

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 46

Editorial Address — Box 310 Shepherdstown, W. Va. 25443

AUGUST 1983

PRESIDENT'S MESSAGE

In March of 1980 we published the first printing of **THE BEST FROM AMERICAN CANALS**, a joint venture of the American Canal Society principals and the Reynolds Metals Company of Richmond, Virginia. ACS members may recall this as an eighty-eight page, 8 1/2" x 11" paperback with two-color cover, which included all major articles (and accompanying photos) published in **AMERICAN CANALS** from March of 1972 through November of 1979.

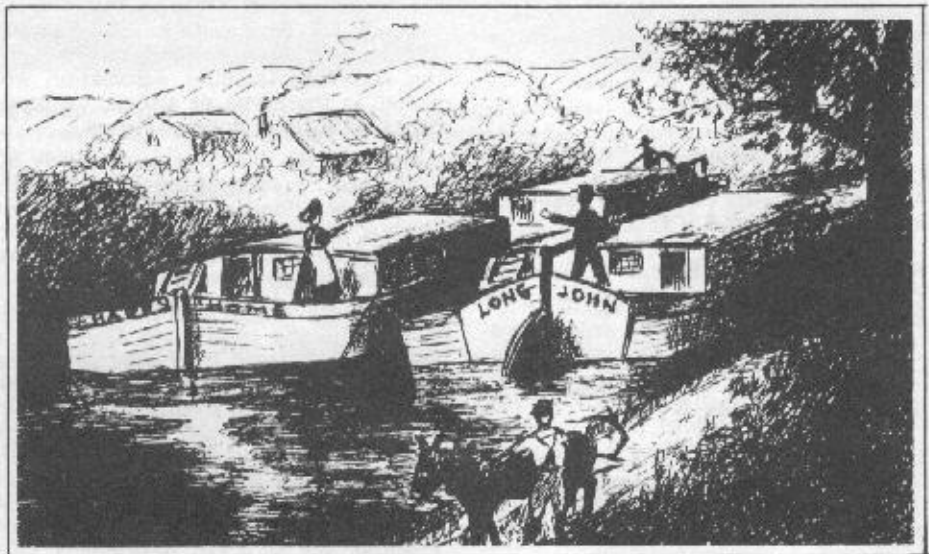
This book was so well received by ACS members, book stores and historical organizations that a second printing became necessary in March of 1981. Now, we have run out of print again! By the time you read this, our printer will probably have the **third** printing ready for distribution. This printing is being called **THE BEST FROM AMERICAN CANALS, NUMBER ONE**. You guessed it, we anticipate printing a completely new "BEST" in another year or so which will include all the voluminous material we have published in **AMERICAN CANALS**, and its supplements, since November of 1979. A few years ago, we went to a twelve-page format; so the new feature material is accumulating at a much faster rate than previously. The new Edition will be called "BEST, Number Two".

In the meantime, those avid collectors of back issues of **AMERICAN CANALS** (and there are many of them) will be pleased to know that "BEST, Number One" is again available. We have made some improvements by setting in printer's type all of the very old issues, which were originally reproduced from typewriter type (as done by Ruth Shank). This has added to the appearance of the third printing and increased its readability.

To avoid depleting our limited American Canal Society treasury funds, we are picking up the tab for this printing of **BEST** in the American Canal and Transportation Center (PA).

We are happy to welcome into **LIFE MEMBERSHIP** in the American Canal Society **William J. Ellenberger, P.E.** of Washington, D.C., **Edward A. Mather** of Wilmington, DE, and **Paul H. Reimer, Jr., P.E.** of Allentown, Pa. Our regular members are reminded that the ACS Life Membership fee will be increased from \$100 to \$150 as of October 1, 1983. Nuf sed!
Bill Shank

"WHAT'S IN A NAME?"



Canal boats of the mid-1800's, as drawn by the late Philip Hoffmann.

By William J. McKelvey, Jr.

