A TEN-YEAR REVIEW

This fortieth issue of AMERICAN CANALS completes a full ten years of activities for the American Canal Society, since Tom Hahn, Bill Trout and I had our initial discussions about forming an international canal organization in 1971. It is helpful to take a brief look backward to see if we have accomplished what we set out to do.

The incorporation of the AMERICAN CANAL SOCIETY (with Bill Cagle as our attorney) was officially approved by the State of Maryland October 2, 1972, designating us as a "non-profit scientific and educational corporation", and indicating our objectives as follows:

"To encourage the preservation, restoration, interpretation, and usage of the canals and other waterways of the United States, past and present; and to cooperate with local canal societies for the foregoing purposes to serve as a central repository of information and to provide assistance, leadership, and direction for action regarding canals and waterways; to provide for the exchange of archeological, industrial, historical, and other information pertaining to American canals; to encourage and actively participate in the research of data and materials concerning American canals; and to publish materials on the foregoing and related subjects."

It took us a few more years to prepare a set of by-laws, but we finally made it in April of 1978; in the meantime we held our first Directors' Meeting in Syracuse, NY in May of 1974.

Our first newsletter was published in March of 1972, before we even had a name for it. Two more issues appeared in June and November of that year, and we have been publishing an 8 to 12 page quarterly news letter, with varying regularity, in February, May, August and November of each calendar year ever since. Bill Trout has prepared a ten-year index to all past issues which is included with this issue.

Other publications have included: The American Canal Guides by Bill Trout — Part 1 (1974) Part 2 (1975) and Part 3 (1979); The Canal Boat Construction Index by Carroll Gantz (1979); "The Best from American Canals" by Hahn, Shank and Trout (1980); and miscellaneous listings of Canal-Related Organizations, Canal Parks and Boat Trips in the USA, etc. We have also issued ACS shoulder patches, site-markers, and commemorative medals.

We have been co-sponsors of three successful field trips: The Rideau Canal (1973) with the Society for Industrial Archeology; the Welland Canals (1979) with the Marine Historical Society of Detroit; and the Whitewater Canal (1981) with the Ohio and Indiana Canal Societies.

We have assisted with and/or encouraged the formation of the following new canal societies in North America: Carroll County Wabash and Erie Canal Inc. (1974); Illinois Canal Society (Cont'd on Page 2)
Lehigh Canal Boat
(Cont'd from Page 1)
crew of Hauser's Truck Service, Route 22 and 512, Bethlehem, provided the towing power.
Hauser donated the service of three towing wreckers, a 30-ton and a 16-ton, Leshak said. Two laborers were hired to pull the boat from the quarry and the third served as an anchor during the final salvage.
Northampton borough rescue units also assisted, and the Northampton Borough Fire Department flushed out the boat to make the back end lighter.
The sportmen's club acquired the quarry containing the submerged boats in 1970 and 1971 from the cement company in two parcels for $1. When a member noticed a portion of a boat above the quarry's surface in 1975, the club decided to salvage one as a Bicentennial project.
Efforts to find a salvageable boat and to free it from tons of silt and other boats trapping it took six years. Leshak stressed the entire project was done with volunteer labor.
Since raising the boat in October, volunteers have reinforced the craft with steel banding to keep it from breaking apart in its removal from the quarry.
When Leshak was asked if the group is considering raising another, he replied, "After six years - c'mon!" He said the quarry's low water temperature (in the 50's) and other conditions will keep the remaining boats from speedy deterioration for a number of years to come.
Leshak said the club will do some repairs, "putting the planks in where they should be" and then wrapping the boat in black plastic to prevent rapid excessive water loss. This, he said, will prevent warping.

EDITOR'S CORNER
This column is always the last thing to be written just before I stuff everything into an envelope and mail the copy from Shephardstown, West Virginia to Bill Shank in York, Pennsylvania where it goes to the printer, and where Bill does the layout work and all the other things that it takes to get a new issue into production. Consequently, I am always in a hurry to whip out something for the column and get the copy in the mail before the Post Office closes. Typically, it is a Saturday morning, 23 January, at 11 o'clock, and the Post Office closes at noon. Perhaps it is as well — as a result you readers of American Canals get more canal articles and less editorializing.

It hardly seems possible that this is the 40th edition for which I have been the editor. There is the expression that "Life begins at 40," so perhaps that portends good things for American Canals and the American Canal Society in the future. I am glad that we are able to increase to twelve pages as it provides more flexibility in the length and type of articles that we can carry. Also with this issue you will note a switch to a lighter color paper stock. This is an effort to help ensure better quality control, easier reading, and clearer photographs.
One thing we are lacking is an adequate supply of photos to liven up our articles. So, I appeal to all contributors to provide photos, line drawings or maps where you can. If you can't, don't let that be a deterrent to sending in the article. To take the words of that situation, we need a better photo library to help fill in the bare spots, so I would appeal to those of you who have photographs to share with us.
Happy Tenth Anniversary to all of you. I have enjoyed our exchanges of letters and friendships through the years.

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TEN-YEAR REVIEW
(Cont'd from Page 1)
(1977); Virginia Canals and Navigations Society (1977); Portage Canal Society (1977); Scioto Valley Canal Society (1978); Neversink Valley Area Museum (1980); Sandy-Sewer Canal, Inc. (1981); Indiana Canal Society (1982); and the Canadian Canals Society (1982).

