PRESIDENT'S LETTER
NO. 4

Lots of things to mention this time. Most important, probably, is that the ACS annual membership meeting will be in the morning of Thursday, September 17 in Joliet, Illinois at the 11th Annual World Canal Conference. Our ACS directors meeting will be held the evening of September 17. We'd like to see all who can make it attend both meetings.

Also, I'd still like one of our members who also dabbles in corporate law to get in touch with me and help me with my education in getting our society primed to enter the 21st century with both feet in the proper position.

As this issue of American Canals goes to press, the ACS is finalizing the contract to bring Tom Hahn's new book on General Canal Terminology to each ACS member. Exactly how this will take place will be a topic of our September directors meeting. Your input on future ACS sponsored titles would be appreciated.

Your president has agreed to act temporarily as chairman of the ACS Parks Committee. Kate Mulligan has agreed to bring her considerable experience and knowledge to this committee also. With many, many Historic Canal Corridors springing up that attempt to convert canal lands into recreational areas, I believe our society can really provide some help. I'd appreciate hearing from some of you who might have already 'been the route' on one of these corridor things. I'd like to hear some comments about make-up and content of lead organizations. Is it better to have extensive, and expensive, up-front planning, or has experience shown that small hunks of planning and 'doing' bit by bit is the best? We'd like to hear from you about this.

Lance Metz, Tom Grasso and Dave Johnson assure me that the new Liaison Committee is up and running and about to make some headway. And after some pressure and traveling in his everyday life, Mark Newell is planning extensive changes to our society web-site.

I can imagine that assistance and support in any form would be welcomed by all our committee chairmen.

So, till next time, HEADWAY to Ya, and I hope to see you all in Joliet.

Perry K. Woods

SCENE ALONG THE SAVANNAH-OGEESCHEE CANAL, CIRCA 1840
Reproduced by permission of the artist, John McClelland

CANAL SOCIETY OFFERS PRINT

The oil painting reproduced above is available as a 19 by 25 inch full-color print, signed by the artist, for $50 (including tax and shipping and handling charges). This sale is one of the fund-raising activities of the Savannah-Ogeechee Canal Society, to finance its program to restore the 16½-mile canal connecting the Savannah and Ogeechee rivers and convert it into a multipurpose linear park. The canal was built between 1826 and 1830, and finally ceased operation in the early 1890s. For full details, see the article by Mark Finlay in American Canals no. 103 (Autumn 1997), pp. 8-11.

To purchase a print, send a check for $50, payable to the Savannah-Ogeechee Canal Society, to L. R. "Tommy" Shearouse, P.O. Box 341, Pooler, Georgia 31322. No C.O.D. or credit card orders, please. The original oil painting is also for sale at $3,000 from John Tucker Fine Arts, phone (912) 231-8161.
CANAL CALENDAR


Early September, 1998. Inland Waterways International 16 day tour leading up to the World Canals Conference. Includes 9 days by water on the Hudson R. and N.Y. State Barge Canal and 6 days by bus visiting canal sites in Canada, Ohio, and Indiana. To join British canalsists for all or any portion, Contact: Can. Soc. of N.J., 906-722-9556.


September 17, 1998. American Canal Society annual meetings, in conjunction with World Canals Conference (above). 10:30 a.m. — membership meeting; 7:00 p.m. — directors meeting. Contact: Terry Woods, 330-832-4621.

September 19-20, 1998. Canal Town Days, Palmyra, N.Y., on the Erie Canal. Contact: Mr. or Mrs. Cooper, 315-979-6700.


November 7, 1998. Towpath hike, Jackson Township on the Ohio & Erie Canal. Contact: O&C Canal Corridor, P.O. Box 435, Canal Fulton, Ohio 44614.


DEADLINE: Material for the next Canal Calendar must be on the editor's desk no later than October 1, 1998.

A.C.S. SALES

Limited quantities of the following American Canal Society products are still available. Place orders with Keith W. Kroon, 2240 Ridgeway Ave., Rochester, New York 14626. Make check payable to American Canal Society. Add $1 shipping charge for up to 3 items, $2 for 4 or more items, except as noted. A.C.S. burgee, suitable for flying on your boat or displaying on your study wall. Postage included ... $15.00 American Canals 20-year index, 1972-92 ..... $3.00 American Canals back issues, 1972 to present The Best from American Canals vol. 5 (1899-91) ..... $8.00 The Best from American Canals vol. 6 (1991-93) ..... $8.50 The Best from American Canals vol. 7 (1993-98) ..... $8.50 Towpath to Tugboats: A History of American canal engineering ..... $8.00 The Canals of New York State ..... $7.00 The American Canal Guide pt. 1, west coast ..... $1.00 The American Canal Guide pt. 2, lower east coast ..... $2.00 The American Canal Guide pt. 3, lower Mississippi & gulf states ..... $3.00 The American Canal Guide pt. 4, West Virginia, Kentucky & Ohio River ..... $3.00 The American Canal Guide pt. 5, Virginia, Delaware, Maryland & D.C. ..... $3.00 Canal lock print by Ben Dale — an 8½x11½ color print of a packet boat at a lock on the Middlessex Canal ..... $2.00.
While U.S. workers add lanes to interstate highways, the Germans are constructing a second aqueduct on the Mittelland Canal in Minden. This canal is a link for commercial traffic between Berlin and the Rhine. The eastern end of the canal is the Elbe River at Magdeburg. Traffic may go up the Elbe to Dresden and Prague or down river to the Elbe-Havel Canal and Berlin. Near Wolfsburg the Elbe-Seiten Canal branches off to Hamburg. The western end is the Dortmund-Ems Canal near Rheine. The river and canal run north to the North Sea at the Netherlands border. To the south the canal passes through Münster to the busy industrial area around Essen and to the Rhine.