Several years ago I did extensive research on the subject of **Canal Boat Names** in the annual volumes of **MERCHANT VESSELS** of the **UNITED STATES** for the years 1870 thru 1925. From a total of about 7000 names I gleaned the most interesting, unique, amusing and unusual. Chapter 12 in "When Horses Pulled Boats", Harlow's 1936 work (recently reprinted by the American Canal and Transportation Center) really jogged my mind to get this article in print.

By far the most popular identification of canal boats was to use the name of the owner or members of his family. Second most frequent names were those of states, counties, cities, rivers, lakes, etc. Boats named after famous people, politicians (especially presidents), naval & military heroes, and even Indian names were common. Names such as **SISTER TO THE SIX BROTHERS**, **SEVEN BROTHERS**, **ORPHAN GIRL**, **ONLY DAUGHTER**, **PILOT'S BRIDE**, **FAITHFUL SON**, and **TWIN BROTHERS** were likely to describe the family or family members. Could names such as **LONG JOHN**, **WILDMAN**, **WIDE AWAKE**, **EARLY BIRD**, **PLAYBOY**, **HERMIT**, **HERO**, **ROMEO**, **BLOOMING YOUTH**, **ROVER**, **INDUSTRIOUS**,

ATHLETIC, **GREAT WARDROBE**, **ORATOR**, **ODD FELLOW**, **EXPLORER**, **DAILY WALKER**, **HANDY ANDY**, and **MOUNTAIN BOY** have been descriptive of the owner?

The following names obviously described how the canal boater felt about his vessel: **DREAMLAND**, **PLEASANT HOME**, **BACHELOR'S HOME**, **DUPLEX**, **HARVEST HOME**, and **HAPPY HOME**. Virtues were used as names: **PRUDENCE**, **FIDELITY**, **ECONOMY**, **HONESTY**, **HARMONY**, **AMBITION**, **MODESTY**, and **ENTERPRISE**. **FROLIC**, **FORTUNATE**, **GAY & HAPPY**, **HAPPY TRAVELER**, and **BUENA VISTA** seem to indicate that these boaters were enjoying their work. Perhaps **BONANZA**, **TRIUMPH**, **VICTORY**, **SURPRISE**, **UNEXPECTED**, **HARD TIMES** and **LAST CHANCE** indicated the fortunes of the operators. Occupations were used as canalboat names: **FARMER**, **DUSTY MILLER**, **CORN PLANTER**, **MINER**, **GLASS MAKER**, **LUMBERMAN**, **PLOW BOY**, **POST BOY**, **RAIL SPLITTER**, **RAILROAD JACK**, **MILL BOY**, **YANK-EE SAILOR**, **SPORTSMAN**, **MECHANIC** and **NEWS BOY**.

The boat owner's nationality was no doubt indicated by the following names: **SHAMROCK**, **IRISH-AMERICAN**, **KIL-**

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American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

"DEDICATED TO HISTORIC CANAL
RESEARCH, PRESERVATION
AND PARKS"

AMERICAN CANALS is issued quarterly by the American Canal Society, Incorporated. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

Annual subscription to "AMERICAN CANALS" is automatic with a minimum ACS dues payment of \$10.00. Individual copies may be purchased at \$2.00.

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LEHIGH CANAL PRESERVATION

Lehigh County commissioners by an 8-0 vote have authorized purchase of 13.5 acres of land along the Lehigh Canal in Catasauqua for historic preservation — providing that the borough or another nearby municipality agrees to lease and maintain the property for 25 years or longer. The tract is the last privately owned segment of the historic canal trail from Jim Thorpe to Easton.

(From the Allentown (Pa) Morning Call, April 16, 1983)

1935 MOVIE FEATURES LEHIGH CANAL

(Thanks to ACS Secretary, Charlie Derr, we produce below an article written by Alice LeSoravage of the Allentown MORNING CALL and published June 23rd, 1983.)

Neither Janet Gaynor nor the late Henry Fonda ever won any awards for it. And it wasn't director Victor Fleming's most outstanding work.

But for members of Freemansburg's historical association, the showing of the movie, "The Farmer Takes A Wife" will be a momentous occasion, somewhat of a premiere, you might say.

The movie, Fonda's first, will be shown Monday on Cinemax and members of the Old Freemansburg Association will gather in the home of association president Carl Raub at noon to view it.

