"Captain's Corner"

In April the principal officers of the American Canal Society (President Tom Hahn and Vice Presidents Bill Shank and Bill Trout) met in Washington, D.C. to review the first 15 months of the existence of the American Canal Society and to make plans for the year ahead. Discussed were the formulation of the by-laws, our bulletin - AMERICAN CANALS, the work of present and future committees and all the things that needed to be hashed out. One thing was very apparent - we need more help in our activities; during the coming year we will be asking more of you, members of the Society, for your help in our various projects.

We will appoint an Information Committee. One of the functions of the Committee will be to disseminate dates of the functions of various canal organizations. We do not intend to sell any organization when it should have its meetings or field trips. Rather, we hope to exchange information in sufficient time to allow flexibility and choice in selecting dates.

Some of us had to miss the joint Spring Field Trip of the Pennsylvania Canal Society and the Canal Society of New York State because of conflicting dates with the Annual Reunion Hike of the Chesapeake and Ohio Canal Association, which was held on the same weekend as our trip. The PSES-CONYS Field Trip on the Delaware and D&H Canal in W.J. was held on the same weekend as a Canal Society of N.Y. function; the Rideau Canal trip in Canada sponsored by the Society for Industrial Archeology and the American Canal Society is on the same weekend as the Field Trip of CONYS and the Delaware and Hudson Canal Historical Society in September, etc. With good communications and cooperation surely we can do better in the year ahead. Send your tentative dates as soon as you can and we'll see what happens. Dr. Trout suggests a monthly status report so that we are not left behind in the future.

One major objective of the American Canal Society is to preserve the historic canals remains of the Americas. We were appointed to learn in the January 1973 issue of SCHOB OF HISTORY (published by the Pioneer American Society) that the last substantial bit of the Alexandria Canal - the old locks taking the canal from the river in Alexandria, Va. - was bulldozed out of existence for a motel in December 1972. Right in our backyard! Would it have helped to have had a Virginia Canal Society as a watchdog? We simply cannot sit back and see our American heritage destroyed in this manner. A key point here is that we need to help index, catalog, measure, catalog, study and get official status (National Register of Historic Places, etc.) of all historic canal structures. Part of this can be done with your assistance to Peter Stott and the Canal Index Committee. We are working with the Society of Industrial Archeology (SIR) and the Historic American Engineering Record (HAER) in the exchange of information in the indexing of canals and their structures. Dr. Bill Trout and I had fruitful talks with the chief of HAER and the National Trust for Historic Preservation (of which ACS will be a member organization) on the subject of preservation. Our rapidly expanding western planning and industrialization are overtaking our past but with intelligence and application we can take advantage of modern technology to preserve and restore structures of the past.

Tom Hahn

Rideau Canal Field Trip

Sept. 22-23, Join with members of the Society for Industrial Archeology and take part in their first project on a Canadian site. Explore the industrial settings and engineering works following the Rideau waterway between Ottawa and Kingston, which retains its original locks and hand operated machinery. Tours will be guided to mills, locks and the site of the historic mill and country town of marble Reservoir, typical of mid-19th-century industrial towns dominated by one family, along the commercial and military important waterway. Travel by boat a length of the canal from Chaffey Locks, through Davis to the Jones Falls, famed for its great masonry arch dam, hillside flight of locks and 19th-century buildings. Rest there overnight at the hotel, tennis and travel next day to the head of the canal, Kingston. There a tour of the new musical, the registry office, and the Kingston brewery will be held. Several publications, of which The Rideau Waterway (51A Occasional Publication No. 1) was the first, are being produced as the registration fee has been carefully kept down to approximately $10.00, which will cover all costs - publications, transportation, admittance, meals (1), and overnight accommodation - from S.A. Saturday until 5 P.M. Sunday. Tour registration forms will be available in July from Elma Brown, National Historic Sites Service, KIA OH, Ottawa, Canada. To obtain a copy of The Rideau Waterway and SIR for registration fee please write to Industrial Archeology, Room 5020, National Museum of History and Technology, Smithsonian Institution, Washington, D.C. 20560.

Canal Index Committee

A number of entries have come in regarding canals in the southern states, particularly 13 recently received from Mr. W. W. Richardson. The Mid-West is also represented (we include Mr. Lamb's Illinois & Michigan report in this issue), comments and additions are requested from American Canal readers.

No response however has come from Pennsylvania or New York and we hope that members will not remain idle long.

Peter Stott

U.S. "Canallers" Guide

We are gathering information for a travellers guide to key canal points of interest in the United States, to contain in particular information on restored areas and institutions, pump houses, restoration work and the like, with details on how to get there, when they are open, etc. We plan to have a person or committee soon to handle this project. In the meantime we need contributions to start. Send to Annandale Guide, P.O. Box 638, Glen Echo, Md. 20768.
The Rideau Waterway...

The Waterway... is 127 1/2 miles long, measured from the beginning of the chain of locks at Ottawa to the Escarp bridge across Kingston Harbor which may be taken as the junction of the canal with Lake Ontario. About eighteen miles of this total length are really an artificial waterway, the remainder being the ordinary courses of the two rivers and the lakes which form a part of the route. There are a number of so-called branches, one up Kemptville Creek to the town of Kemptville and four on the lakes to give access to small towns once served by the Canal, and there is one real branch constructed just after the Canal proper had been completed. This branch is the Big Rideau Lake to the town of Perth. It is almost seven miles long, and has two locks with a total lift of twenty-six feet.

On the main Canal, there are 17 locks with a total lift, one up and down, of 439 ft. of the locks are required for the ascent from Ottawa to the summit level of the Canal which is in Upper Rideau Lake, with a lift of 277 ft. For the descent from Upper Rideau Lake to Kingston, only 11 locks are used, the drop being 1/2 ft. The difference in the number of locks for the two sections matches the more gradual rise from Ottawa to Upper Rideau Lake, the average lift in each lock on this section being only 8 1/2 ft., and the steeper descent to Kingston, the average lift of these locks is 3 9/10 ft. The clear water in each lock measures 13 ft. long and 33 ft. wide, but the minimum size of vessel permitted thru is 100 ft. The official limiting draft is 5 ft. but boats drawing up to 5 1/2 ft. may normally go thru all parts of the Waterway. The main channel of the Canal has a minimum width of 60 ft. at the bottom and 80 ft. at the top, but the rounded bottom sections of some of the locks limit the size of barges which can be moved thru the Canal to somewhat less than the minimum size for normally shaped boats. Bridges over the Canal include those by the Waterway, the critical section at the Ottawa and where the limit is 26.5 ft.