The aqueduct crosses the wide valley of the Weser River and a highway. It is just the width of one boat, so opposing traffic must wait for a boat to complete the transit. The new aqueduct will eliminate this bottleneck. The base of the new aqueduct is complete across the road and the river. Excavation is in progress to join it to the canal.

I biked from Amsterdam to Minden to visit the site. There is not a canal-side bike path, but the road ran beside the canal a bit near Bad Essen. Access is easy to the aqueduct and along the Weser River in Minden. Minden is an attractive city and just up the Weser River is the mountaintop Kaiser Wilhelm monument. I visited the site on June 23, 1997. No schedule for completion was posted, but if not finished now, it should be soon.

The freighter Malepartus crossing the Weser River westbound from Berlin
CANADIAN CANAL RESTORATION
by D.G. Barber

In American Canals #90 (August 1994) I reported on the current state of the various preseaway canals along the St. Lawrence River. At that time I noted that the easternmost of these, the Lachine Canal at Montreal was nearing the completion of restoration of its lowest two locks at the Old Port. The latest issue of Canals Canada of the Canadian Canal Society reports that restoration work is continuing on the canal and that it is expected to be reopened for pleasure craft in 2002. The reopening is to be celebrated by a World Canals Conference.

The next canal westward is the Soulanges Canal which connects Lake St. Louis with Lake St. Francis and parallels the Beauharnois Section of the seaway. When I visited this in 1993, I found an intact and watered canal with inoperable locks and a few dropped bridges. Canals Canada reports that area officials hope to have this canal reopened for pleasure boats by October 1999.

(Concluded From Page Three)

in British crime fiction.

Some of the greats of British crime writing have flirted with canals and inland waterways: Ngaio Marsh in the Inspector Alleyn novel Clutch of Constables (Collins, 1968) and Agatha Christie in By the Pricking of My Thumbs (Collins, 1968) in which a painting of a canal scene is an important clue. A good thriller with a well-evoked canal background is Andrew Garve, The Narrow Search (Collins, 1957). In this a baby is kidnapped by her father (estranged from the mother) and cannot be found. The distraught mother and her boyfriend take over when police enquiries have failed, armed with the single clue Llangollen (a town in North Wales). This is the prelude to a chase, ultimately successful, up the Llangollen and Shropshire Union canals.

Ivon Baker’s Death and Variations (Hale, 1977) is concerned with both canals and railways, the former only marginally; the hero begins a canal cruise in the Midlands but lack of water in the "cut" (this is the drought summer of 1976) causes him to abandon it and as a result he becomes involved in a murder. Colin Dexter, creator of Chief Inspector Morse, twice features the Oxford Canal. In The Riddle of the Third Mile (Macmillan, 1983), the body of an Oxford don is pulled out of the canal, described so:

"Two miles north of police headquarters in Kidlington . . . an elbow turn to the right leads . . . to the Boat Inn, which, together with about twenty cottages, a farm and a depot of the Inland Waterways Executive, comprises the tiny hamlet of Thrupp. The inn has served generations of boatmen, past and present. But the working barges of earlier times, which brought down coal from the Midlands and shipped up beer from the Oxford brewers, have now yielded place to the privately owned long-boats and pleasure-cruisers which ply their way placidly along the present waterway."

A few years later Dexter again featured the Oxford Canal and Thrupp in The Wench is Dead (Macmillan, 1989). This comes complete with a map of the canal and has a stimulatingly different plot. The murder (fictitious, but circumstantially presented) has taken place in 1859 and is "investigated" by Morse while he is in the hospital convalescing from an ulcer. The (apparent) victim was a woman, the accused crew of an express, or "fly", boat in which the woman was taking passage from Preston Brook to London via the Trent & Mersey, Coventry and Oxford Canals and the river Thames. The Victorian canal background has obviously been carefully researched; Morse eventually reaches a startling conclusion and for many reasons this is a fascinating tale, perhaps Dexter’s best.