Early in our history, we formed a Canals Index Committee, which has produced detailed informational sheets on about 70% of the historic canals in both North and South America. We also have a working Canal Boat Committee, which has collected much valuable data on old canal boats, and has located various underwater remains.
Our membership has grown to nearly 700 persons in the United States, Canada, and the United Kingdom — with Directors in both the latter, to provide liaison with our members there. Our officers are constantly being contacted by individuals and organizations worldwide seeking information on American waterways, past and present.
We have been given financial aid in our endeavors by private industry and individual bequests, rather than federal agencies. We are also supported by our growing Life Membership and ever-increasing new memberships and renewals. We feel we are, at last, financially self-sufficient. We thank all of you, our members, for your continued support and loyalty. Together, we can continue to be a powerful voice for the preservation of our historic canals in America and the growing use of our inland waterways in the future.
Bill Shank

ENGLAND BY CANAL BOAT AND BICYCLE
ACS Director Bill Gerber, of Chelmsford, Massachusetts, has put together an interesting trip to England, which should appeal to all active members of ACS who like hiking and biking, and the "outdoor life" in particular. The group will leave Boston's Logan Airport June 25th, 1982 returning July 11th. Arriving in London, the group will proceed to Birmingham, where they will pick up two narrow boats and use them for "boating" for a circle-tour of the canals of the Midlands, including the Avon Canals, the River Severn and the Stafford and Nantwich Canal. Participants will provide their own ten-speed bikes for towpath riding and visits to nearby points of interest along the way. All will assist with the locking operations and housekeeping chores on board the boats. Total cost of the trip, including air fare, is estimated at $1375 per person. At that price, it should be a "sell out!" Interested parties are asked to contact Bill Gerber at once, at 16 Princess Avenue, Chelmsford, MA 01863.
He has a complete information "kit" ready for you, maps of the route to be followed, diagrams of the boat facilities, and physical requirements for the participants.

The above stamp was sent from FINLAND with the following Note: "I was glad to receive the publication American Canals and the other information material. Will you please note the new address of our offices. I am also pleased to enclose a postage stamp showing the Mustola Lock in the Saimaa Canal. The stamp was issued in honour of the opening of the new Saimaa Canal on August 5, 1968." J. Saisto, Director of Waterways Department Roads and Waterways Administration (RWA), P.O. Box 33, 00621 Helsinki 52, Finland.

AMERICAN CANALS, NO. 40 — February 1982
THE EMPEROR’S LOCK MODEL

By William E. Trout, III, Ph.D.

Professor Needham, in his latest hefty volume on Science and Civilisation in China,1 and in a detailed article in the Transactions of the Newcomen Society,2 has presented convincing evidence that the Chinese were the first to invent the pound lock - with a lock chamber - and that many of these were in use while large government boats plied the canals almost 1500 years ago (not 2000 as mistakenly stated in American Canals No. 7, Page 3). However, by the late 1700’s European travelers began to rediscover China, the large boats were no longer used so the locks had been abandoned in favor of flood-gates with inclined planes or sills, which were found to be much better suited for the comparatively small boats then in use. Therefore, in the late 1700’s, when the canal era in Great Britain was just beginning, the western world, without the benefit of Dr. Needham’s research, not only thought that the Chinese were ignorant of locks, and lacking in inventiveness; but were so bold as to present a lock model to the Emperor of China, as a technological present from western civilization!

The only clue I have concerning the Emperor’s lock model is a handwritten comment which I discovered in a book published in England in 1797 and now in the library of the University of California, Berkeley. This book is dedicated to the Duke of Bridgewater - the "Canal Duke" - and is entitled, OBSERVATIONS ON THE SYSTEMS OF CANAL, NAVIGATION, WITH INFERENCES PRACTICAL AND MATHEMATICAL, IN WHICH MR. FULTON’S PLANS OF WIND-BOATS, AND THE UTILITY OF SUBTERRANEOUS AND OF SMALL CANALS ARE PARTICULARLY INVESTI-

GATED, INCLUDING AN ACCOUNT OF THE CANALS AND INCLINED PLANES OF

China, by William Chapman, London, 1797.3

William Chapman (1749-1832) was, among other things, a consulting engineer on the Grand Canal of Ireland, and engineer of a branch line, the Kildare Canal.4 Amidst the most fascinating discussion of inclined planes, boat lifts, and other inventions in his book is the following paragraph on page 86:

"It is an argument against the inventive powers of the Chinese, that they have not hitherto constructed Locks, as a great part of invention lies in the conception of the possibility of the event; and the Chinese have been informed, for upwards of a century, of, if not the possibility; as the Jesuit Missionaries sent to China by Lewis the XIVth, in 1635, acquainted them with the principles of a Lock, with which they were highly astonished. The Fathers thought that any one who would carry to China the model of a Lock would be well received; and cause as much admiration as the first writer that the Missionaries presented to the Emperor,","X Dec. 1797. I gave one to S. G. Staunton before he set out - and he and it has as yet never been heard of - R. Mylne"

Because the title page of this copy of the book is inscribed, "Robert Mylne Esq. from the Author" we know that this marginal note was by Robert Mylne (1733-1811), architect and engineer, involved with, for example, the Gloucester and Berkeley Canal and the Worcester Canal, and described by a cartoonist as the "firey comet."5 Sir G. Staunton, to whom Mylne gave the lock model, was no doubt Sir George Leonard Staunton, (1737-1801), a born diplomat, F.R.S., M.D., a friend of Dr. Samuel Johnson, and Ministry Plenipotentiary of Britain’s first "embassy" or delegation to China, under Lord Macartney, in 1792, five years before the date of Mylne’s marginal note.6,7 The obvious inference is that Mylne’s lock went to China with Sir George. But what happened to it?

Sir George Staunton was ill when he returned from China in 1794, so that may be why he never got in touch with Mylne. He had in fact planned to remain in Peking as the British minister, but his health prevented this - as well, no doubt, as a rule of the Emperor that any ambassador desiring to reside in Peking had to stay there for life! As it was, the delegation was hustled out of China after a stay of only 47 days. Critics at the time charged that this was because Lord Macartney refused to kowtow before Emperor Ch’ien-lung. However, a table was drawn up showing that all embassies to China had been eased out in a short time so prostrating oneself made no difference. Such were the problems of canal enthusiasts in those days.

