no less a canal center for in that year it also became the terminus of both the Erie and Champlain divisions of the new New York State Barge Canal System.

No less a part of Waterford's canal history, however, is a "ditch" only one-half mile in length which has never experienced a packet plying its waters. It's "King's Waterpower Canal" constructed in 1828 by John Fuller King. In a real engineering feat for the time, King constructed two dams across the north branch of the Mohawk River. After holding back this water King released it through the canal. Along the 53' wide canal were built dozens of factories turning out an almost unprecedented variety of goods, much of which was subsequently shipped on Waterford's Champlain Canal and the adjacent Erie. Each establishment had its own sluice way and gate, through which the water was released, turning the wheels of the factories and falling back into the riverbed with a drop of 16'.

The power canal had only one enemy, which was the seasonal high water. As the Mohawk flooded, the water wheels ceased turning and workers had to be furloughed. But in spite of this drawback King's Canal was a major factor in Waterford's early prosperity, and though not as colorful perhaps as its distant cousins, the transportation canals, it too is an important part of our canal history, both directly as a canal itself and indirectly as a boon to the industries and businesses which used and supported the transportation canals like the Champlain and Erie.

A section of King's Canal still remains intact and plans are underway for its nomination to the National Register of Historic Places.

(Submitted by Garry F. Douglas [ACS], Village of Waterford Historian.)

CANAL GRAFFITI

Bill McKelvey notes canal graffiti in the Warren Street Station of the Newark City Subway which now runs in the bed of the old Morris Canal. It reads, "BRING BACK THE MORRIS CANAL!"

prism have been filled or graded by adjoining homeowners and several canal bridges were washed out or fell abandoned.

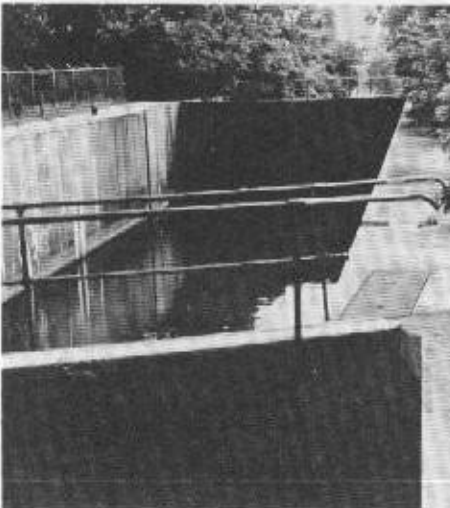
Yet, there still remains the Knox Lock as rebuilt in stone, but with the gates long destroyed. A culvert diverted to serve the Powder Mill still stands, and embankments are still conspicuous at this location. The Sennebec Lock in Union has been modified and is still crossed by the Dirigo Bridge. Upstream, several stretches of embankments and remains of locks are awaiting relocation and clearing to make them available for observation. On July 16, 1969 the *Georges River Canal System* was placed on the State of Maine Register of Historic Sites, and on March 10, 1970 the Canal System was placed on the National Register.

(Membership in the Georges River Canal Association is \$1. Send to: Mrs. J. Winchenbach, RFD #1, Warren, ME 04864)

HISTORY OF WISCONSIN'S PORTAGE CANAL

The name and geographical location of Portage, Wisconsin, have close ties with early American water transportation. Joliet and Marquette, in their famed explorations, were the first to observe that the narrow two-mile strip of land separating the Wisconsin and Fox Rivers, should be connected by a canal. Located on the Wisconsin River, Portage, population 7,821, is a short 2½ miles west of the headwaters of the Fox River. For almost 100 years waterborne commerce moved up the Fox River from Green Bay and Lake Michigan, crossed the portage and continued down the Wisconsin River to its junction with the Mississippi River.

Here was a logical spot for a canal, and as trade grew, agitation began to cut a channel between the two rivers to open a wider trade route to the west. In 1837 a company was chartered under the name of the "Portage Canal Company" to build a canal connecting the Fox and Wisconsin Rivers. In 1838, after about \$10,000 was spent by the company, the canal was abandoned. Nothing further was done until Congress in 1846, recognizing the value of the route granted the State of Wisconsin alternate sections of land, three miles on each side of the Fox River, to build a canal. A new route was chosen; construction began on 1 June 1849.