Reginald Hill’s Bones and Silence (Collins, 1990), set in "mid Yorkshire," introduces a (fictitious) canal which is used for the disposal of drugs. Also set in Yorkshire is Barbara Whitehead, The Girl With Red Suspenders (Constable, 1990); here a navigable river (the Ouse) is used as the channel of drug distribution. There are one or two scenes in the (real) Ship Inn at Acaster Malbis, near York; the climax takes place on a river boat.

Now for the classic espionage novel The Riddle of the Sands (1903), by Erskine Childers, in which two amateur yachtsmen foil a German plot to invade England from Friesland by conveying troops in canal lighters towed by steam tugs. A number of short streams, suitably widened, improved and canalized, leading back from the coast and fed by a railway loop, were to provide the means of assembling the lighters and tugs. Earlier in the book the two heroes travel along the Kaiser Wilhelm Canal from Holtenau to Brunsbuttel:

"Broad and straight, massively embanked, lit by electricity at night till it is lighter than many a great London street; traversed by great war vessels, rich merchantmen and humble coasters alike it is a symbol of the new and mighty force which . . . is thrusting the [German] Empire irresistibly forward to the goal of maritime greatness."

That was in 1900; the Kiel Canal has been improved a number of times since, though the German Empire has long since disappeared and it never quite achieved "maritime greatness."

DENVER’S HIGH LINE CANAL
by Sue Soder

The High Line Canal is an urban irrigation canal running some sixty-three miles through the Denver metropolitan area. Construction was completed in the 1880s by an English company. Its purpose was to promote settlement of the arid territory surrounding Denver. As its name suggests it was designed to follow the "High Line" of the land and thus meanders much like a river or stream. It was prevented from being a financial success by the cost of construction and operating with junior water rights, making predictability of flow uncertain.

An unlikely Denver scene – The High Line Canal

AMERICAN CANALS, XXVII-3 Summer 1998
Today the canal is owned and operated by The Denver Water Department. They maintain the canal and accompanying trail. Designation as a National Recreational Trail was obtained in the late 1970s. Although still used for irrigation to a limited extent, it is now mainly a recreational asset to Denver, heavily used by walkers, runners, bikers, horseback riders, and rollerbladers. Fishing, swimming, and boating, however, are not permitted. Many areas have a definite rural character with signature cottonwood trees and abundant wildlife. This sense of nature in the middle of a city is what that High Line Canal Preservation Association hopes to protect and enhance for future citizens to enjoy.

**RIVER CRUISING GUIDE IS AVAILABLE**

The 1998 edition of Quimby's Cruising Guide is now available. Regarded as the recreational boaters' bible for cruising mid-America's inland waterways, the 36-year old annual directory has been expanded to include the Gulf Intracoastal Waterway from New Orleans, La. to Carrabelle, Fla. All other sections have been updated and revised. Quimby's provides such essential information as where to get fuel, overnight dockage, and supplies and repairs, arranged by river, then river mile. Information on locks, towns, landmarks, history and interesting miscellany is also presented. In all, over 7,925 miles on 22 rivers are covered.

This year, our cover story highlights cruising tips on the Gulf Intracoastal Waterway from New Orleans, La. to Carrabelle, Fla. with narrative and photos provided by longtime ICW boater Cliff Conrad.

Designed to lie flat on the console, the 250-page spiral-bound 1998 Quimby's is available at most harbors and marinas for $19.95 or from the Publisher for $21.95 each, including shipping: The Waterways Journal, 319 N. Fourth Street, Suite 650, St. Louis, MO 63102, phone (314) 241-7345, fax (314) 241-4207, or E-mail quimbyq@aol.com.

**LIMITED EDITION HISTORIC PRINTS OFFERED BY THE FRIENDS OF THE NEW JERSEY RAILROAD & TRANSPORTATION MUSEUM**

Left to right: Charles Cioppa, Dean Cioppa, and William Locascio, of Four Star Color; Kerry Day and Captain Bill McKelvey, of Friends of the N.J. Railroad and Transportation Museum; and Richard Pedersen, artist. The Phillipsburg painting is on the easel; the prints are stacked in the foreground.

A unique oil painting of the three bridges and five railroads serving Phillipsburg, NJ has been transformed into a limited edition color lithograph by Four Star Color of Fairfield, NJ. The painting of the dramatic 1955 scene, commissioned by the "Friends" President, Capt. Bill McKelvey, was skillfully rendered by noted railroad artist Richard Pedersen of Wayne, NJ. The view, "Phillipsburg - Historic Transportation Hub and Gateway to New Jersey" depicts the importance of the rail and canal heritage of the area.

A second oil painting by the late Griff Teller, famed Pennsylvania Railroad calendar artist, was also commissioned by McKelvey and printed at the same time by Four Star Color. Teller's "John Bull Meets the New Jersey at Princeton" depicts the first steam locomotive of the Camden & Amboy Railroad meeting the first tugboat of the Delaware & Raritan Canal Co. at Alexander Road, Princeton, NJ.