At the Ottawa end the Canal starts with a flight of 6 locks which have come a familiar sight thru popular photography and the motion picture screen. It leads to a series of lock and drainage buildings. This great water stairway, with a total lift of over 80 ft., is nearly the entire length of the drop of the Rideau Falls into the Ottawa. The flight brings the Canal up to the level at which it is seen along Ottawa's Parkway. The limits of Ottawa are the next locks, a set of two at Hartwells, and another set of two at Peterborough. These four locks come within the next few miles, and there is also at Long Island one of the noted收费 masonry dams which are so striking a feature of the engineering work of the Waterway. Then follows a stretch of water over 20 miles long in which the Canal is straightened and the flow gentle, thru the level fertile farms of this part of Carleton County. A succession of locks in the next 15 miles, each with a lift of 1 1/2 ft., brings the Canal up the North Branch of Smiths Falls, on a flight of three, at Smiths Falls. Here, too, is a fine arched dam near the beginning of the Niger as the interested visitor must search for it. The locks which separate those at Smiths Falls lift the Canal to the level of Big Rideau Lake, the first and largest of the Upper Rideau Lakes. It is a long and broad lake that the Tay Branch to Perth takes off, the Beveridge lock being located at the outlet of the Niger, connecting Big Rideau and Upper Rideau Lakes; the latter is the summit of the Canal and as the link between the Rideau River and the St. Lawrence System. That is just what was used to be a portage. But thru the height of land into Newboro lock, where the Canal descends thru the Clifton, Sand, Whitefish and Cranberry Lakes. A large bog between the last two of these Lakes was submerged when the water level was raised by the building of a dam at Bowsers Mills; it was the site of some of the greatest difficulties in building the Canal. The Whitefish Lake is the outstanding piece of engineering of the entire system, the great arched dam and short lock being a marvel of modern engineering. Still little known except to fishermen and the occasional visitor, this giant curbed stairway of locks, flanked by a dam which is made up of a series of arches, is perhaps the most striking testimony to the skill of Colonel By and his associates on this Waterway thru the bush. Below Bowsers Mills, the Canal is formed by an artificial lake created by the flooding of the old course, the present level being by the dam at Kingston Mills, where there is another flight of three locks in a beautiful natural setting. These are charged into the estuary of the Cataraqui at the level of Lake Ontario, and from this point to the bridge over Kingston the canal is all of about 5 miles to the bridge over Kingston, around the Hook which marks the official end of the Canal. (This extract from THE RIDEAU WATERWAY by Robert L. Hixson, Editor of the University of Toronto Press and not reproduced under copyright provisions of the U.S. Government, is the authoritative, well-illustrated, 250-page, paper-bound 6 x 9 book, with a good index and tables of mileages, lock, clearances, etc., and for sale by the University Press at $4.00 from the American Canal and Transportation Center, 809 Rathborne Road, York, Pa. 17403.)

Douglas—ACS Director

The American Canal Society is honored to announce that Justice William C. Douglas, recently appointed as a Director of the Society as a Special Advisor to its President.

Justice Douglas is an internationally known conservationist with a keen interest in the preservation, restoration and usage of the historic canals of America.

The President of the American Canal Society would like to share with ACS members a letter from Justice Douglas dated June 5, 1973:

"Dear Tom:"

I am delighted that an effort is underway to preserve remnants of old canals. There are quite a few east of the Mississippi River that I have seen in several states. Although few remain intact, there are portions which can be made the center of state or local parks. Even a mile or so offer recreational prospects.

There is one in the Monongahela Valley near Hamilton, Pa., that should be saved.

"Yes, Douglas, and I joined a group some years ago to have a small segment of a canal included in one of Pennsylvania state parks. Canals are often associated with important historic events and usually perpetuating culture and heritage.

G.E. Donates Canal Land

General Electric is giving the town of Rotterdam land involving a total of 500 acres. Included are remnants of the abandoned canal's towpath, starting at a point east of Thurway Exit 26 and terminating in Rotterdam Junction. Included in the parcel is one of the remaining canal bridges. The bridge carried the towpath across Platetown Creek (Pott's Kill). One of the studies being made includes a bike path along the river.

Flights of Locks on the Rideau Canal at Ottawa, circa 1932. The Chateau Laurier is on the left, and the Canadian House of Parliament is close by. (Courtesy -- The Public Archives of Canada)
Lehigh Canal

Charles W. Derr, Chairman of the Citizens Canal Restoration Committee of the Borough of Freemansburg, Pa., 1917 reports that the city of Allentown made the necessary repairs to the towpath and that the section of the Lehigh Canal in east Allentown, Bethlehem and Freemansburg are watered once again.

Mr. Derr also reports on plans for the Canal Park in Allentown. The borough council awarded the contract for construction of the Canal Park at Monroe St. We hope to have this completed for use this coming summer. Not to rest on our accomplishments, we have started working on the second and more extensive phase. As the Monroe street wall has been completed for more passive recreation, we're planning a historical restoration of Lock 19 and the Nancy Run Creek section of the canal. At which time we will report on the project at the end of the summer. I have talked to Harry Rinker, James Nalley, the borough engineer, and the borough park architect about this. We want to come up with a comprehensive plan for this area. Some of our ideas are as follows: restore the lock appearance; install the lock house; replace the Nancy Run Creek culvert; replace the creek's mill bridge across the bridge; and install a fence to the section of the canal from the dam to the lock. Please pass a general cleanup of the area. We will constitute the basis for the project. Again, this is only a comprehensive plan for the future with no immediate plans to start any construction.