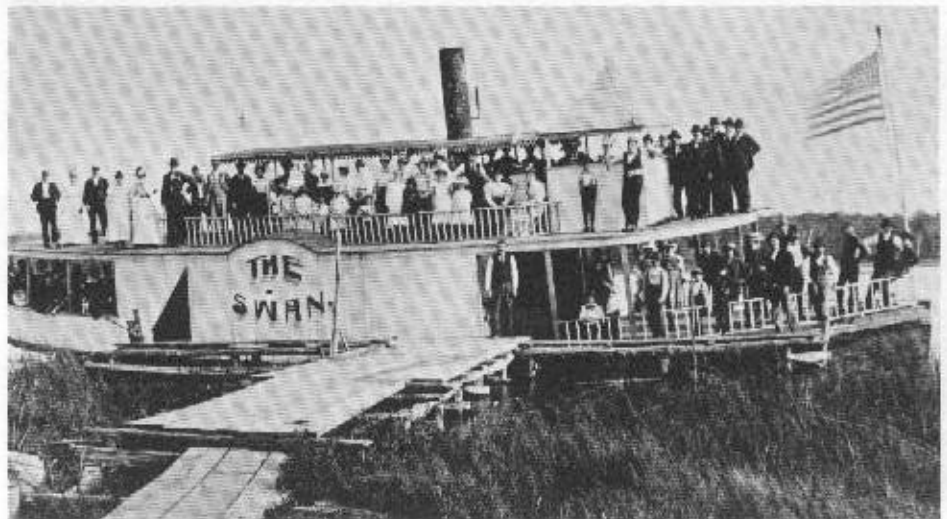


Contemporary View of Upstream Lock of the Portage Canal. (Herb O'Hanlon)

The work progressed slowly because of misunderstandings between the contractor and the state. The men working on the canal were not paid for weeks and months and were compelled finally to abandon it in an unfinished condition. A resident of Portage thus describes the work in March 1851: "The banks of the canal are crumbling before the thaw, in many places, and falling into the stream. The planking is in great part afloat . . . It presents a melancholy spectacle of premature decay."

Repairs were subsequently made, the water let in, and on Saturday, 24 May 1851, a boat attempted to pass through the canal. A Portage newspaper describes the scene as follows:

"The beautiful steamer, *John Mitchell*, nearly accomplished the feat of passing through the canal at this place, from the Fox into the Wisconsin River, on Saturday last. She came up as far as Main street. As the *John Mitchell* came up the canal, the *Enterprise* came up the Wisconsin River to the head of the canal. The blustering rivalry between these inhabitants of different waters (the throat of each giving its best puff and whistle alternately), was quite exhilarating, and called out a large concourse of



The steamboat *Swan* is pictured in an 1896 photo during its journey through the Portage Canal.

citizens, to gaze upon the scene presented, and make predictions for the future. After a short time, boats and citizens withdrew, amid strains of music, and the 'noise and confusion' were over."

The water was drawn off, and the work of strengthening the banks and bottom, to prevent the quicksand from pouring in and filling up the bed, was proceeded with; but their efforts were of little avail, if the same local authority quoted can be relied on. On the 31st day of August, 1851, the water was again let in, and the next morning it presented a rather novel appearance, the planking having raised from its fastenings, at the bottom, and floated on either side of the surface, and forming two floating plank-roads. On Sunday night, September 28, 1851, the Wisconsin River, which had been unusually high for some days, broke into the canal, and cut a channel through its southern bank, some fifty yards wide and eight or ten feet deep.

Little was done from this time until 1853. As the Constitution of the State forbade the creation of any public debts, the Board of Public Works was limited in their expenditures to the receipts from the sale of land granted by Congress. At this stage of affairs, another company proposed to take charge of the work, complete the canal and the improvements contemplated on the Fox and Wisconsin Rivers. On the 6th July, 1853, an act was passed by the Legislature of this State, incorporating the "Fox and Wisconsin River Improvement Company". The company was instructed to commence the work within 90 days, and to finish the improvement within three years. They failed to comply with the law, and finally the United States took the work off their hands. Then came the Civil War and more delay.