Sir George probably entrusted the lock model to the delegation’s scientist or ‘machinist,” Dr. James Dinwiddie (1746-1816), who had been giving public lectures on China throughout the British Isles, complete with “philosophical fireworks” and balloon ascensions, so was the ideal person to convey science to the Chinese Emperor. Dinwiddie described his duties as “The erecting and regulating the planetarium; the constructing, filling and as-

Inclined plane for boats at Ning Po, China.

sponding in the balloon; descending in the diving bell; together with experiments on air, electricity, mechanics, and other branches of experimental philosophy; astronomical and other calculations,”8 and presumably the demonstration of Mylne’s lock model. Unfortunately for canal historians and the Emperor’s court, this series of spectacles never took place, because Emperor Ch’ien-lung was not at all interested in foreign science and technology. Dr. Dinwiddie heard him say, when inspecting an air pump, “These things are good enough to amuse children”9 but otherwise were of no interest to the Emperor and his court. Perhaps one reason for this indifference was that the great Lord Macartney, representative of His Majesty’s government, and his entourage, were considered mere merchants or traders by the Chinese and therefore of extremely low rank. No self-respecting Chinese scholar who knew English dared stoop to serve as translator, and by decree, foreigners were not allowed to learn Chinese, and any Chinese caught teaching them had to be punished. Macartney’s translator was a Chinese who knew Italian! So although the lock model may have been demonstrated to the Emperor (as the air-pump was) it obviously made little impact on Chinese science, despite the prediction of the Jesuits 100 years before. Also, the language barrier made it impossible to delve deeply into Chinese culture. Dr. Dinwiddie did, however, get a good look at the canals and made the following significant observation:

"The flood-gates in the canals of China are preferable to English locks in every situation where the canal is nearly level, and are constructed at a quarter of the expense. The inclined plane down which the boats are launched and up which they are drawn is a mode superior to our practice, for besides their being cheaper they are much more expeditious. The power employed consists of two windlasses, placed opposite to each other on the banks or abutments of the canals, the axis perpendicular, the gudgeons of the lower end supported on a stone and the upper end turning between two stones, sustained in an horizontal position on four upright stones. Each windlass has four bars which are manned with twelve to sixteen persons. The time employed in one instance observed was two minutes and a half, and in another about three."10 Were these Chinese

(Cont’d on Page 4)
THE EMPEROR’S LOCK MODEL
(Cont’d from Page 3)

inclined planes ever copied in England or anywhere else in the world?

But we are still left with the question, what happened to John Mylne’s lock model? Curiously, Chapman’s 1797 book, in which Mylne made his notation, has material on China obtained by the delegation, and actually quotes passages from Staunton’s account.9 If Chapman had known about the lock model, he certainly would have mentioned it. Perhaps because the scientific program of the delegation was something of a flashe, it was not properly publicized in England. But there may be another reason why Chapman and Mylne were not informed about the lock model.

When the delegation returned to England in 1794, Dr. Dinwiddie stayed behind, taking a closer look at the canals, and then sailed to India with the scientific apparatus — which the Chinese had ignored — presumably including the lock model. He stayed in India until 1805, after which he returned to the United States and for five years was Professor of Fort William College in Calcutta.8 This raises the interesting speculation that Dr. Dinwiddie may have introduced canal locks to India! Has anyone worked out the history of canals in India? In any event, it is possible that he did not take the model back to England with him in 1805, but left it with Fort William College, or with the East India Company’s Botanical Garden in Calcutta where he delivered some of the material collected by the delegation; but inquiries in India have not yet turned it up.

There is still hope that Dr. Dinwiddie himself can tell us more about the Emperor’s lock model. He wrote a journal of his trip to China, some of which was published by his grandson, W.J. Proudfoot, in 1868.11 And there is of course the model itself, somewhere. What, indeed, did you do with the Emperor’s lock model, Dr. Dinwiddie?

SOURCES

4. Dictionary of National Biography
8. Ibid., pp. 310-311.
9. Ibid., p. 54.
10. Ibid., p. 269, Macartney quoting Dr. Dinwiddie.

Author’s Note: I would like to thank Professor Needham for reading the manuscript and correcting a serious error; Roger Calvert for locating a copy of Proudfoot’s book in the British Library in London (Call Number 10925.saa.8 if anyone has the chance to look through it for references to the lock model); and Cyril Wade for writing a summary for this article for publication in Sheila Doug’s excellent magazine for the British Waterways Board, WATERWAYS NEWS (May 1977).
RIDEAU CANAL CELEBRATES 150TH BIRTHDAY

KINGSTON, ONT. — When Lieutenant-Colonel John By died in 1836 he was a bitter and disappointed man. He had been the genial name behind the construction of the 122-mile Rideau Canal in what was then known as Upper Canada — a feat that required great courage as well as engineering excellence — and yet he'd been ordered home to England after its completion in 1832 to face an enquiry into the canal's 800,000-pound cost.

Though the investigation absolved By of any mismanagement, the colonel didn't live long enough to get the honors that were due to or to see how important his creation would become to the birth of a nation.

Today, 150 years later, Ontario is poised to pay tribute to that achievement with a year-long celebration in 1982.

The Rideau sesquicentennial, which started on New Year's Day, will not only honor the opening of the canal but its 150th year of successive operation. This is a rare occurrence in North America because most of the continent's canals fell into disuse and closed down, as railways and then roads usurped the waterways' importance in communications.

Today, the 49 beautifully maintained locks and 24 lock stations strung along the Rideau Canal from Kingston to Ottawa stand as a tribute to the man who supervised their construction. They also serve as a focus for a unique and surprising holiday experience, allowing visitors to discover some of the loveliest countryside in Ontario, as well as a fascinating part of Canada's past.

Though the canal was originally built as a defense project for British North America, the threat of another 1812 war with the United States never materialized. The waterway did serve for a time as a transportation system of national and local importance, but its military, commercial and public usefulness declined by the end of the 1800s.

But at the beginning of the 20th century, the Rideau Canal got a new lease on life. It became an attractive vacation destination for Canadians and for the new-friendly invader from the U.S. In 1972, it was transferred to the care of Parks Canada, a federal department that's responsible for the immaculate locks and historic buildings that line the canal's route today.

One of the most remarkable effects of the Rideau Canal has been to forge a close relationship between the land it traverses and the people who inhabit its course. This loyal tie has resulted in a tremendous response to the 150th anniversary celebration. An estimated 5,000 citizens are actively involved in organizing about 350 different events.