In conjunction with the above plans I tried to persuade borough council to purchase the Shallenberger Coal and Navigation Co. stock buildings in the canal area. As the council could not place this in the 1973 budget, I have taken it upon myself to purchase this structure as a holding agent until this park site is loped.

Bald Eagle and Spring Creek Navigation

The Pennsylvania Historical and Museum Commission is about to spend some money restoring the old lock house through work the Bald Eagle and Spring Creek Navigation system ran. Excavation of the furnace and rebuilding of the 19th century Iron Plantation was done in the fall of 1971 and the spring of 1972 at which time the survey work was done on the grist mill and the cider mill north of the site. The restoration of a canal lock is included in the restoration. The site will be restored to the 1850-1860 period.

Ohio Society Field Trip

The Canal Society of Ohio has scheduled its fall canal tour for the western portion of the Sandy and Beaver Canal on 19, 20 and 21 October. Further details in the next issue.

"Steamboat Bill"

The Winter 1972 issue of STEAMBOAT BILL (quarterly) of the Steamship Historical Society of America, Inc. contains a beautifully illustrated seven page article about steamboating on the Ohio River. This article is written by a passenger on the recent trip of the islands. The article is a reminiscence of the islands and the history of steamboating on the Ohio River. The author describes the islands and the history of steamboating on the Ohio River. The article is a reminiscence of the islands and the history of steamboating on the Ohio River.

This stalled canal-boat train vividly portrays one of the hazards of traveling the Pennsylvania Canal one hundred years ago. It's also an excellent example of fine authors publishing. With 216 pages of text and 65 illustrations, including photos by the author, and actual operating photos from the collection of Bill Wharne - it is one of the most complete canals on the Pennsylvania Canal Era now available. (A project of the American Canal and Transportation Center, priced at $4.75)

TUNNEL REOPENING AT DUDLEY

By Clive S. Taylor

Having lived alongside the gap hole that was the Titusville portal of Needleton Tunnel (Dudley's big brother) I have always been interested in canals. Being so close to Dudley Tunnel I had a particular interest in its reopening.

I arrived at the rally site with my boat ABCHU at 5 PM on Thursday, far from being the first there. After an evening meal I looked around the site, stretching some 1-1/2 miles. A really superb job had been made of Parkhead Locks since I last seen them. The Rally site was situated in the former Toll office by Parkhead Bottom Lock (No 3), a fitting use for the area we were in. As the daylight faded it became clear just what an unusual yet interesting site we had - a canal works, a steam engine firm, a steelworks, a large hoising estate, green fields with conve grazing and Needleton church on the hill proudly surveying all. We were all in or overlooking the rally site.

I was in sole company of an ice breaker and the local constabulary that Thursday night... Friday saw a hire of activity going on, boats arriving, more tents being erected, Trust and members engaged around the site on numerous jobs. The rally site was improved including the Narrow Boat Owners Club, and visitors garage, even the Wallsall Trolley Bus arrived and by this time the two trip boats were operating, causing some congestion (yes on canals!). It was all sorted out in the end, by nightfall.

Sunday saw rain, but the paper boy still came round as the previous two days. Well, we had complained about the low level of the canal water due to the lack of rain, so I suppose we brought it on ourselves. Boat owners received the handsome plagues on Sunday, and trips through the tunnel started. I went through at 2PM the journey taking approximately 1-1/2 hrs though time flew. On arrival back at the site by the special bus provided, I started up my boat engine to try to get to liquids and back before midday. It was then 4 PM when we set out. I had a friendly crew by this time) and it took us 1-1/2 hrs to reach the junction of 2 miles having passed most of the boats attending the rally.

We reached the tunnel entrance (Costy Hill) to be faced with four boats entering from the other end, the first of which was the only steam boat at the rally namely FURFUR. The last boat got stuck on shallows just clear of the tunnel entrance and between the two crews we took 1/2 hr to free it. Having lost 1 hour, we proceeded through the 357 yard tunnel to be met by the sight of some 60 wooden and steel boats, most loaded, moored in the center of Goosewood tides were (Brantish Steel) which spans the canal. We proceeded down to Main Basin where after photographic evidence, we turned round and headed back in the fast fading light. Another wait at the tunnel entrance for two more boats made our arrival back at the rally site somewhat late: 11:30 to be exact. We, the crew, had not eaten since noon and were invited back to a crew members house for tea! I eventually turned the boat the bed at 2 AM Monday morning. On Monday it rained and was so wet most of the day. Events were rained out. Tuesday brought a cloudy day.

In all 320 boats had come from just about as far North, South, East and West as you can get. I'm sure the organizers had not originally envisioned 320 boats attending. Full credit to them. Although TRAP has ended things have not ended yet. There is still a heck of a lot to do. One intention, eventually, is to run round trips i.e. Park Head, Dudley Tunnel, Park Head, but that is in the future. Meanwhile, trips through Dudley Tunnel will continue at the weekends and any CAN member who manages to find himself on one of these trips will, I am sure, be made extremely welcome by the ICT members.

(Rev. Clive Taylor is a member of the American Canal Society.)
THE CANALS OF SOUTH CAROLINA

By Lewis W. Richardson

(Conclusion of a two-part article)

THE RIVER NAVIGATION

As early as 1711, the Proprietary Government was concerned with aids to
river navigation. In 1777, with the Rev-
elution in progress in the North, twenty-
four thousand pounds was set aside for the
improvement of various waterways near
the coast. The British invasion of the
state halted all such projects and it was
1797 before there was any major work.
Even the next thirty years, there were peri-
odic attacks on the river problem, with
small improvements, generally dispersed
and with little effect.