Although the film was made nearly 50 years ago, Freemansburg history buffs and preservationists will be looking for familiar landmarks, including houses and bridge abutments, many of which have since been razed by nature or man.

A trip into America's history, the movie is set in the 1850's and deals with a young man, played by Fonda who joins the Erie canal boatmen to finance the purchase of a farm. Eventually he falls in love with Janet Gaynor, (the first actress to win an Oscar, but for an earlier movie). Other members of the cast were Charles Bickford and Jane Withers and the producer was Winfield Sheehan. Victor Fleming, the director, is probably best remembered for "Gone With the Wind" and "The Wizard of Oz."

But how did the film company come to choose Freemansburg?

The Erie canal, deteriorating after it was closed in the 1920's, apparently was unacceptable as a site for the film, says Raub, and location scouts were sent to

survey the Lehigh Canal, parts of which were still in use. The production company decided upon sites in Freemansburg, Bethlehem and Allentown.

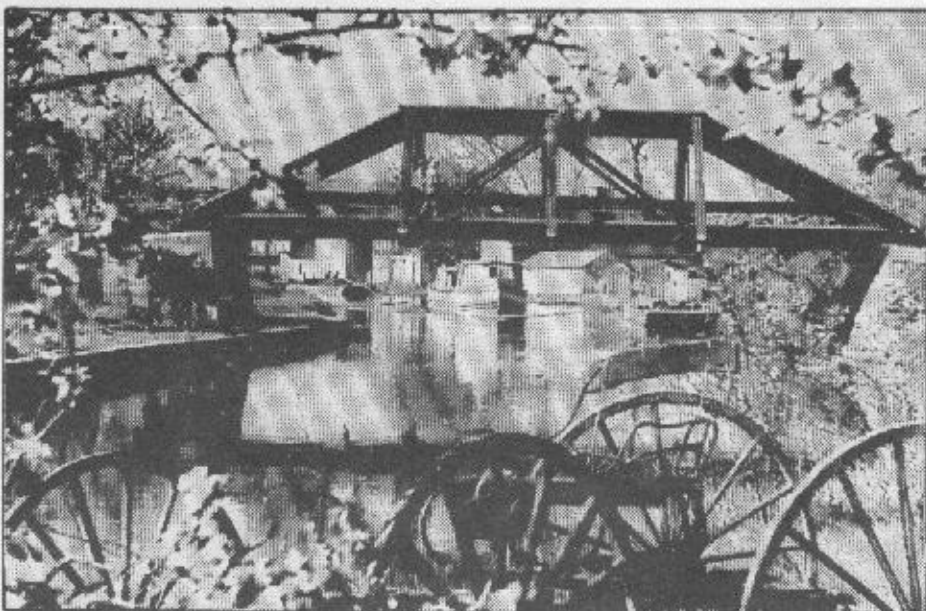
Some of the Freemansburg settings, association members believe are on the film, include the locktender's house; Lock No. 44, which was still operable then; a wooden wagon bridge known throughout the borough as "the red bridge" which led to a grist mill, and a house now owned by Borough Councilman **Charlie Derr**. Only the abutments of the bridge remain. The Willow Grove Hotel which dates to the early 1800's also may be in the film, but members won't know until they view it.

Derr says that for the film, local carpenters were hired to make replicas 45 feet long, about half the size of working Erie Canal boats. The Erie boats differed somewhat in structure from the Lehigh Canal boats. While Lehigh Coal and Navigation Co. Canal boats were distinguished by number, the Erie canal boats had names. Nameplates from the replica boats used in the film are part of the collection in the Canal Museum in Easton, Derr points out.

Derr's grandmother, 84-year-old Mrs. Ruth Heater of Freemansburg, remembers when the film crew and stars came to the tiny borough for the filming.

It caused quite a stir. Everyone who was home during the day went down to the site to watch, she recalls. Unfortunately, she says, she was teaching school in another town during those days and did not get an opportunity to see either Fonda or Gaynor.

"But my husband told me about it. He said they would bring her (Gaynor) in a limousine. And she would go on the picture. People would be crowding around." The cast was housed at the Americus Hotel in Allentown, she recalled.