It should be noted that you don't have to have a boat to discover the Rideau Canal. Roads parallel its route almost from one end to the other, and every lock station is accessible by foot, car or bicycle.

When you decide to explore the locks, most of which are hand-operated today as they were 150 years ago, be sure to pick up a free "passport" at the first lock station you visit. Keep it with you all year and get the lockmaster of each station to stamp and sign it for you as a unique souvenir of a holiday to remember.

If you want to explore Canada's history on your trip, be sure to visit the blockhouse and Lockmaster Anglin's Visitor Centre at Kingston Mills. Follow the trail to the defensible lockmaster's house and the blacksmith shop at Jones Falls. Stroll through the villages of Burritt Rapids and Merrickville, which are still much as they were in the late 1800s. Visit the Bytown Museum theatre at the Ottawa locks.

Hand-operated, lower-gate mechanism of the flight of locks on the Rideau at Jones Falls, Ontario. (Photo by Bill Shank).

If it's peace, quiet and beautiful scenery you want, stop at any point on the canal. There are picnic tables and washroom facilities at most lock stations, and you'll never have to look far for a pleasant, green spot for sun-bathing or fishing. If you don't want to take a water tour, that can be arranged.

For more information on Rideau Canal 150, contact Ontario Travel at 900 Bay St., Queen's Park, Toronto, M7A 2E5. Information on the Rideau Canal can also be obtained from Parks Canada, 12 Maple Ave. N., Smiths Falls, Ont., K7A 1Z5.

NY STATE BARGE CANAL LEGISLATIVE QUIZ

The New York State Barge Canal is: A) a way to move goods, B) a tourist attraction, C) a recreational waterway, D) a source of electricity, E) all of the above.

What the state should do is: A) modernize the canal, B) widen the canal, C) all of the above.

If you answered E and C, you agreed with most of the speakers at a recent hearing of the New York Assembly Transportation Committee.

Most of the 534-mile canal system is 60 years old and showing the signs of age. Equipment is deteriorating and the waterway isn't large enough to handle the new, larger barges. Rebuilding the canals would cost more than $1 billion, according to the state Department of Transportation. Improvements alone are estimated at $300 million.

One of the reasons to modernize the canal is for its source of energy.

James L. Lorocco, state energy commissioner, said the canal was being used for small hydroelectric power facilities. "Further expansion of its hydropower potential is appropriate not only as a means to reduce our dependence on foreign oil, but also to avoid the problem of ever-increasing costs of non-renewable fuels (like oil and coal)," he said.

(From D. E. R. Schmidt from the 16 Dec. 1981 Albany Times-Union)

WATERWAY GRANTS

The Pennsylvania Humanities Council recently awarded grants to the following projects: "Working Rivers: Changing and Changels," sponsored by the University of Pittsburgh Office of Research, received $14,400 for support of finishing costs in production of a thirty-minute film on the historic and evolving roles of the Monongahela and Ohio rivers; and The "Role of Canals in Economic, Social and Technological Development," sponsored by the Canal Museum at Easton, PA, received $10,000 for five interpretive exhibits and an accompanying public lecture program on the role of canals in Pennsylvania.
THE PENNSYLVANIA RIVIERA

By Judith Platt

After the French Riviera, what? How do you keep 'em home in PA after they've seen Paris, not to mention Cannes, Monaco, and other haunts of the idle rich? The previous summer we blew the bankroll with a three-week stay in France which included a comfortable, spacious apartment in Nice, bathing in the Mediterranean, sightseeing in Paris, side trips to jet-set watering places, and two days in Florence. What sort of plans could satisfy our desire for adventure, luxury, contact with people, and natural beauty, yet be accomplished in a week and cost no more than $500?

We got the answer while taking a Sunday morning stroll in the New Hope, Pennsylvania area before heading back to Philadelphia after the July 4th weekend. We read on historical markers that we were walking the towpath of the Delaware Canal, a portion of the Pennsylvania Canal system, built in the nineteenth century to haul coal down from the Lehigh Valley. The markers further informed us that the canal still maintains many of its original locks and aqueducts and that it is still possible to walk the length of the canal - 60 miles - on the towpath which borders it. In a burst of the spirit in which Hillary and Tensing said why not? We wondered: why not spend our week walking the canal?

Crossing the Aqueduct in New Hope, as seen from the front of the canal barge. Note mules and drivers on the towpath. (Photo by Bill Shank).

Quickly our mutual enthusiasm for the idea grew; my husband, Allen, is a romantic and I love a challenge, but the sober facts were these: we are in our 50’s and our physical activity of late had been limited to an occasional walk of three miles or less (usually in the city), weekends bicycling, housework, and gardening. Walking an average of ten miles a day with our week’s clothing on our backs would be a very different sort of venture for us.

We put our plan into action by calling Roosevelt State Park: the canal, towpath, and “berrm” (the western bank of the canal) comprise the Park.

In a day or two we received clear, simple maps of the Park showing the towns through which we would pass and the location of the locks and aqueducts. Using these maps we planned each day’s walk: about 9 or 10 miles a day. Then we made calls to inns along the canal. We were able to find lodging on the canal in all but two places: the restaurant of the Golden Pheasant (near Erwinna) backed onto the canal, but the house in which we would spend the night was located about a half a mile from the restaurant on the road. In Yardley we could find no inn or tourist home so made reservations in nearby Newtown. Two of the inns had swimming pools, a feature which we would greatly appreciate since the week chosen for our walk would turn out to be extremely hot and humid. Our original plan was to spend the last night in Bristol, but a combination of Allen’s sore knees and the advice of several people met along the way that the canal near Bristol was very industrial, with factories which would necessitate our leaving the canal at several places to walk around them, made us decide eventually to end our walk in Yardley.