The completion of the Santee Canal in
1800 accentuated the need for river
improvement. The way to the Charleston
markets was open to a great part of the
state, provided the dangerous stretches of
river navigation could be tamed. The improve-
ments needed required too much
money with too much risk, to attract
private investors, and the state govern-
ment failed to act. Peace following the
war of 1812, brought with it a rapid
rise in the price of cotton, which had by
then become the chief money crop. This
boost to the economy plus a considerable
surplus in the State Treasury, finally
forced the General Assembly to act. In
1817, the state created the Santee Canal
and appropriated a million dollars to be
spent in four years for, "The Internal
Improvement of the State of South Car-
olna." The money was earmarked for
turnpike roads and canals to improve the
Pee Dee River, but the bulk of it was to be expended on the Wat-
era, South Carolina, and Congaree; all part of the Santee
system.

Work began in 1820 on non-sector
projects, one other, a project that had
been evident from the start that a labor
force for such a crash program
would be a problem. The Santee Canal ex-
erience had proved conclusively that
leased slave labor was unsatisfactory for
such work. In any case, with high cotton
prices, the slave catchers of the
plantations were needed. Then too, artisans capable of stone cutting and masonry would be needed.
Recruiter officers were dispatched to New York and Boston and by the summer of 1820, nearly 1000
men, including many Irish immigrants, were on the job. They took passage money and were paid at least 10$ above the prevailing local rates. This
policy, very unpopular in the neighbor-
hoods where the work was in progress, was
expensive and supplied valid ammunition to critics of the program.

All of the canal projects were built by "cost-plus" contracts with no real cost
estimates and a general lack of management or control. This resulted in no better than it does today. Late in 1822, five of
the canals had been completed, but the
day of reckoning was at hand - the million
dollars appropriated for internal improve-
ments had been expended. There was much
dissatisfaction, particularly in those
sections that had not directly benefited
from the program, and serious opposition
to the granting of more money. However,
the Legislative Committee investigating the
matter stated that the program was successful
in that the canals were not abandoned -- the immense sums expended
on them will be worse than lost. --
(Read it and we'll let the last but little
on our national character --).
This and
similar arguments prevailed, and, by 1830,
additional appropriations had brought the cost of the Internal Improvement program to $1,935,596.

With this money, the State had built
some roads, made "cuts" and deepened chan-
nels along the coastal waterways and had
improved, by removing logs and other ob-
structions, miles of river channels. The
major portion, however, had been spent on
the up-river canals. There were 25 miles
of these, with 59 locks covering a 1ft
of 1177 feet of the Canal's elevation. Four locks were built of wood, four of
brick and thirty-one of granite. Two of
the wooden locks were rebuilt of stone in
1831. While the lift in feet of each lock
is a part of every "Report," the other di-
ensions are difficult to determine. The
original proposal for the navigations, in
1818, stated that the lift should be
80' x 10', the guard locks, 130' x 12'.
This was evidently the size built, as the
river boats are described as being 50' x
8', 64' x 9-1/2", etc. An exception was
the Columbia Canal, where the locks were
70' x 16'.

The State established tolls for the
canals, beginning at one cent per mile of
cotton per lock. Information is very
 sketchy but there seems to be no doubt
that the Columbia Canal was the most pro-
fitable of the river works. In the first
year 1827 boats and 66,597 bales of cotton
passed through. These figures do not in-
clude boats with produce and merchandise,
arriving or departing from those water
ways. Carriages other than cotton, included
bricks, flour, grain, salt, wood and man-
ufactures, often used the waterways to their
chances. For several years, the
Columbia was to return a profit to the State. In
contrast, the canals on the Catawba-Wat-
era never paid for their maintenance and
the $200 a year paid the lock keepers.
In no case did prosperity linger. The spread
in the Depression that began before 1850, all of the canals were closed to
traffic. The only part of what has been
termed "The Costly Delusion" that
remained was the hazard to the
river that continued.

It may be of interest to note that
the President of the Board of Public
Works, for a time, was Joel Polk, whose
name is perpetuated on a successful
by the Christmas flower than by his long
career in public service. Serving with
him, was Robert Mills, later to be the
Federal Architect in Washington and the
designer of the Washington Monument.

Because of changes in design and additions to the original plans, data
on the river canals is confused. For example,
Mill's Atlas (1826) lists a total of
only 55 locks. The figure following, on
the individual canals, are derived from the
Engineer's Report of 1826, when the
were 59 locks.

Catawba-Wateree River

In the canal era, the river was known
as the Catawba as far south as Water-
see Creek, about twelve miles below present Great Falls, below this point it became
the Wateree. Canals were built around the
four principal falls on the river, all on
the west bank. Some work had begun on
all of them by 1820; the Landsford and the
Catawba were completed in 1823, the
Wateree in 1824 but it was 1826 before the
builders could boast that the Rocky
Mount would be "finished so as to pass
the crop of next year." All were abandon-
ed by 1838.

LANDSFORD CANAL: At Landsford, 13
miles south of Rock Mill. Cost $190,000;
two miles long; 3½' lift. One guard and
four lift locks, all stone. The contractor
was Robert Leckie, later to be Super-
intendent of Masonry on the Chesapeake
& Ohio Canal.

CATARINA (FISHING CREEK) CANAL: From
Powell's Landing, near present Fort Loxon,
over a ridge (The deepest cut in the
state, 121') into Fishing Creek valley,
then to the river at the mouth of the
Creek. Cost, $165,000; length, 3 miles;
11ft 6" lift. One guard and six lift locks,
all stone.

ROCKY MOUNT CANAL: Near present
Great Falls. The canal here was a com-
oration of excavated channel, dams and
slackwater pools, around the most diffi-
cult stretch of river in the state. Cost,
$202,000; length, 5 miles; lift, 121'.
One guard and fifteen lift locks, all
stone. Both the Catawba and the Rocky
Mount projects are now under the water
of Waterse Lake.

WATSEEE CANAL: About seven miles
north of Camden. The canal began at
Jones Mill, a little above the mouth of
White Oak Creek. It was planned to
cross Conway Creek by aqueduct and
return to the river at Sander's Creek
but instead the canal was terminated at
Conway Creek. Cost, $190,000; length,
7 miles.

(Concluded on next page.)