As built by the Government, the canal was commenced in the fall of 1874. The excavation was made by a steam excavator, wheelbarrows and small construction cars. When completed in June 1876, the canal was 2½ miles long, 75' wide and 7' deep, with a timber and pile revetment on each side. Two locks were constructed, one with a lift of 9' at the junction with the Wisconsin River at the western edge of Portage and the second, to the east, near the junction with the Fox River. The latter (Fort Winnebago Lock) had a lift of 6'. The locks were rebuilt by the Government; the former in 1880, and the latter in 1874 and 1875. They were 35' wide and 160' long, between gates. The United States steamer, *Boscobel*, was the first boat to pass through the canal, after its completion.

There was extensive traffic through the canal for 30 years; barges loaded with lead ore from

Prairie du Chien, lumber scows from northern Wisconsin and flats of farm produce vied with pleasure craft of all sizes. The canal was closed on 7 July 1951. The locks were removed from the Fox River end but the one on the Wisconsin River end is still intact and can be seen today. It is of modern concrete construction with steel lock gates. Evidently the lock was rebuilt prior to abandonment.

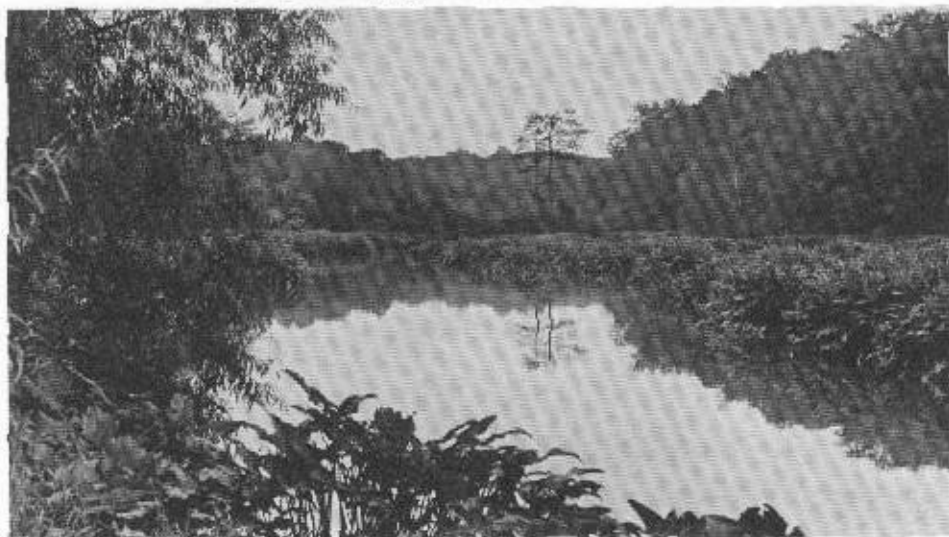
In its passage through the town, the canal is blocked by one small coffer dam and by changes in several street crossings. Bridges have been removed, several lengths of large corrugated steel culvert pipes placed in the canal bed parallel to the canal banks, and all filled in to make solid street crossings.

About a mile east of the Wisconsin River the double-track main line of the Milwaukee Road crosses the canal at Portage Junction. An examination of the bridge shows it to be a former vertical-lift span that was made permanent at the close of navigation. Another mile east of the former lift-bridge, and off state highway #33, is a series of old buildings maintained by the State of Wisconsin. A country road from highway #33 to the restored buildings closely follows the waters of Portage Canal. Known as the Indian agent's residence, the buildings, too, are relics of Wisconsin's early heritage.

To the east, are the remains of the downstream lock. Actually only half the lock is still evident. One set of gates with stone lock-walls remains. The gate has been cut down to water level and cut-stone—perhaps from the lock walls—packed into the downstream V of the gate, in effect, forming a small dam. Retracing the canal back to the Wisconsin River shows a waterway still in a remarkable state of good preservation. Canal banks are still held in line by timber cribbing; the water level is intact throughout.

President Henry Abraham and Secretary Frederica Kleist (both members of ACS) of the Portage Citizens Canal Committee (and others) are attempting to restore the Portage Canal, at least in part. At present all parties are awaiting the results of a title search by the Wisconsin Department of Natural Resources to determine ownership of land as a first step in the process. Those desiring further information or who wish to support the effort should write to: Frederica Kleist, 528 W. Cook, Portage, Wis. 53901. The American Canal Society supports the preservation and restoration of the historic Portage Canal. (Compiled from information provided by ACS members Frederica Kleist and Herb O'Hanlon—Ed.)