The limited edition prints will be offered for sale by "Friends" to raise money for the state railroad and transportation heritage center. Four Star Color graciously donated their services to produce these prints, unveiled at the open house showcasing their newly renovated facility. The paintings were transformed into beautiful lithographs by skilled Four Star technicians, using the latest technology available in the graphic arts industry and printed on their new forty inch six color high speed printing press. Artist Pedersen was on hand to discuss his work with guests and to sign proofs and prints.

These prints will be coveted by railroad and canal enthusiasts, historians, preservationists, and collectors of fine art. They document the diverse and interesting transport heritage of the State of New Jersey which "Friends" is working to preserve for future generations. Information on the availability of prints and the Friends of the New Jersey Railroad and Transportation Museum can be had by writing them at P.O. Box 8301, Trenton, NJ 08650-8301 or by calling or faxing (908) 464-8335, with your address.
AN OHIO CANAL TUNNEL: LOST & FOUND
by Nancy Savage Gulick and Michael E. Morthorst

An interesting canal era structure has been making news in the Cincinnati, Ohio area recently. A canal tunnel, a unique structure in this country by any standard, was rediscovered after many years of obscurity. The Cincinnati-Whitewater Canal Tunnel languished for over a hundred years, its whereabouts known only to a few local residents in the villages of Cleves and North Bend, 14 miles west of Cincinnati. Hidden in a deep ravine, overgrown with weeds and trees, the tunnel and the canal it served kept its history hidden from us, as well.

The Cincinnati-Whitewater Canal with its impressive tunnel was constructed between 1839 and 1843 by a privately-financed enterprise as part of a project to connect Cincinnati, Ohio, then the second largest inland city in the United States, with the Whitewater Canal, a component of the promising Indiana canal system. At the time when both the Cincinnati & Whitewater and the Whitewater Canal were being built, the Whitewater River Valley was one of the most significant political, commercial and cultural sections of the new state of Indiana. The purpose of building the Cincinnati & Whitewater Canal was to establish a transportation corridor between the two burgeoning regions. Together, the two regions could move their goods into wider national markets.

Indiana’s Whitewater Canal was authorized in 1836. Later, that same year, Cincinnati merchants ordered a survey of the route from Cincinnati to Harrison, Ohio located on the Indiana border. The Cincinnati & Whitewater Canal Company was formed in 1837 and construction began in 1839. The first boat traveled the short 25-mile stretch, including passing through the 1,782 foot tunnel, to arrive in Cincinnati in 1843.

The Cincinnati & Whitewater Canal connected with the Whitewater Canal at Harrison, Ohio. It made its exit from a dam-created slackwater pool on the Whitewater River. This slackwater provided a crossing-over point which connected the two canals as well as providing a water supply for the 25-mile stretch of canal into the city of Cincinnati. The route closely paralleled the east bank of the Whitewater River.

Three locks were built; one at south Harrison, one at Dry Fork Creek and at the Great Miami River. Aqueducts were built at Dry Fork Creek and at the Great Miami River. Abutments of these structures exist to the day as supports for the bridges of successor railroads. The canal featured four culverts which crossed minor streams on arched stone and earthen causeways.

After passing through Lock 3, just west of Cleves, the route was confronted by a low ridge between the villages of Clevos and North Bend. The solution to the problem posed by this barrier resulted in the most impressive engineering structure on the canal. It was here that Darius Lapham, resident engineer, designed a 1,782 foot tunnel through the ridge at a cost of $65,523.

The tunnel entrances were 24 feet high at the waterline and 20 1/2 feet wide. The tunnel entrances were faced with limestone blocks while the length of the tunnel was constructed of bricks made of clay dug and manufactured on site. A newly-patented brickmaking machine, designed by Jesse Reeder, was used to make the million bricks lining the tunnel. William Henry Harrison, who later served as President of the United States, was an enthusiastic supporter of this canal and the tunnel itself was sited on his own property opposite his home in North Bend.

Prosperity was brief on the Cincinnati & Whitewater Canal. Four major floods, coupled with national financial panics, put the canal out of business by 1856. In 1862, the canal right-of-way was divided and sold to two railroads. The Whitewater Valley Railroad bought the C & W Canal route north of the Great Miami River together with the Whitewater Canal in Indiana and built its rail line on the towpaths of the two canals. The C & W Canal route south of the Great Miami River was bought by the Indianapolis & Cincinnati Railroad. The Cincinnati-Whitewater Canal Tunnel was used by this company as a rail tunnel from 1862 to 1884. Its use was discontinued due to the tunnel being subject to flash flooding. The two entrances were bricked up and the tunnel was abandoned. During Prohibition, the tunnel was used as a point for the illegal distribution of alcoholic beverages.