Philip J. Hoffman, retired engineer of Johnstown, Pa., continues to turn out so
of the finest and most authentic sketches available of life on the American canals
a century ago. Above is his rendition of the Allegheny Portage Railroad connection between the Juniata and Western Di-
visions of the Pennsylvania Main Line Canal. Mr. Hoffman is the principal illustrator of the "Pennsylvania Main Line Canal" by McCullough & Leuba and "Welch's Report on the Allegheny Portage Railroad" -- both recently produced by AMERICAN CANAL AND
TRANSPORTATION CENTER.
Canals of South Carolina

(Concluded from preceding page)

"POLING THROUGH"

Saluda River

LORICK'S (LORICK'S MILL) CANAL: On the north bank, about 30 miles above the confluence with the Broad, now under Lake Murray, the exact length uncertain, but it was only to pass a mill dam. Begun, 1829; completed, 1832; abandoned, 1837. Cost, $20,000. On one side of the canal were the mill owner, paid $1,000 of this sum so as to forestall the destruction of his dam, by a freeze in the channel.

DREHER'S (DREHER'S SCADS) CANAL: On the north bank, about 11 miles from the Broad, now the site of Lake Murray Dam. Begun, 1829; completed, 1832; abandoned, 1837. Cost, $78,000; length, one mile; lift, 21'. One guard and five lift locks, all stone.

SALUDA CANAL: Along the north bank entering the Broad just above the junction of the two rivers. Traffic from the Saluda Canal crossed the Broad River in the slacksboat of the Columbia Feeder Line. Begun, 1832; completed, 1832; abandoned, 1837. Cost, $281,000; length 3 miles; lift, 32'. One guard and four lift locks, all stone.

Broad River

LOCKHART CANAL: In the town of Lockhart. The canal begins on the west bank, about 1-1/2 miles north of State Road No. 10, and on the east the river opposite the mouth of Turkey Creek. Begun, 1829; completed, 1832; abandoned, 1837. It was abandoned for its full length in 1833. The mill on the east and the mill on the west of the canal were both built of stone and the name is due to the fact that there was a mill on one side of the canal and on the other.

DREHER'S CANAL (PATRICK'S EXTENSION) CANAL: On the east bank of the Broad, two miles above the mouth of the Saluda. Originally intended to bypass Bull Shoals, it was planned to improve, by means of a wing dam and one stone lock of 21' lift, a natural channel between Grixburg and Dreher Island. Begun, 1829; completed, 1829; abandoned, 1837. One guard and two lift locks, all stone.

COLUMBIA (COLUMBIA) CANAL: In the City of Columbia. The canal began at a mill on the east side of the Broad and was extended to have had one lock additional to the Bull Sluice lock. Begun, 1829; completed, 1832; abandoned, 1832. Cost, $24,000; length, 3 miles; lift, 3'. One guard and one guard lock and one lock at the upper guard lock and the river lock at Broadly were stone, the other three were brick.

Bull Shoals (BRADLEY'S) CANAL: On the north bank, about 3 miles above the confluence with the Broad, now under Lake Murray. Exact length uncertain, but it was only to pass a mill dam. Begun, 1829; completed, 1832; abandoned, 1837. Cost, $20,000. On one side of the canal were the mill owner, paid $1,000 of this sum so as to forestall the destruction of his dam, by a freeze in the channel.

DREHER'S (DREHER'S SCADS) CANAL: On the north bank, about 11 miles from the Broad, now the site of Lake Murray Dam. Begun, 1829; completed, 1832; abandoned, 1837. Cost, $78,000; length, one mile; lift, 21'. One guard and three lift locks, all stone.

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The Union Canal Tunnel at Lebanon, Ky., was so narrow that there was barely room for a canal boat to squeeze through, with no additional clearance for a towpath. Hence, the mile-long tunnel and the eight miles of tunnels and bridges makes an inviting and interesting subject for the canal historian.

Some years ago ACS Vice President Bill Shank attempted to lay the material for the "First Canal in USA" permanently to rest with the following introductory paragraph to an article which he published in the International "Torch" Magazine:

"America's first canal was built about 1636 in Plymouth County, Massachusetts, when the people of Plymouth, Duxbury, Kingston and Marshfield founded Boston to reduce the dangers to navigation in their area by digging a short channel from Plymouth to Boston. This primitive, tidal-water canal was usable only 20 hours a day at the time of changing tides."

"The antiquity of American Canals, "How Old Is Old?" In past years, talking to groups, one could always anticipate the question, "Who was first?" My answer was to tell of a canal built by the Jesuit Fathers on the River Wye at St. Marie, near Georgian Bay, Ontario. The Fathers and their Huron charges, under constant harassment by the Iroquois, built a stockade around their mission and village, about a hundred yards from the river. A large spring within the stockade provided the water supply for a channel, large enough for the freight canoes, from within the stockade, down to deepwater. To overcome a fall of about two feet, a simple one-way lift was added. This "one way" allowed the heavy canoes, bringing vital supplies to the mission and taking away furs, to be loaded and unloaded without fear in the safety of the stockade. The date was 1614-1615. Although miniscule, this canal had all the elements of later and larger projects."

(Submitted by ACS Director, L.R. Richardson)
VIRGINIA'S OLD CANALS AND NAVIGATIONS

By W. E. Trout III

THE TIMELAPSE CONNECTION FLIGHT: Most critical is this important flight of 5 large stone locks in downtown Richmond, 3 of which will be destroyed by the imminent Dominion Expressway. A donation to James River and Canal Parks Inc., 777 Richmond, Va. 23206 will entitle you to be a "Friend of the Canal" and help this very active citizens group. The lower end of the canal, the Richmond Dock, may be rebuilt as a storage lagoon for storm sewage - hopefully a temporary role as promised. On the good side, the 2 other locks of the flight have been dramatically cleaned up by Reynolds Metals and recently received, with ceremony, the first plaque to be presented by the Virginia Historic Landmarks Commission. Reynolds has made a showplace of the site and has even begun a canal library.