A BICENTENNIAL CANAL?



The Archer's Hope Creek-Queen's Creek Canal would have started its northward course at this point on the east branch of College Creek, about a mile away from Williamsburg. (Alexander C. Brown)

"Low Bridge, Everybody Down" was a song written about the Erie Canal, but had the hopes and plans of our colonial Virginia forefathers been realized it might well have been none other than Williamsburg! For today, a long-forgotten act of the colonial House of Burgesses meeting there in February, 1772 has come to light. The act provided for the "Cutting of a navigable canal from Archer's Hope Creek, to Queen's Creek, through or near the city of Williamsburg."

In those times both creeks were flourishing shipping points for Virginia's colonial capital and expressly planned as such when Governor Nicholson laid out the town at the turn of the century. Williamsburg's maximum elevation is now reckoned at 90' above sea level, but it would have required only a comparatively short linear excavation up various gullies to unite the headwaters of the two creeks by canal, so bisecting the ridge down the spine of the Peninsula, and making Williamsburg directly accessible by boat and creating an island out of today's Newport News, Hampton and York County. Reasonably enough, this is exactly what the legislators of 1772 planned, but never quite brought about since the Revolutionary War intervened.

Though the directors were charged with keeping "the said canal and the banks, sluices, and bridges belonging thereto" in good repair, mention was made of locks or a source of water to operate them. With Williamsburg's elevation at 90', the amount of material to be excavated by mere man or animal-power would have been impressive for a sea level canal.

Even before these acts received official sanction, the *Virginia Gazette* of Dec. 19, 1771, reported that Governor Dunmore had authorized the survey of the proposed canal route to begin and, shortly before the 1772 Assembly met, a subscription book was opened and flourishing at the Court House. Unfortunately no further mention of the canal ever appears in the *Gazette*. It is unlikely that little if any actual digging was ever carried out and unquestionably the project, shelved for the duration of the war, was thereafter forgotten.

Although some extensive navigation schemes proposed in colonial times were revived soon after the new nation came into being, the cross-Peninsula canal plan faded into obscurity. Quite likely, the transfer of the seat of government from Williamsburg to Richmond in 1779 had a lot to do with giving it up, for Williamsburg importance

waned, and even George Washington's vast enthusiasm for internal improvements failed to revive the Archer's Hope Creek to Queen's Creek Canal. (Condensed from an article by ACS Director Alexander C. Brown in the 10/5/75 edition of *Panorama*. - Ed.)

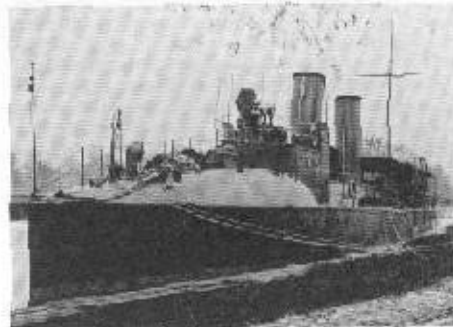
FINAL DUES NOTICE

A pink invoice enclosed with this issue will be a reminder to a small percentage of our members that their 1976 dues remain unpaid. Failure to return a check promptly will result in removal of your plate from our active mailing list. 'Nuf sed!

THE DELAWARE AND HUDSON REENACTMENT

The Delaware and Hudson Canal Historical Society and the town of Wurtsboro, New York on 13 July 1975 jointly celebrated the 150th beginning of the Delaware and Hudson Canal by turning over a symbolic shovelful of earth for the installation of a snubbing post in the town where the canal began. Among the events attending the celebration were the showing of the late *Marville Wakefield's* paintings by his wife, Barbara, and their children, *Dorothy Sanderson*, author of the *Delaware and Hudson Canalway*, several local historians, and Wurt's descendants spoke at the occasion.

D. & R. CANAL BOOK



This photograph is only one of the 275 excellent photographs offered in ACS Member Bill McKelvey's new book *The Delaware and Raritan Canal: A Pictorial History*. This is not just a book for "Canal Buffs". Every railroad enthusiast, steamship fan, and collector of New Jersey lore will welcome this book, the result of many years' research on the part of the author. The book contains 128 pages, is hardbound and has a format of 8½ by 11 inches. The price is \$14.00. The book is published by Canal Press, Inc. 39 W. Springettsbury, York, PA 17403.