In the 1950s, the North Bend end of the tunnel was either obliterated or buried during the relocation and construction of new Highway 50. As a result, fill material from that project has heavily silted in the Clevos end of the tunnel. The top portions of the portal and wing walls and the interior brick arch of the tunnel can still be seen. Little has survived of the 25-mile-long Cincinnati & Whitewater Canal other than the tunnel, the deteriorated Lock 2 and the aqueduct abutments. In some places the channel can still be traced.

Considering the minimal remains of any structures or channel of the more significant canal of this region, the Miami & Erie Canal, the Cincinnati-
Cleves entrance, Cincinnati-Whitewater Canal tunnel, as it was in November 1958. Photo by John Diehl.

Whitewater Canal Tunnel and related structures are the last and best canal era remains in all of Southwest Ohio. The modest C & W canal, with its still-visible structures can still prove to be a valuable resource to the greater community, as a recreational and educational site.

Developments in the last two years placed in jeopardy the remains of the canal tunnel. A local entrepreneur, owner of the property, proposed filling in the depression wherein the tunnel lies, with flyash from a nearby coal-fired power plant. The resulting level landfill was to be donated to a local school district for a ball field. However, a citizens group concerned with the environmental impact of a flyash landfill in the heart of the village of Cleves and the possible destruction of the historic C & W Canal Tunnel, went to work.

The Committee for Canal Preservation, made up of local residents and three trustees of The Canal Society of Ohio (also ACS members), called meetings to discuss options. The energy-providing company, whose flyash was to fill in the tunnel, was sensitive to the political fallout and was willing to walk away from the project. When the Ohio EPA office expressed concern about the tunnel's acting as a culvert for run-off from the proposed filled site, the energy company withdrew.

The committee has engaged in a variety of fund-raising projects and has received some generous donations from interested individuals who live in the community as well as from others in the Cincinnati area. The committee is on its way to completing a purchase agreement with the major property owner of the site on which the tunnel is located. This owner is donating the single parcel that contains the tunnel itself while the price for the remaining parcels is still in negotiation. The committee has already purchased property adjacent to the tunnel property that will be significant in securing and enhancing the general site for later development.

Meanwhile, the committee had been contacted by a similar tunnel-preservation group in England. Thanks to Mark Newell, chair of the ACS Archaeology Committee, who put some information about the Cincinnati-Whitewater Canal Tunnel on the ACS web site (http://www.blacksheep.org/canals/ACS/acs.html click on "News"), the information about the C & W Canal Tunnel effort was picked up by a canal enthusiast working on restoring a stretch of canal and opening the Lapal Tunnel, which has been part of the Birmingham Navigation System. The web site for information about their efforts is http://www.seeap.aston.ac.uk/pjb/lapal. As a matter of interest and support, the Cincinnati-Whitewater Canal Tunnel Committee and the Lapal Tunnel Trust will communicate from time to time to celebrate our successes or to commiserate about the problems we have in common.

Cleves entrance as it is today. Photo by Lynn Gulick.
BRIDGES
by James E. Held

The opening of the Erie Canal in 1826 transformed New York into the most dynamic city on the continent. Gotham then was not the metropolis of five boroughs we know today. "New York" consisted of the bustling, crowded island of Manhattan. Brooklyn, across the East River, was the country's third largest city and growing rapidly. Along both banks stood the wharves and warehouses of the world's busiest port. Only a river stood between the two communities, and a bridge would unite them, so in 1868 city fathers on both sides hired the prominent engineering family of the Roeblings to build one. Inadvertently, a canal would help complete the daunting project.

The bridge's construction would take a terrible toll on the family. After an accident, injection inflicted a painful death on the father, John Roebling, in 1869. His son, Washington, assumed the position of chief engineer. He shared his father's confidence, genius, and pride, qualities of which Washington would need every ounce before work was done. This era marked the nadir in public morality and the zenith of greed and graft for the notorious Mayor Tweed. He used the noble bridge as another public project to exploit while corrupt cronies were granted contracts that smuggled inferior steel into its structure. Even the basic engineering principles of suspension remained unproven. Roebling's Niagara, Cincinnati, and D & H Canal bridges, had performed magnificently, but other suspension bridge disasters fed the doubts and questions exploited by rival engineers and the tabloid press.

Even for the Roeblings, this bridge was a challenge without precedent, but the task of sinking the massive caissons down to East River bedrock progressed steadily. Then laborers, after digging in the deep, muddy shafts emerged with an ailment as baffling as it was painful. Only later would modern medicine identify caissons disease as the bends and discover both cure and prevention. Roebling, not one to sit idly by, participated in all the dangers of the subterranean work until he too was disabled by severe muscle spasms, nausea, and swelling.

He tried his utmost to continue work, by moving into a Brooklyn Heights apartment. From a window, he overlooked the construction through a telescope and corresponded by paper and messenger with engineers on the site. Still, his lengthy absences aroused suspicion among members of the Bridge Commission and reporters who began to question his health, capabilities and very integrity.