THE RAPPANNOCK NAVIGATION: This is the best remaining lock-and-dam navigation for bateaux in the U.S. and will be flooded if the Corps of Engineers' Salem-Dock Dam is constructed. Although this threat appears to have been overcome there is still the more difficult task of having the Rappahannock declared a Scenic River with thorough development as proposed by the National Park Service and the Bureau of Outdoor Recreation. Actively working on this is the Rappahannock Defense Committee, P.O. Box 156, Fredericksburg, Va. 22401, which publishes a newsletter and urgently needs contributions.

THE DISMAL SWAMP CANAL. Congress has declared the Dismal Swamp Canal a Natural Landmark, and has authorized a study of the best means of protecting the swamp and the Dismal Swamp Canal. Since the beginning of the scenic waterway in 1869, the canal might have been altered to save water, perhaps by halving the size of the locks and chambers, and allowing one more lock to be used rather than the present two. The locks are still in use but the Army Corps of Engineers plans to close them by 1980. The Dismal Swamp becomes the Backwater Canal, and in making sure that the stone locks, and a wonderful aquatic in Weldon, will be preserved.

The Locks should fit the National Park Service's canals on Great Falls, Va. (Potomac Canal), and when completed, the Blue Ridge Parkway (Batterson Creek Lock). The Virginia Historic Landmarks Commission has been very active in canal preservati on and deserves our support. For details contact W. E. Trout III, P.O. Box 1522, Petersburg, Va. 23802.

THE NORTH RIVER NAVIGATION. The proposed study of the North Fork of the James River between Lexington and Buena Vista, using the route of an abandoned C&O Railway branch, appears to be in limbo but may not be dead yet. This well-preserved and comple piously endowed navigation is the most accessible by car in Virginia. Dan Saladino is already a scenic wayside park.

THE RIVANNA NAVIGATION. The Rivanna Locks in Charlottesville are handsome, but the 3-mile channel will be flooded if the Corps of Engineers builds the Roundabout dam instead at using an alternate site upstream of Charlottesville. Somehow the use of the alternate site should be encouraged.

THE UPPER APPOMATTOX NAVIGATION. The proposed 3-mile upper appomattox canal to Petersburg for use as a park. Unfortunately, the remaining mile of the canal will be used as a landfill by the city, but can be re-excavated when the time comes. The ruins of the Locks of Appomattox are still a reminder of the old timestep.

THE COCKS CRESCENT AND LITTLE RIVER NAVIGA TION. This may become part of a Loudoun County Park Authority. The Locks of the creek is owned by the Xerox Corporation which has expressed interest in preserving and perhaps restoring the lock and related facilities.

THE TUCKALOOGA CREEK NAVIGATION. The picturesque Tuckaloog Creek area on the west end of Richmond is rapidly being invaded by housing developments. The town council is making a decision. It is a matter of time before it is too late.

THE ROANOKE NAVIGATION. At the lower end of the lock and dam navigation through Virginia is the Roanoke Canal, between Roanoke Rapids and Weldon, N.C. There have been complaints about the cost of the locks and chambers, and in making sure that the stone locks, and a wonderful aquatic in Weldon, will be preserved.

Canal enthusiasts should visit the National Park Service's canals on Great Falls, Va. (Potomac Canal), and when completed, the Blue Ridge Parkway (Batterson Creek Lock). The Virginia Historic Landmarks Commission has been very active in canal preservation and deserves our support. For details contact W. E. Trout III, P.O. Box 1522, Petersburg, Va. 23802.

I. & M. Canal Foundation

The I. & M. CANAL FOUNDATION is dedicated to the promotion and development of the recreational, historical, and natural environments of the canal and its adjacent environs, is determined that the Canal will be restored, its full recreational potential developed, and that the Canal be preserved for future generations. The ball is rolling, but now it is more important than ever to develop a broad base of support. The Canal is nearing the time for action is greater than ever.

For details and to sign up for our newsletter, write to: Illinois and Michigan Canal Foundation, 302 Liberty St., Morris, Ill. 60451. Individual or Family Membership is $10.00; others available.
Middlesex Canal

The Historical Commission in conjunction with the Middlesex Canal Society of Woburn has filed a bill in the State House of Representatives for the resumption of training the Old Lexes Canal in Woburn.

This bill pertains to the portion of the canal which lies on State property between Route 129 and between Route 38 and Alfred Street. Appearing to present the bill was Leonard J. Gann, a new member of the Woburn Historical Commission, who through the use of maps and photographs called upon upon the State Department of Public Works to dredge, clean, and refurbish the Canal. Mr. Gann stated that the State is submitting a similar program in Woburn for a 1200 ft., section where Route 129 is to cross the canal.

It was pointed out that just last fall the Federal Government recognized the Middlesex Canal as a National Historical Site and to preserve and restore the same. Meetings are regularly held on the second Monday of each month at the Intermediate School in Woburn at 7:30 PM. Membership dues are $1.00 per year, and are raised to $2.00 for an organization. ACS President Tom Hahn told the association during a recent General Assembly last summer that the Middlesex Canal would be put on the group in any way that it could. One immediate source of help would be for ACS members who are able to support the Georges River Canal Restoration with $1.00. Money goes long way down in Maine and your donations would be well spent.

George's River Canal Association President Ronald A. Overlook (Box 212, Woburn, MA 01801) also told the association and the Woburn Historical Society can be justly proud of the contributions they have made in the restoration work they have helped in the canal site quickly shows visitors that they have accomplished much.

"Yachting" Magazine

The March 1973 issue of YACHTING contains a six-page special, "Wild and Unexplored -- Riding the Scottish Highlands via the Caledonian Canal (also a five-page article on "Wrong Way" cruise from New York to Florida via the Great Lakes). For instance, the Illinois River (All parts of the Illinois Waterway), the Mississippi River, the Inner Harbor Navigation Canal, the Gulf Intracoastal Waterway and the Gulf of Culebra.

Individual copies of the magazine are available for $1.00 from Yachting, 844 4th St., New York, NY 10036.

Dismal Swamp Canal

A measure of success in the long campaign to Virginia's Great Dismal Swamp -- Union Camp Corp. will deed 9,400 acres of the swamp (including 12.6 million to the Nature Conservancy) which will transfer the property to the Interior Department for a wildlife refuge (Central Atlantic Environmental News, Feb. 17, 1973).