New Boat Model at Roscoe Village



Something new to the Roscoe Village Canal Museum is a six-foot-long canal boat model of a family boat complete with figures and a clothesline on the deck for the family washing. Nancy Horyn, Director of Restoration at Roscoe Village, is shown snipping timothy hay to put in the stable of the model.

3,000 YEAR OLD CANAL REDISCOVERED

"Eastern Canal" Changes Interpretation of Old Testament

The "Eastern Canal", an unsuspected waterway which may have been "The Shur of Egypt", "The Ways of Horus" and "The Dividing Waters" of ancient records (up to now thought to be a fortified wall, or a branch of the Nile), guarding the eastern flank of Egypt, along the east border of the Nile delta, has been rediscovered by three Israeli scientists. The discovery has changed the interpretation of early texts, including Genesis and Exodus.

The canal was evidently primarily for defense, but used for navigation, perhaps with a depth of 2 or 3 meters and a bottom width of 20 meters - compared with de Lesseps's Suez Canal some 3 millennia later, 8 meters deep and 22 meters wide. It ran northeasterly, from the Nile at Cairo, through the Wadi Tumilat to Ismailia, now on the Suez Canal, through Quantara, and to the Mediterranean. It could be as old as the earliest pyramids, which go back to about 2600 B.C.

Linking this route with the Red Sea, south from Ismailia, was a task left to a later age - to join the Mediterranean and Indian Oceans. Pharaoh Necos (610-544 B.C.) is credited with the first attempt; he evidently re-excavated part of the Eastern Canal but abandoned the project after losing some 120,000 men. The link was finally completed by the Persian, Darius (522-486 B.C.), and lasted into Roman times, then was briefly opened again in A.D. 644 by the Moslem Omar. Parts of the canal were found centuries later in 1872 when the Suez Canal was being constructed. Now with these recent discoveries, made with the aid of aerial photographs, we may learn more about the very early beginnings of the Suez Canal. (See "Evidence for an Ancient Egyptian Frontier Canal" by Amihai Sneh, Tuvia Weissbrod and Itamar Perath, *American Scientist* 63: 542-548, 1975.) (W. E. Trout, III, Ph.D.)

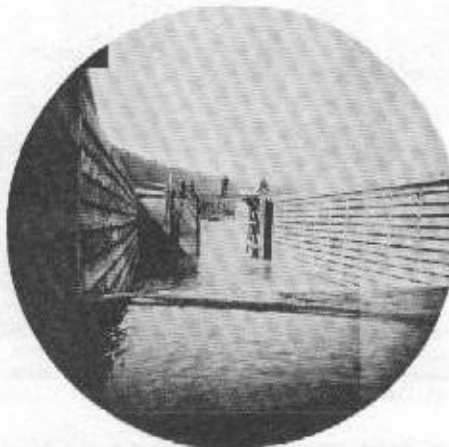


Possible route of the rediscovered Eastern Canal (ca. 3,000 B.C.) and the Pelusiac Branch of the Nile; Darius' canal (500 B.C.), and the Suez Canal (1869 A.D.). (Modified from AMERICAN SCIENTIST)

BAILLIE-GROHMAN CANAL PARK



Construction of the Baillie-Grohman Canal at Canal Flats, British Columbia underway c1888. (Mrs. Mabel Jordon and Vice-Admiral Baillie-Grohman)



Interior view of the lift lock of the Baillie-Grohman Canal at Canal Flats, British Columbia c1890. (Mrs. Mabel Jordon and Vice-Admiral Baillie-Grohman)

GOOSE CREEK

The American Canal Society is on record as supporting Goose Creek in Loudoun County, Virginia as a Scenic River. ACS VP Dr. Bill Trout in his supporting letters to members of the Virginia Legislature emphasized the historic nature of Goose Creek, pointing out that a century or so ago the Goose Creek and Little River Navigation Company (led by George Carter of Oatlands and Charles Fenton Mercer) began a project to make the creek navigable by canal boats, with a series of locks and dams. The project was abandoned when it became clear that railways were more practical. (Those are fighting words, Dr. Trout - Ed.) The old dams washed away long ago, leaving the creek in its natural state, but many of the stone locks are still here and there along the length of the creek - genuine historic sites awaiting rediscovery by the traveler. Happily, the public-spirited attitude which made George Carter's project possible, still prevails in Loudoun County.