On a Monday morning in July, we donned our new running shoes (recommended to us at a local sport equipment store as best for steady walking) slacks and tee shirts, and borrowed back-packs, were driven to the Greyhound Bus Terminal in downtown Philadelphia by our son, and boarded a bus for Easton. After a two-hour ride north on Route 611 we left the bus in Easton and after a brief walk through a busy workaday small city we came to the towpath and the beginning of our adventure.

As we stepped onto the grassy path we were abruptly in the country and quickly felt far from the city bustle. The beauty of the canal, towpath, and river, the thick barrier formed by the trees which hid the road from us, the absence of billboards, hot dog stands, and souvenir shops — all combined to give us the feeling that we were deeply in the country. Wildflowers and butterflies were all around us. Small animals — rabbits, squirrels, and woodchucks trusted us enough to come quite near. We saw familiar birds — robins and bluejays — and some less common, like redwing blackbirds. At a turn in the canal a couple of long legged herons rose up from the waters and flew awkwardly off into the dense growth along the towpath.

Looking upstream at Ulsterstown Lock Number 18, from the covered bridge just below the lock. (Photo by Bill Shank).

(Cont’d on Page 7)

DAY BY DAY TRIP SUMMARY

Day 1 Bus from Greyhound Bus Terminal (Center City Philadelphia) to Easton. Brief stop at Easton Museum. Easton to Riegelsville: approx. 9 miles. Dinner at Triangle Bar—Route 611. Lodging at Riegelsville Hotel.

Day 2 Riegelsville to Erwinna: approx. 13 miles. Dinner and night at Golden Pheasant.

Day 3 Erwinna to Lumberville: approx. 9 miles. Dinner and lodging at 1740 House (swimming pool).

Day 4 Lumberville to New Hope: approx. 8 miles. Lunch at Mother’s/Dinner at Pickles. Lodging at Hacienda Inn (swimming pool).

Day 5 New Hope to Yardley: approx. 11 miles. Dinner and lodging at Oppert Arms Hotel in Newtown.

Day 6 Return to Philadelphia by car (courtesy of two sons). Conrail a possibility.

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We were surprised at the constantly changing aspects of the path. Sometimes the growth underneath was high and rough; sometimes, where homeowners cut the grass themselves, the turf would be smooth and velvety. In some instances where the “berm” belonged to a canal home property, this area too was cared for by the owner and was exquisitely landscaped with trees, lush grass, and rhododendrons, laurel, and other plants native to Pennsylvania.

The canal itself widened and narrowed, sometimes flowing swiftly, sometimes almost as still as a pond, topped with algae or filled with long grass waving in its depths. The river to our left was at times close — clearly visible with an occasional house on the Jersey side, sometimes hidden by thick bushes and trees, and then invisible — separated from us by a swamp or a barren, stony island. The river, too, had its changing moods. At times it was placid and wide, then narrow, then fast running witheddles, currents, and white water. One hot, still, afternoon we left a shaded tunnel-like stretch of towpath and were surprised by a wide expanse of river studied with large, grey rocks and crowned by high, wooded hills. Suddenly the veil of trees was gone, and we could see to the north and south for great distances.

We constantly referred to our map to identify the locks and aqueducts. Small bridges crossed the canal at regular intervals and we learned to gauge our progress by them. They also gave us access to the road and enabled us to leave the towpath at lunchtime. (We had not planned our lunch breaks, but when we were hungry we went up to the road and by asking passersby or merely taking a chance on finding a diner or stand were able to have quite adequate lunches.)

We had a powerful sense of the past. It was easy to imagine the mule-drawn barges of coal following the same route. In the Canal Museum at Easton we had seen domestic articles used by barge families during the heyday of the canal, but stronger than these for evoking the days gone by was a young employee of the Park cutting the towpath growth who told us that his “grandad and daddy both” had worked on the barges and had gone to school only during the brief period in winter when the canal was frozen. He patiently, and with some pride, explained how the locks had worked, and later at Point Pleasant we were able to observe the “wickets” he had described which allowed the water to flow through and raise and lower the barges as they brought their loads down to Bristol.

We met no other backpackers walking the towpath. We did, however, meet and talk with a variety of people. These contacts ranged from casual, brief encounters: two young men fishing from the banks of the canal on hearing of our goal shook hands with us and congratulated us much in the manner of well-wishers who cheer on runners at various points along the route of a marathon; and a hard-hatted road worker with whom we carried on a shouted conversation returned to his drilling saying enviously, “You’re having a ball!” — to longer conversations with homeowners along the towpath. There were former city dwellers from both Philadelphia and New York who had begun by coming to the canal for a weekend respite from the city and had been beguiled by the beauty, peace, and solitude of living along the towpath, and like converts to a religion were the most convinced advocates. We also talked with longtime residents: a farmer, who allowed us to change our wet socks on his porch, told us that his daughter was the seventh generation of his family to work their farm. The feeling of many of these canal dwellers was summed up in the words of one friendly lady who walked along with us to show us an exceptionally fine view and said in parting “This place gets in your blood. You’ll come back, I promise you!”
Gould Visits New Port Mayaca Lock

While most of us have been freezing in the "Bitter Winter of '82," ACS Director Alden Gould (Ft. Myers, Florida) has been running around in shirt-sleeves pursuing his favorite hobby — photographing working canal locks.

Here are some pictures he has sent us of the new Port Mayaca Lock, near the eastern end of the Okeechobee Waterway across southern Florida.

The Lock was completed in 1977, at a cost of approximately $16,000,000. It is four hundred feet long by fifty-six feet wide, with sector gates. Adjacent to the Lock is a four-gate spillway, with gates 29 feet wide by 19.5 feet high, manually controlled.

There are four additional locks on the Okeechobee Waterway, which connects the Atlantic Ocean, north of Palm Beach, with the Gulf of Mexico at Ft. Myers.

Detailed view of the manually-operated sector gates of the Port Mayaca Lock. Lake Okeechobee can be seen in the background.

Exterior view of the Port Mayaca Lock looking toward the east. Just beyond the lock is the St. Lucie Canal.