Canal Society of New Jersey

The Canal Society of New Jersey is considering the publication of the book THE MORRIS CANAL: THE BEGINNING AND THE END by Society Editor, Bob Geller. The book would be of a transitional chapter between the 1823, when it was very rare and the 1929 Vanderven Report. It would be the result of long out of print. The book would be printed on good antique-white paper stock and bound with hard maroon buckram binding. The pictures and four foldouts in the 1929 report would be additional. In short, probably be additions to the transitional chapter. Such a commemorative volume would be particularly appealing to the members of the 15th anniversary of the Morris Canal. The Morris Canal and Banking Co. will finally be issuing the book. The book would sell for about $10. In order to help determine whether there is sufficient interest, ACS members who would like to purchase it should write to: The Canal Society of New Jersey, Maulock Hall, P.O. Box 737, Morristown, N.J. 07960. Your check or money order is no commitment to buy -- just indicate your interest.

N.Y. State Barge Canal

Native American ingenuity plays a large part in maintenance of the 57 massive locks of the New York State Barge Canal. Composed of the 55-mile Erie, Champlain, Oswego, and Cayuga-Seneca Canals, the locks is 2.5 million passengers and 1.7 million tons of goods, 5000 passages of pleasure boats through the locks during the regular April to November navigation season last year.

To facilitate the lock trips, much enlarged from its 19th century origins, was built in the years 1901-1919. Most of these locks are of wood and are considered ancient canals and gates. "Commissioner Schuler said, "are at least a half-century old, and all get a major check-up each winter for ice due to break down, we make the repairs and improvements that we need and can afford." Joseph R. Sillato, director of waterways maintenance for the New York State Department of Transportation, says that on the average, each lock is rehabilitated once every 10 years with a minimum of six locks being overhauled at a time. Sillato's staff of under 100 craftsmen constantly keep their repairs to the locks not only for the 57 locks but also to keep their fleet of about 50 tugboats in winter, steamers. The various locks are replaced with diesel engines and the latter are periodically disassembled and completely overhauled.

Boat Restoration

Canal enthusiasts in the Cumberland, Maryland, area have been helping to raise money to build an authentic 0 & 0 Canal boat, patterned after the plans of the Canal Company, Barge No. 57. A dollar of more contributions will entitle the donor to a "full boat certificate" in the restoration project. Send contributions to: 8 0 0 Canal Co., Cumberland, Inc., 207 N. Cumberland, Md. 21502.

"Waterways World"

"Waterways World" is published monthly and is devoted entirely to matters affecting waterways. It includes news of events in the United Kingdom, as well as a large number of books in Britain and abroad (including from time to time the United States). The annual U.S. subscription is $6 per year to Waterways Productions, Ltd., potassium House, Dale St., Burton-on-Trent, Staffs. DX 3YP, England.

Texas Barge Canal

Representatives of 40 Texas counties hope to form a San Antonio River Basin Development Association to create interest in a proposed barge canal linking the San Antonio River with the Rio Grande River at Rio Grande City, Texas. The San Antonio River would run from Floresville, about 20 miles southwest of San Antonio, to the Rio Grande River via the San Pedro River and Rio Grande City. The proposed canal reportedly already has the backing of Texas Gov. Preston Smith.

New Signs for Old Erie

New historical signs are going up along the banks of the Erie Canal in the Fayetteville area. The signs are both land and waterborne. The "information panels" explain how the canal was engineered, constructed, and how the use of equal importance will be other signs discussing the economic impact of the canal and its role in today's environment. The project began after the museum received requests for information on the canal and the various watercraft on the waterway.

Renovation Funds Asked

Canal Museum trustees have asked for county government financial support of a project to turn back on the Weilbach Building in Syracuse, NY. Approval is being sought for $10,000 in county funds to help remodel the 19th-century structure at Erie Boulevard and Montgomery Street to visually open it to the public. This will give the former Erie Canal weigh station the location where the greatest tonnage was carried on New York's canals. It has been a county-sponsored museum since 1965.

Dam-Lock Discovered

An element of the timber-tidal dam across Kings River (a tributary of the Kings River) in downtown Mass. peninsula and E Somerville, erected c1670 to power a series of mills, was exposed during a utility excavation in what Prof. Douglas P. Adams of MIT believes to be one of the important IA discoveries of the decade. Shortly after construction of the Middlesex Canal in the late 1810's, a set of reversible locks was cut into the dam's east end to permit the traffic of their boats and ships to the Ottawa River. The locks' double gates allowed passage regardless of the relative height of water in the bays or sea water on opposite sides of the dam.

In 1776 the estuary was filled in for a cover over part of the site (much unfinished); Canal St., adjacent to the canal was widened into present Rutherford Ave, and all traces of oaks and locks were lost to view. Curiously enough, evidence of both have intrigued historians for years, but not until excavation for a major storm drain last fall was there definite evidence of remains. Excavated to view for a brieft period, the site was saltwater and empty of the remains of both dam, the form of the dam side lock wall. It was in good condition. Before recon- struction of the dam, Prof. Adams and other members of the Middlesex Canal Assn of which he is president, those concerned hope that the site can be formally excavated, the remains of part of the dam, locks and associated mills permanently exposed, preserved as a historical site and turned into a historic site in the area (which includes over 20,000 acre Bunker Hill and the Charlestown Navy Yard National Historical Park). The project involves the controlling authorities and the new Bunker Hill Community College whose campus occupies the site. Those interested are encouraged to contact Prof Adams: 50 Monument Ave., Charlestown, 02129 (617) 241-9560.
D.&H. Canal Historical Society Activities

This old photo of an abandoned lock on the Delaware and Hudson Canal at Lackawaxen, Pa., is thought to have been made about 1925. (The D. & H. Canal ceased operations in 1899.) This photo was sent to us by Dr. Ernest H. Coleman, ACS member.