Great progress has been made by the Historical Association of East Kootenay in putting to good use the remains of the Baillie-Grohman Canal, which was described in *American Canals* #7, and in Part 1 of the *American Canal Guide* by the establishment of a park at Canal Flats on 7 September 1975.

THE CRANBROOK DAILY TOWNSMAN (31-7th Ave. S., Cranbrook, B.C. VIC 1H6) put out a 2-page spread on the history of the canal and the park in the Oct. 2 issue; copies may still be available at 20¢ ppd. Keep your Canal Guide handy when visiting western Canada so you won't miss this new and important canal park.

OLD CANAL SONG

The Boatman's Call! The Boatman's Call!
We hear it 'mid the water's fall,
Uprising clear above it all!
"Prepare the Lock! Our barge is here;
Our steady team has borne us near,
Open the way, the way make clear!"

(A song from the *West Branch Canal*, submitted by Mrs. Emma Carpenter from *Old Town* by Isabel Winner Miller. Please send in any canal songs, sayings or expressions you have to be shared by readers of *American Canals*. - Ed.)

NEW FRENCH WATERWAY

The French government recently began work on a canal from the North Sea to the Mediterranean, a project going back to the dreams of the Roman Empire under Nero.

The project parallels a projected 2,173-mile network of inland waterways running from the Dutch port of Rotterdam on the North Sea through the Rhine, Main and Danube Rivers in Central Europe to Constanta, Romania, on the Black Sea. About 61 miles of canals are left for completion in West Germany to finish the system to the Black Sea, and French experts say that they could be finished by 1985.

LOUISIANA LOCK ON NATIONAL REGISTER



Plaquemine Lock from the Bayou. Note the short pair of gates in front for operating under "reverse head". (W. E. Trout)

When driving down Route 1 along the W bank of the Mississippi, 13 miles below Baton Rouge, don't miss picturesque Plaquemine (or Bayou Plaquemine) Lock, which since 1961 has been a Corps of Engineers park in the middle of the town of Plaquemine. Bayou Plaquemine (from the Indian for persimmon) was made famous by Longfellow's "Evangeline" and was connected directly with the Mississippi until a levee was built in 1867 by Iberville Parish. To restore the connection, the lock was constructed in 1895-1909. Designed by Col. George W. Goethals of the Corps of Engineers (later Chief Engineer for the Panama Canal) it had at the time the highest fresh-water lift - 55 feet - of any lock in the world. In 1961, it was replaced by the Port Allen Lock across from Baton Rouge.

A tour of the variety of locks in Louisiana will appear in a future section of the American Canal Guide, and will include the Plaquemine lock, the

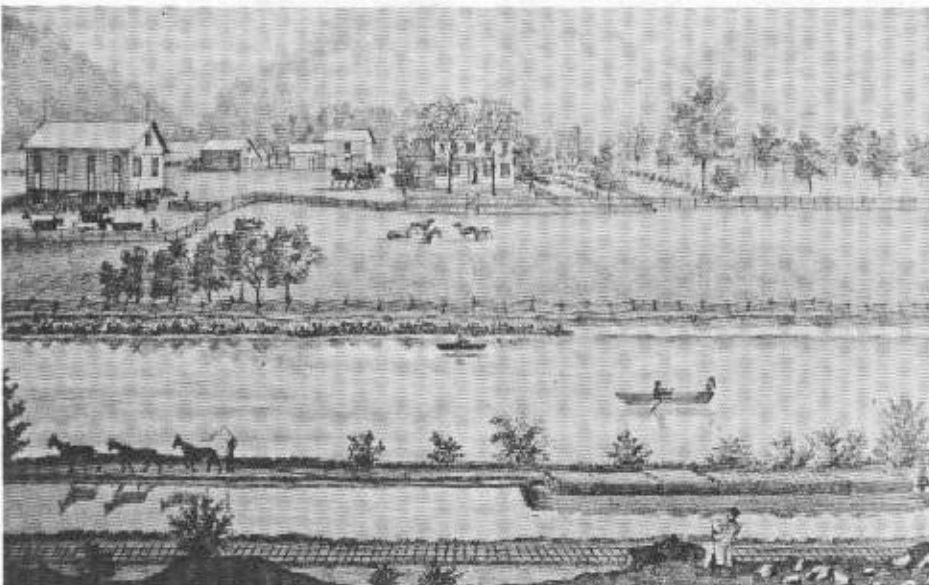
best canal park in Louisiana, and the only lock in the state on the National Register of Historic Places.