Treatments in both upstate New York and European spas temporarily revived his stamina, but when illness and stress became overwhelming he retreated to his Trenton home. Roebling, however, felt equally restless in idleness, and after recuperation, he became anxious to return to the work site. His physical and nervous condition, however, was still poor, and he found the noise, vibration, and crowds of train travel beyond enduring. No doubt, the nineteenth century "paparazzi" would be waiting on arrival to hound him. Ever resourceful, Roebling hit upon an ingenious manner to sneak into New York and cheat the press out of capturing him at his worst.

The Delaware and Raritan Canal opened for business in 1834. Thirty-five miles of water across the waist of New Jersey joined the Delaware River basin with Raritan Bay. From there, tugs hauled rafts of canal boats to the two cities. Roebling worked to unite. Passenger packet service between Trenton and New Brunswick had long since ended, and steam tugs assumed from mules the work of towing laden vessels of coal, brick, lumber and stone, some of which, no doubt, contributed to the great bridge. But America's fascination with speed had begun, and no one suspected a prominent engineer like Washington Roebling would travel to New York at four miles per hour. So in the fall of 1876, he and his wife chartered a tug and canal boat.

Roebling's extensive biographies omit the details of this day-long episode in his life: the name of the vessel, the weather, and his impressions of the autumnal colors, farms, locks, and canal communities on this leisurely voyage that left him time for reflection. Canals were part of the family legacy. Sitting quietly on deck, he undoubtedly thought of his father's work on the Delaware and Hudson Canal, and of those early suspension bridges that spanned rivers and ravines, as technological preludes to the masterpiece in the making. Perhaps recalling their success bolstered flagging confidence and determination. After passage through to Raritan Bay, the tug towed the passengers to the foot of Brooklyn landing. From the harbor, he had a magnificent view of his bridge only partially completed, but in his mind, Roebling clearly saw those gothic arches and the web of cables that we admire today.

The future still held more personal and professional trials for Roebling. Today, traffic streams across his bridge adding to New York's brutal high energy. Urban refugees, seeking a respite, retreat to the quiet of the D & R Canal State Park, and those other remaining waterways where four miles an hour is a welcome relief. The Roeblings contributed to the Canal Age with a handsome structure over the Delaware River that has withstood the flow of floods and time (see opposite page). With the Brooklyn Bridge, they helped to build the coming era that would leave these narrow channels of water to history, but each stone and span of wire mirrors the difficult steps in the lives of father and son. Maybe that four-mile-an-hour passage gave Washington the power to draw on his deep reserves of strength, to continue until completion The Great Bridge, just as our return to a human pace along calm canals helps us through our modern work week. In this way, a bridge so grand and a canal so quiet unite us with the genius of their creators.

Pictured here is the longest of four suspended aqueducts completed by the elder Roebling between 1847 and 1850 for the Delaware and Hudson Canal Company. The view looks southwest from New York to Pennsylvania across the Delaware River. There are three spans of 131 feet and one of 142 at the west end.

A sectional boat is shown lightly loaded traveling west to pick up a full load of anthracite coal, the cargo for which the canal was built. In the foreground below the bridge the original 1829 canal bed can be seen. It entered a guard lock at a dam in the river just out of the picture on the right. Until the aqueduct was complete boats crossed the river in a slack water above the dam.

In the cross section drawing trussed members protrude downward from the bottom of beams B. For many years it was thought that these were eliminated during construction, as redundant, but an old photograph, recently discovered, indicated that they were utilized.

Old records document the use of pointed wooden shields covering the upstream ends of the piers. These protected the stone from ice damage but the arrangement of the planks as indicated is conjecture.

After the canal was abandoned in 1898, the aqueduct trough, with paths removed, became a bridge for wheeled vehicles and pedestrians. In 1980 the National Park Service purchased and restored the entire structure using the original suspension cables, the oldest by John Roebling that are still intact. A wood replica of the original trough with a towpath at the north side now serves as a bridge for canal buffs in automobiles or on foot.

An article about the original aqueduct and its modern restoration was published in American Canals no. 58 (August 1986) and reprinted in The Best From American Canals No. III.

Sources:
- E.D. Leroy, The Delaware and Hudson Canal and Its Gravity Railroads, (6th edition, 1985);

**CANAL SOCIETY OF NEW YORK 1998 SPRING FIELD TRIP. PART 1:**

**ONEIDA LAKE CANALS**

by Bruce J. Russell, Contributing Editor

The Canal Society of New York State, one of the largest and most active in the country, generally runs spring and fall field trips to points of interest on the far-flung inland waterway network of New York.

Because New York State had so much inland navigation, the society is never at a loss for places to visit. Its field trips usually attract at least two bus loads of people. On Saturday May 2, 1998, the destination was Oneida Lake, a 22-mile-long, 4-mile-wide body of water situated between Utica and Syracuse. It is the largest lake wholly within New York State. Here are located the re-
mains of two man-made waterways which once connected with the Erie Canal. Although today Oneida Lake is known primarily as a tourist destination, it was once an important link in a water route stretching from the Hudson River through the Mohawk Valley to the port of Oswego on the southern shore of Lake Ontario. From Oswego sailing ships and (after 1830) steamboats enabled traders, settlers, and soldiers to teach Canada.