The Delaware and Hudson Canal Historical Society is already into a busy year. The annual meeting was held in March, at which time the elected officers were: President, Warren Van Fleck; Vice President, Walter Olsson and Treasurer, Eli Zwick. William Collins was elected as Chairman of the Board and Mrs. Ruth Math was appointed Secretary at the organizational meeting of the Board of Trustees. Committee chairmanships were appointed and work for the year is underway. The museum reopened 20 May; it is located on School Hill Road in High Falls and is open Friday, Saturday and Sunday from 1 to 4, until the end of September. The Bulletin will be published on a regular basis. The Society is going to sell Bottle # 2 in the series. This one will be in commemoration of the Roebling Aqueduct across the Delaware. Bottle # 1 can still be ordered from St. James Powers, 201 Park Lane, Port Ewen, N.Y. 12466. It is blue and features the gear house and commemorates Locks 26, 17, 18, 19 and 20 in High Falls, receiving National Historic Site designation in 1966. Price is 60.00 plus 75c postage and insurance, when mailed.

The Canal Society of New York State will go to the Delaware and Hudson for a field trip on 22 September. Headquarters will be Lake Minnewaska, a resort beside a glacial lake atop a mountain. The trip will last 3 days and run from the Upper-Sullivan County Line at New Glens Falls to Lake Minnewaska. It will feature a walk to a falls with a lead mine at the base, two locks and a stop at the town in Ellenville to see buildings used in canal days. The group will visit Port Ewen, Middleport and Port Jervis and will see the remains of the enlarged locks. At High Falls the group will visit the D & H Museum and visit the DePuy Canal House Tavern. The day's outing will end with dinner at Lake Minnewaska and an evening slide program plus a surprise. (Submitted by Mrs. Grace Elliott)

Canal Village Train

The second of the Historic Rome Development Authority's feature attractions for the Erie Canal Village - a narrow gauge railroad - is well on the track and headed for an anticipated June test run. The train which will include an engine and tender, four gondolas, and a caboose, is being built by Edward J. Nolan of Pulaski. With the exception of some wheels, couplings and some iron trim, all the units making up the train will be new, and according to the builder, will be an exact replica of the type of train popular around the turn of the century.

The type of engine being built by Nolan is a 2-6-2 engine, in that it consists of two wheels in the pilot truck, six drive wheels, and two in the trailing truck. Under each gondola car will be fitted with seats and have a capacity of about 125 passengers. The railroad will be located on the "tire" or south side of the canal and will carry its riders over a one and one-half mile section of the canal between S. Charles St. and the Rt. Bull area. The north side of the canal will be the path used by horses to draw the canal boat, which is also nearing completion.

"Canal Fever"

The February 1973 edition of Surveyor, the quarterly publication of the American Society of Magazine Editors, contained a full-page article, "Canal Fever is Contagious," about the canal and building restorations in Ohio at Cohocton (MONOCELLO II), Piqua (THE GENERAL HARRISON) and Canal Fulton (ST HELENA II). Also included is a three-page article (both articles nicely illustrated) "For British Canal A Thorough Restoration." Querries to: Editor, SURVEYOR, American Bureau of Shipping, 45 Broad St., New York, N.Y. 10004

Glossary

Tom Hahn is collecting canal terms for a glossary of all canal terms. Information and canal enthusiasts are needed. If others are interested in the project, perhaps a small committee can be formed as much work is needed in identifying, collecting and collating information. In addition to the term itself, when known, indicate with what canal associated.

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Farmington Canal Restoration

Charter was granted in 1822 by the Legislature in Connecticut for the Farmington Canal Company, to connect the two waterways in a single system. Explosive growth of textile-weaving industries, textiles, brick yards, sawmills throughout the valley created markets for better transportation, and the canal grew famously. In 1839, New Haven shipped northward on the Canal boats 1,000,000 pounds of traffic. Passenger traffic flourished to the point that Farmington at a fare of 3.75k in 24k hours bankrupted the stage lines with their dusty and bumpy roads. Of the 20 locks rising 20 feet above tides, all were beyond the Parthenon Bridge at the River floodplain from Southport to Atosu, where Canvass Whitt's location survey took place. On the fall of the Parthenon Bridge, the canal closed for the winter of 1837, its short life was over. Sheffield and Farmington could not support the railroads, and when the Canal closed, the railroads closed. The first rail car passed through the town in 1845. The long road of the Farmington Canal, leaving a lasting mark on Farmington, has been preserved with both freight and passenger traffic.

Growth of the towns, rapid and continuous, was widespread in every direction through the Great Plain communities. In many places every sod and stone of the Canal has been removed to open the way for the new improvement over the channel or washed out the sluices and culverts. Many of the railroads have the same courses as the Canals, and many rail lines which are now through the Canals where a little drainage water remained clear enough for them to live, and where the town children and dogs are too insignificant to throw a stone at the train, as the tangles of wild shrubbery, and weeds covered even the memory of the Farmington Canal. It is open to the public as a matter of fact.

Towns included Farmington, Hartford, Windsor, Middlefield, Tolland, and East Haddam, each with the name of a Canal. Historical Society, Inc. took action to recover a portion of the Long Level in its Town. Contractors donated their equipment and labors to the work, including brush clearing and the State of Connecticut erected a splendid 15-foot high) bronze plaque on the Old Lock for the contribution of the Farmington Canal. For this effort, Mrs. Ruth Hummel and her Historical Society was presented the first prize of the Connecticut Historical League for their preservation efforts.

Next, in spring 1973, with the same incentive, the Farmington Canal Association has been established to explore possibilities of recreation, open space, and historic preservation in the vicinity. Planners, conservationists, and historians in each town are preparing for the Canals by fixing a tree for the schools for a major effort. It will be a long hard task, but all Canal enthusiasts see the Association well. For information or offers of assistance, please write Mrs. Ruth Hummel, P.O. Box 2, Plainville, 06062 Connecticut.

The WEILLAND CANAL EXHIBIT at the S. Catherine's (Ont) Historical Museum contains, among other displays, a 16-foot model of one of the original locks (1829).