(From Register write-up by Gary J. Hebert, Editor, *The Greater Plaquemine Post*.)

FOX RIVER

The Berlin (Wis.) Boat Club will begin repairs to the Eureka Lock (one double lock) of the Fox River after Labor Day with the aid of equipment from the corps of Engineers and perhaps some materials from local contractors. The Eureka Lock and the lock tender's house have been submitted as candidates for the National Register of Historic Places. Donations for the restoration of the lock are needed by the Berlin Boat Club, P.O. Box 148, Berlin, WI 54923.

SUSQUEHANNA WEST BRANCH CANAL



An old print showing a canal "freighter" traveling along the West Branch Canal near Jersey Shore. The original caption reads: "Res. of James V. Crane, Nippenose Tp., Lycoming Co., Pa. Built 1776." (Courtesy Marion E. Gamble.)

CLASSIFIED ADVERTISEMENTS

WANTED BY COLLECTOR. Stocks, bonds, lottery tickets, currency, checks: From early canals, transportation, improvement companies - especially Virginia. Describe and price. Don Roberts, P. O. Box 162, Hampton, Virginia 23669.

Cruise the English Canals this summer in PHOBOS. Genuine ex-working boat, comfortably converted for family living. Reasonable terms. Details from East Whitley Farm, Shamley Green, near Guildford, Surrey, England.

Wanted: Someone with an interest in or a knowledge of the *early St. Lawrence Canals*. Homer L. Dodge, Cremona Farm, Mechanicsville, MD 20659.

**The British Petroleum Book of Industrial Archaeology* (Cossans) - Description of Britains industrial remains, industry by industry. Over 130 illust., hardback, 496 pp. \$13.95

**Now a Canal Belt Buckle!!* Design based on 1967 Erie Canal Postage Stamp. Silver and black metal. Very attractive. \$6.00

**A Canal and Waterways Armchair Book (Gagg)* - Hardback, 31 illust., 160 pp. \$14.95

Close Out! *Inland Waterways Guide* (1973) - Canal descriptions, maps, photos, 192 pp. soft cover. \$1.00

**The Shell Book of Inland Waterways* (McKnight) - Fully illust., comprehensive guide to every aspect of 4,000 miles of rivers and canals, maps, hard covers. \$12.95

**Thomas Telford* (Bracegirdle & Miles) - Great Engineers & Their Works Series. 115 excellent illustrations. Hard covers, 112 pp. \$11.95

Thomas Telford (Pearce) - Soft covers, 25 illust., 48 pp. \$2.00

**Waterside Pubs* (Russel) - Their architecture, history & relationship to canals. Hard bound, illust., 176 pp. \$8.95

Nov.-Feb. *Waterways World*, 56-60 pp. each canal articles @ \$1.00 each. Our selection back issues. 6 for \$5.00

(American Canal & Transportation Center, Box 842, Shepherdstown, WV 25443. In WV add 3% tax. Add 35¢ shipping \$3.50 & under, 50¢ over \$3.50.)

*New offerings

NEW RIVER

The American Canal Society strongly supports the Proposed New River Wild and Scenic River in West Virginia. The James River and Kanawha Company spent a great deal of time surveying the gorge for a canal which was to have connected the Ohio Valley with the Atlantic; and they did in fact complete a turnpike, now US-60 and I-64, to complete such a link by road. The river was used to float logs, and was probably used by man-powered, poled, river batteaux. Research into the historical aspects of the gorge might develop the historic location of the original turnpike dating from the 1820s, and evidence of early navigation of the river through the discovery of wing dams, sluices and eye-bolts through low-altitude aerial surveys at extreme low water.