On the Erie Canal, which opened in 1825, the trip from Albany to Buffalo usually took 6-7 days. The May 2nd trip was designed to reflect the remnants of these two short but at one time very important inland waterways which were part of what was sometimes referred to as the “Oneida Route.” The society also produced a guide book and trip companion featuring the history of the two canals. Such booklets are a feature of all Canal Society of New York field trips. They are well researched and profusely illustrated with photos from the group’s archives.

The State of New York refused to finance the proposed canal, possibly because officials didn’t want to see business and toll revenue diverted from the established waterway. Consequently, local merchants, many in the lumber trade, banded together and raised the necessary capital. The state did furnish surveyors and engineers for a fee. Work began in 1832 and was finished in 1835. The waterway included 4.5 miles of man-made channel from Higgingsville to Wood Creek, with dimensions identical to the original Erie Canal. From Wood Creek to the lake, a 2-mile distance, no excavation was required. A towpath was simply built adjacent to the natural stream, which was cleared of rocks and straightened in a few critical places. Hence the first Oneida Lake Canal was approximately two-thirds

Members of the Canal Society of New York demonstrate that “closed to navigation” is only a relative term

man made and one-third improved natural waterway. Between the Erie Canal and Oneida Lake, a 56-foot drop in elevation required 7 locks to overcome.

The seven locks of the first Oneida Lake Canal were built as cheaply as possible. Instead of the superb masonry found on the Erie, use of rubble stone and wood was the rule.

Other problems which plagued the Oneida Lake Canal were constant silt ing of Wood Creek and formation of sandbars at the point where it entered the lake. Frequent dredging became necessary, making the waterway expensive to maintain. In retrospect, the artificial cut should have been dug all the way to Sylvan Beach.

For several years, from 1835 until about 1857, the Oneida Lake Canal made money since it was faster than the alternative route to Oswego. However, when the enlargement of the Erie was finished in 1856, the much bigger boats which began using it could not fit into the smaller locks of the Oneida Lake Canal. As a result there was a loss of business, with the large vessels proceeding to Syracuse and then north on the Oswego Canal.

Working in conjunction with the Oneida Lake Canal was the Oneida Lake & River Steamboat Company, which at its peak in 1860 owned four towing vessels, each capable of handling up to 20 canal barges lashed together two abreast. These tow with the waterway and proceeded 22 miles across the lake to Brewerton. Towing by steam tug continued along the Oneida River which had been canalized to Three Rivers Point where the Oswego River and its adjoining canal were reached. A visitor to Sylvan Beach during the late 1840s and early 1850s would see a constant parade of boats exiting the canal and being nudge into formation for towing. Meanwhile the mules used for each boat were conveyed across Oneida Lake aboard special mule barges, giving the mules an opportunity for a well-deserved rest. Once the Oswego Canal was reached they were once more put to work hauling the boats north to Oswego. Nowhere else in America were such mule barges employed.

By the early 1850s the cheap construction of the Oneida Lake Canal’s seven locks began to exact its price. On several occasions their rubble stone walls collapsed into the chambers, creating a need for emergency repairs. Furthermore water continually leaked out of them at such a rate as to cause a drop in the depth of the mainline Erie Canal from Rome to Syracuse. Heavily laden freight boats began scraping bottom. Ultimately a guard lock was installed at Higgingsville to isolate the Oneida Lake Canal from the Erie.

In 1860, legislation was proposed to reconstruct the locks of the Oneida Lake Canal so their dimensions would match those of the recently enlarged

end of the waterway and proceeded 22 miles across the lake to Brewerton. Towing by steam tug continued along the Oneida River which had been cana
Erie. In 1863 the seven chambers were completely dismantled in preparation for their reconstruction the following year. At that point, political infighting entered the picture and no further progress was made.

Only a 1-mile section remained open, from Higginsville to the Conley Stone Company and Quarry. This portion contained no locks. Since the Erie Canal was always in need of good quality stone for lock repairs, embankment construction, etcetera it was felt that access to the quarries ought to be maintained. This remnant stayed in use until the early 1920s, when the Rome-Syracuse stretch of the Enlarged Erie Canal was closed to navigation and converted into a feeder channel for the New York Barge Canal, which it joined near Rome. Its water level was then purposely dropped from 7 feet to 4 feet, and the movable bridges crossing it were permanently closed. On May 1st, the day before the field trip, several Canal Society of New York members traveled over it by canoe.