Penmark, PA 19126

Center for Canal History and Technology

The recently organized Center for Canal History and Technology held its first Symposium at Easton, PA, January 30th, 1982. The event was attended by some 110 people from Pennsylvania, New Jersey, New York State and Delaware. Lance Metz, Symposium Director, amazed the attendees by distributing a 230-page bound edition of the "Proceedings" before the papers had been presented! Subjects covered included the careers of Canvas White, Charles Ellet, John Roebling; Gravity Railroad of the Pa. Coal Co.; the competition between railroad and canal along the Schuykill; the impact of the Lehigh Canal on Moravian Bethlehem; and life style in the early Anthracite Coal Era. The faculty included historical specialists from Lehigh University, Bethlehem Steel and Penn State. Similar Symposiaus are planned for the future by the Center, whose headquarters are 200 South Delaware Drive, Box 877, Easton, PA 18042.
RETURN TO THE GREEN RIVER

By Jack E. Custer

The Middle Ohio River Chapter of the Sons and Daughters of Pioneer Rivermen toured the first three locks and dams of the Green River of Kentucky back in October, 1976. The lock on the Rough River is notable in that it was the first concrete dam on the western rivers. It is also not readily accessible and is on private property.

The M.O.R. Chapter’s 1976 trip was an eminently successful effort to educate many and many have hoped that the project would become a model for the remaining half of the Rough River’s locks and dams would eventually be scheduled. Finally it happened.

On October 2, 1981, river buffs from Kentucky, Indiana, and Tennessee congregated at Bowling Green, Kentucky.

Shortly after 9:00 a.m. on October 3, a convoy of five cars was formed. In the lead was John P. Hines, a former deckhand turned bank president who led the group over the southern Kentucky countryside.

The first stop was at the Barren River on the outskirts of Bowling Green. It was there that steamboats of all kinds could be handled and freight for this area. It was also from here that passengers could board smaller sailboats for Evansville and Louisville. At the present time a steamboat landing is now a boat ramp, with no visible vestige of the former lively steamboat trade to be seen.

One interesting aspect of the Bowling Green wharf was that the town was dry, while the vicinity of the wharf was wet. So, even in its fallow days, steamboating on the Barren River had some attractions. That all that had to do was to take the streetcar out to the steamboat landing, and a good time could be had.

But, like many other areas, steamboat traffic dropped off after 1920’s. The Evansville burned there in 1930 and that was the last of the Green/Barren River packet traffic. While the packet trade died off, towboating continued for some years. Asphalt was brought to Bowling Green from the Nolin River for some time after wards by towboats. However, the steam tow boats lingered on until the latter 1940’s when their prohibitive operational costs finally pre cluded continued operations. Now it is difficult to envision that there was ever river traffic in the area of Bowling Green.

From the old steamboat landing at Bowling Green, the carava headed through the boom docks to the Barren River lock and dam, 15 or 16 miles from Bowling Green. This 1930 lock replaced an old hand-operated lock at that site. Interestingly enough, the old lock was left intact and the new lock built alongside it. Across the river was once a five story mill, vestiges of which are still visible. This mill used a water turbine instead of the more familiar mill wheel to generate power. However, the flood of 1913 wiped the mill out.

The Barren River lock and dam is an easy place to visit. The lock was abandoned in 1965 when the Green River dam No. 4 was breached and the pools up the Green and the Barren could no longer be maintained. However, river traffic on the Green and the Barren had then decreased to the point that it was no longer practicable to maintain navigation there. As an unfortunate consequence, Bowling Green, Kentucky, is no longer accessible to river traffic.

The Barren River lock and dam is fascinating, in that it dates from the 1930’s and yet has been out of service for almost 16 years. The lock gates have been rendered inoperable. All the machinery is still in place, though badly rusted and showing the years of disuse. The Corps of Engineers once maintained that place with considerable attention, but now it is overgrown and the feeling of abandonment is pervasive in any and every direction.

The steamboats of the Green and Barren Rivers were small. In fact, these boats were built to fit the locks of those rivers! One interesting singularity of their operation was that the stage on these packets was raised by pulling the stage’s boom upwards. This was not the practice on the Ohio and the Mississippi, where the stages of packetboats were normally raised with double locks between the stage and the boom.

Green and Barren River steam packets were singular, in that they were built to fit minute-scale locks on those rivers. From the architectural point of view, they were anomalies, for the simple reason that their lines were compressed to the point of distortion. That is to say, you have no problem telling which boat the Howards built for the Green and Barren Rivers!

From the Barren River lock we headed to No. 5 on the Green River. This lock dates from 1933-34 and replaced another lock and dam which was a short distance downstream, part of which is still visible. Lock No. 5 is in the middle of nowhere, so that feeling of possibly trespassing was a very real possibility. The group reached No. 5 and found another scene of abandonment. The dam still holds back a three meter deep pool of water but the old power house is grown over with vines. The lock gates are rusty and bolted together. The lower approach to the lock chamber is clogged and overgrown to three to five feet old.

From No. 5, the group headed on to No. 6. No. 6 was built from 1901-06 and was hand-operated all its days of activity. From there we were 13 miles above No. 5, two miles from the mouth of the Nolin River, and 17 miles from the ferry at Mammoth Cave. One interesting feature was a heavy timber guide wall above the lock. It is still intact, though many trees grow through it now. Mammoth Cave National Park is directly across from No. 6.

When Mammoth Cave became a national park several decades ago, many landowners in Edmonson County had their property confiscated and were forced to leave by the U.S. Government. This action caused many hard feelings in the area, which still exist. Those who were unwillingly displaced were undoubtedly embittered.

As a result, many were so irate at this action that they swore that they would get revenge on Uncle Sam. Accordingly, many dismantled their houses that the government had displaced them from. They moved their houses on rafts and floated them down the Green River. However, the lockmaster at No. 6 found himself in a dilemma: (1) he sympathized with these displaced people and wanted to help them take their homes elsewhere and start anew; however, (2) as lockmaster he had to identify and log all craft locked through at No. 6. He could do his job and not the work of No. 6 still displaced; yet, if he did not, he would have been aiding and abetting theft of property that the government had purchased.