The May 2nd field trip visited the sites of locks #4 and #5 of the first Oneida Lake Canal. Because they had been physically removed in preparation for a reconstruction which never happened, no stonework was left. Nevertheless, there was a noticeable narrowing of the prism as well as a change in its elevation, providing ample evidence that two locks were once here. From this location the tour buses headed south parallel to the still visible prism to Higginsville. This was the junction point of the original Oneida Lake Canal with the main route of the Erie from Rome to Syracuse. It is still possible to see where the two diverged by closely examining the stonework lining the north bank of the Erie. Tour guides Thomas Grasso, Craig Williams, and David Beebe identified the precise spot and pointed out the rounded stones bordering the junction which allowed turning boats to make their swing into the side cut. A century and a half ago this was a very busy place. Canalside stores, mule barns, saloons, and other structures existed which appear in old photographs. Today the site contains no buildings.

After the 1863 closure, commercial interests demanded that navigation be resumed, either by completely rebuilding the closed canal or excavating another along a different alignment.

To placate them, legislation was passed authorizing the construction of a 5-mile-long artificial waterway from Durhamville on the Enlarged Erie to South Bay on Oneida Lake, a 62-foot drop. Work commenced in 1867, with an anticipated completion date of April 1871. The new canal would have four advantages over its predecessor. (1) It was 2 miles shorter and followed a more direct routing. (2) It did not incorporate any slack-water navigation. (3) Its dimensions, including 7-foot depth, matched those of the Enlarged Erie. (4) It had 6 rather than 7 locks. Some of the stones to build them came from the earlier structures which had been disassembled. The new locks were 98 by 17 feet. The original ones had been 75 by 14 feet.

Unfortunately, the mistakes of the Old Oneida Lake Canal were repeated, in particular shoddy lock construction, and new mistakes were added in the choice of the new route. The soil proved unstable, with hidden deposits of quicksand. Other problems included waning support both from the legislature and shipping interests as the railroad age...
matured. It was 1877 before the New Oneida Lake Canal finally opened, and then it was almost immediately shut down as breaks in embankments caused huge losses of water. It reopened in 1878 following repairs, and again had to be closed because of severe leaks, this time in locks as well as in embankments. Following the 1878 closure, it never reopened.

The May 2nd tour visited the location at Durhamville where the New Oneida Lake Canal had its union with the Enlarged Erie and where the aforementioned barrier gate once existed. There is no trace of it today. In the distance can be seen the remains of the 7-foot-deep prism, now completely filled with trees and other vegetation. In a few places it retains water due to its clay lined bottom.

Although locks 1, 2, 3, and 4 survive in various states of deterioration, they are now located on private property and not readily accessible by public highway. We therefore proceeded north to South Bay where locks #5 and #6 are situated and can be inspected. Lock #5 permitted the waterway to descend to the level of the lake from the low level over looking it. Lock #6 was a guard lock, with no change in elevation. From it, vessels exited the New Oneida Lake Canal and entered Oneida Lake. Here they were towed to Brewerton and beyond to the Oswego Canal. In reality since the canal was finished so late, very little towing was actually done prior to the 1878 abandonment.

Lock #5 is now a garage used to store vehicles owned by the Oneida Lake Marina. A roof has been erected over its chamber. We were permitted to go inside and examine its walls. Their composite nature was still evident. The outer portions were made of well formed blocks while rubble stone made up the walls of the central chamber. The wood planking which once covered them was missing. After 120 years, it had obviously rotted away.

In spite of the present situation it was possible for me to create a mental picture of the time when this lock was functional and boats descended to lake level. The marina's owner also said that this chamber was haunted and that ghosts of long-dead boatmen inhabited it.

In front of lock #5 was a water-filled, circular basin—an obvious survivor from canal days. Here the boats waited until it was all right for them to proceed into lock #6 and beyond onto Oneida Lake. If conditions on the lake were turbulent or if a steam tug wasn't immediately available, they waited here. Oneida Lake does become violent during storms. In the late 1870s there were no doubt canalside stores and shops catering to boaters' needs. Tall stacks of wood were also probably kept here for the steamboats.

In common with lock #5, lock #6 is also being used in a somewhat novel, unorthodox fashion. It now forms the foundation for the meeting rooms, bar, and restaurant of the Oneida Lake Sailing Club. Like #5, it's in an excellent state of preservation, and our group was able to examine it closely. Furthermore directly in front of the lock and club house is what's left of the 600-foot-long stone breakwater which extended into Oneida Lake and provided shelter for boats. This structure was made from wooden cribs filled with rocks and then sunk. These stones were obtained from the north shore of the lake. It was here that towlines were attached and the translake journey began. Most of the breakwater has been removed but a few remains are evident when the water level falls below the normal summer high. Not only the New Oneida Lake Canal, with its 6 composite locks, but also this basin and harbor were built at considerable expense yet used for barely 1½ years before being abandoned. Obviously this was a fiasco. It is clear that waste of taxpayer money is not limited to our own era.

[Part 2 will discuss the Oneida River Improvement, the other half of the faster alternate route to Oswego.]