The lockmaster at No. 6 had compassion for these people; but yet he could not lock them through without getting them and himself in trouble. Instead, he simply related to his sons that he would not be averse to their furtively locking the rafts with houses through in the middle of the night, so long as there were no signal lamps and he could not be connected with this operation. Uncle Sam may have gotten the land; but he certainly did not subdue the spirit of these Kentuckians.

The caravan threaded its way back over the cuts to the main highway and headed off to No. 4 at Woodbury, Kentucky. There the group found a hand-operated lock of sandstone dating back to 1839. A close inspection of the “modern” hand operated winches on each of the lock gates indicated that these winches were built by Charles Barnes, a famous steamboat engine builder of Cincinnati some years ago.

The dam at No. 4 on the Green River was breached on May 24, 1965, and this caused the loss of three locks. The lock indicated that these locks were built in 1934 and up to No. 1 (by the way, there is only one lock and dam on the Barren River) on the Barren. This meant the end of navigation on the upper Green River and the Barren. However, there was precious little navigation in that area in the 1960’s, so the loss was hardly worthy of concern.

The Green River of Kentucky is a singular experience for lock fans, steamboat nuts, and historians of rivers. It is about the only place that one can find lock chambers dating back almost two centuries, still in relatively good shape and tangible.

The steamboats of the Green River were small, yet incomparable. And visiting this area in which they once ran is an incredible experience. Throughout the tour one could continually hear the question “How could those steamboats have been that small?”

Visiting locks and dams dating back to the 1930’s is one experience; however, it is mind-boggling to visit the Green River’s locks and dams that have been abandoned for only 16 years. This park-like setting has given way to rot and ruin and oblivion.

See them while you can, if you can.

AMERICAN CANALS, NO. 40 – February 1982
"Pride of the Union," a restaurant boat on the Union Canal in Scotland, shown crossing an aqueduct.

The accompanying photos were brought home by ACS Director Bill McKelvey, Jr., as evidence of his recent tour of the Canals of Scotland. Bill particularly recommends the VIC-32, a coal-fired steam freight boat which has been converted for vacation cruises through the Scottish Isles, Canals, Locks and Lochs. The boat “has accommodations for 12 passengers, a crew of five, and Rupert, the Captain’s Irish Setter,” says Bill. Full details of the 1982 schedule can be obtained by writing the owners, Nicholas and Rachel Walker, care of Highland Steamboat Holidays, Crinan, Lochgilphead, Argyll, Scotland.

Another boat which McKelvey rode, through the Crinan Canal, was the motor yacht "Impulse," with Captain Rod Mackay at the helm. Bill tells us this boat is of American design and components, with British diesel engines, built in Taiwan! Bill says the Crinan Canal was built between 1794 and 1809, and now passes approximately 2000 yachts between Ardrishaig and Crinan in an operating season.

Bill also visited the Union Canal (of Scotland), connecting Edinburgh and Glasgow, and adds that the Linlithgow Union Canal Society can be very proud of the restoration work they have done there to date. They operate summer cruises on the “Victoria” out of Linlithgow. There is also a restaurant boat operating from the Bridge Inn at Ratto, Midlothian, called “Pride of the Union.”

For full details of “what to see and do” on the Scottish canals, write: Bill McKelvey at 103 Dogwood Lane, Berkeley Heights, N.J. 07922.

RHINE-MAIN-DANUBE CANAL

(From the 14 Sept. 1981 Journal of Commerce.)

The Rhine-Main-Danube Canal, which will connect the Black Sea with the North Sea, and which is rated as one of the most ambitious civil engineering projects in West German history, has fallen years behind schedule.

The length of the combined waterways will run to over 1,600 miles, and that of the canal itself 400 miles. Along its projected course the canal must ascend and descend a range of the Jural Mountains involving a change in elevation of 560 feet. This is to be accomplished via a series of 99 locks, 42 of which are now completed, with the others only partially completed or on the drawing board.

German rivermen have dreamed of such a canal from the earliest days of the country’s history. Charlemagne made the first attempt to build one A.D. 793, but soon learned that it was beyond the pick and shovel technology of his age. King Ludwig I of Bavaria revived the project in 1836. His was a successful undertaking and a highly credible one for the time, involving the construction of some hundred locks. Limited to horsepower for moving the barges, they had a capacity of only 120 tons. Unfortunately for the canal, the railway was becoming a practical means of transportation and the time the canal was finished and it was soon allowed to die.

In 1921, the current project was started under the management of the Rhein-Main-Donau AG, founded for the purpose. Work was interrupted by the financial, social and political troubles of the 1920’s and 1930’s and then by World War II. Finally, the majority interest of the corporation was taken over by the West German federal government and the State of Bavaria, with 64 and 33 percent shares respectively. As much of King Ludwig’s original canal course as practicable has been followed, but with the canal itself enlarged to take boats or barges up to 255 feet in length, and with a capacity of 1,350 tons, the standard for inland waterways.

As in Ludwig I’s time, the railroad stands as the most telling argument in favor of calling it a day and admitting that such a canal can never pay its way. By operating barges and boats both day and night, a practice rarely followed here, the canal would be able to move only 18 million tons of freight a year through the Jural locks. In contrast, an existing two-track rail line through roughly the same stretch of territory can move 60 million tons of freight a year, in addition to a heavy passenger traffic.

(Publisher’s note: Col. Herbert R. Harr, Jr., in the “Military Engineer” for March-April 1981, paints a much more optimistic picture of this canal system, and indicates its potential for tremendous cost-savings in water travel versus land travel in central Europe; not to mention income from hydroelectric power plants along the route.)

AMERICAN CANALS, NO. 40 — February 1982
ACS DIRECTORS - 1982

There have been many changes to the Directorship of the AMERICAN CANAL SOCIETY since our last published listing in February of 1978 - due to resignation, death, or loss of interest. The list of the following twenty Directors are 'Old-Timers' - the rest are new. We appreciate his willingness of all of them to serve the Society, and represent us geographically in areas where the greatest canal interest lies:

Sidney W. Beyland (new)
Star Route, Peru, NY 12972

Louis J. Cahill
Box 745, St. Catharines, Ont. L2R 6Y4

Charles W. Derr (new)
117 Main St., Fremmansburg, PA 18017

William E. Gerber (new)
16 Princess Ave., Chelmsford, MA 01863

Alden J. Gould, Sr.
776 Marsh Ave., Ft. Myers, Fl 33905

Thomas F. Hahn
Box 310, Shepherdstown, WV 25443

T. Gibson Hobbs, Jr. (new)
3204 Landon St., Lynchburg, VA 24503

John M. Lamb
1109 Garfield St. Lockport, IL 60441

J. Hayward Madden (new)
5847 Decker Rd., Livonia, NY 14487

Robert S. Mayo (new)
Box 1413, Lancaster, PA 17604

William J. McKevey, Jr.
103 Dogwood Ln., Berkeley Hghts, N.J. 07722

Thomas N. Meek (new)
7029 Adams Ctr. Rd., Ft. Wayne, IN 46816

William J. Moss (new)
Box 127, Fanwood, NJ 07023

Lewis W. Richardson
5415 Dogwood Ln., Gainesville, GA 30501

William H. Shank
609 Patton Rd., York, PA 17403

Roger W. Squires (new)
4 Manor Way, Beckenham, Kt. BR3 3LJ

Arthur W. Sweeton III (new)
6 Humphrey Rd., Canton Center, C.T. 06020

William E. Trout III
1932 Cinco Robies Dr. Duarte, CA 91010

Herbert F. Verity (new)
6383 Grand Via Ave., Cincinnati, OH 45213

Terry K. Woods
6939 Eastham Crl., Canton, OH 44708

1982 DUES

ACS Secretary Charlie Derr reports that, as of February 1, all but 140 of our members have renewed their 1982 memberships in our Society. Within the next few weeks Charlie will issue a final reminder to those members from whom he has not received checks. Anyone who has not renewed his membership by May 1, 1982 will be dropped from our mailing list. Unlike other historical Societies, whose dues have been pegged to our spurious inflation rates - the American Canal Society has retained its minimum annual dues at $8, unchanged since 1978.

As information on canal activities, canal parks or new societies becomes available, we try to pass it along to you in the pages of this Bulletin. If too lengthy for economical publication, we frequently include such information as a special "insert," as we have done with this issue. We think you'll agree, we give our members a lot for their money!

ETCHBERGER VISITS WELLAND CANAL

This dramatic photo of an ocean-going vessel descending the double-flight of locks on the Welland Canal near Thorold, Ontario, was made by Bill Etchberger of Lebanon, PA. Bill travels back and forth across the United States and Canada, photographing activities at some of the largest locks in North America.

LOUIS J. CAHILL
ACS CANADIAN DIRECTOR

In the last issue we reported that Lou Cahill, Canadian Director for the American Canal Society, had been honored by the American Association for State and Local History, with a special "Award of Merit," in connection with the historic and modern Welland Canals.

Space did not permit us to add a few additional facts about our dedicated Canadian Director.

Lou Cahill is chairman of the board and a founder of the Ontario Editorial Bureau. "The Bureau," as it is best known, was founded in 1946 and presently has offices in Toronto and St. Catharines. Affiliate companies are the Canadian Corporate Information Service, the Ontario Forest Information Service and NED Advertising.

Cahill was one of the founders of Inside Canada Public Relations Limited (1951), Canada's first national public relations organization, and has served as its president and chairman. He is now the Inside Canada secretary, co-ordinating the network activities of 10 independently owned and operated public relations companies which comprise the Inside Canada group.

An independent public relations and communications consultant since the mid-thirties, he has been closely identified with the development and administration of public relations and communications programs for corporations, national and provincial trade, business and professional groups.

Since 1953 he has been a member of the Canadian Public Relations Society and was the founder and first chairman of the Consultants' Section of the Society. For his efforts in this regard he received awards from the Public Relations Society of America and the Canadian Public Relations Society.

Lou has also been one of the prime movers in the founding of a Canadian Canals Society, which will have its organizational meeting May 1, at Dalhousie House in St. Catharines, Ontario.

OHO'S CANALS

1. OHIO & ERIE
2. ZOAR FEEDER & SIDE CUT
3. TRENTON FEEDER
4. WALHONDING CANAL
5. KILLBUCK IMPROVEMENT (little data - two locks found)
6. DREDSON SIDE CUT
7. GRANVILLE FEEDER
8. HOCKING CANAL (extended the Lancaster Lateral to Athens)
9. COLUMBUS FEEDER
10. MIAMI CANAL (joined into Miami & Erie Canal in 1845)
11. MIAMI EXTENSION CANAL (joined into Miami & Erie Canal in 1845)
12. WABASH & ERIE CANAL (the portion from Junction - north was incorporated into Miami & Erie Canal in 1845)
13. TOLEDO SIDE CUT
14. MAUMEE SIDE CUT
15. GRAND RESERVOIR FEEDER
16. SIDNEY FEEDER
17. HAMILTON SIDE CUT
18. WARREN COUNTY CANAL
19. CINCINNATI & WHITESTONE CANAL
20. PENNSYLVANIA & OHIO CANAL
21. MIDDLESBROUGH BRANCH CANAL
22. CUYAHOGA FEEDER
23. SOUTH FEEDER
24. SANDY & BEAVER CANAL
25. NIMISHILLEN & SANDY CANAL (construction on both ends, but never completed.)
26. MILAN CANAL
27. OHIO CITY CANAL (Ohio City, a Rival to Cleveland on the west bank of the Cuyahoga river, built a short-lived branch canal into their town.)
28. MUSKINGUM IMPROVEMENT (Dredson Sidecut joined the Ohio & Erie Canal and the Muskingum Improvement.)

(Publisher's note: The above listing of historic canals in Ohio was recently prepared by ACS Director Terry Woods in connection with the activities of the ACS Canal Index Committee, of which he is Chairman.)
Something is missing from the image.