The house shown in the movie photo still stands although the facade has changed. It is now owned by Freemansburg Councilman Charles Derr.

REPAIRS PLANNED FOR ROEBLING AQUEDUCT



The Roebling Aqueduct on the Delaware and Hudson Canal (Circa 1898) when it still carried water across the Delaware River at Lackawaxen, Pa. The water flume has since been removed, and the structure has been used as a highway toll bridge for eighty years.

(This article was clipped by ACS Director Bob Mayo from the July 28th, 1983 issue of ENGINEERING NEWS RECORD.)

Although it isn't as big a job as most of the bridge fixes now being planned, the face-lift proposed for a bridge that once carried a canal aqueduct over the Delaware River near Lackawaxen, Pa., is heavy with historical significance.

Designed by John Roebling, designer of the Brooklyn Bridge, in 1847, it has proven its durability over the intervening 136 years. It is believed to be the oldest extant cable suspension bridge in the country. The bridge incorporated innovations, such as spun cables, that Roebling had introduced on two earlier bridges in Pittsburgh. The cable-anchorage system has iron I-bar links and is essentially the same system later used on the Brooklyn Bridge.

Four spans originally carried the Delaware and Hudson Canal 534-ft across the Delaware river between Pennsylvania and New York. The canal trough was about 18½ ft wide and 6 ft deep. Water suspended in the canal trough weighed over 1,800 tons. When the canal was abandoned in 1898, the bridge was sold, drained and converted to a privately operated single-lane toll road.

In 1970, it was placed on the National Register of Historic Places, and in 1972 was named a Civil Engineering Landmark by the American Society of Civil Engineers. In 1979, the National Park Service bought it for \$75,000.

The bridge is now part of the Upper Delaware National Scenic and Recreational River. Rep. Joseph M. McDade (R.-Pa.) has asked that \$1 million be added to the Park Service's budget to pay for full restoration of the bridge.

In the meantime, funding has been sporadic and the refurbishing project divided into four more-easily funded phases. The first entails inspection and design recommendations for the piers and suspension components. Phase two covers analysis of and design recommendations for the deck and approach roads. Phases

three and four cover the actual construction.

Phase one is being carried out by A. G. Lichtenstein & Associates, Fairlawn, N.J. Lichtenstein examined the 8½-in. cables, each composed of 2,150 wrought-iron wires, and found them still sound. The consultant recommended that the old cable wrapping be removed and the cables cleaned, rewrapped and painted. The original wrought-iron hangers were found to be in excellent condition — in fact in better shape than a few stainless-steel hangers that had been used in an earlier repair job after an accident.

There was some concern that the piers were founded on wood cribbing — a common feature of Roebling's designs — that might have deteriorated. But divers found stone masonry to the base of the foundations in the river.

ILLUSTRATIONS NEEDED

In these days of audio-visual aides, TV educational programs, and photographers and artists competing for our attention in the "commercials", it is almost mandatory that any periodical publish as many illustrations as possible. This is one reason for the success of AMERICAN CANALS.

In recent issues we have had a shortage of illustrations, with the editorial material which you send us. We would greatly appreciate your including, with your manuscripts, sketches, maps and photos to make your material more meaningful. Even line-drawings clipped from newspapers or magazines are easy to reproduce (with due credit) if available.

The best reproduction is obtained from sharp, black-and-white, glossy photos (any size). Next best are color prints, of good contrast. Least desirable are color slides — which have to be converted to black and white prints by a laborious process. Thanks for your help in this connection.

(The Publisher.)

C. E. WATERWAYS FIX COSTLY

The Corps of Engineers waterways infrastructure has so deteriorated that the fix will cost \$11 billion, according to a soon-to-be-released national waterways study. Nearly one-third of the locks and dams in need of repair are in the six-state Ohio River Basin.

Preliminary results of the report were made public recently in Pittsburgh by Lt. Gen. Joseph K. Bratton, chief of engineers. To meet repair requirements, the Corps' operations and maintenance budget request may for the first time top its construction budget for fiscal year 1984, he said.

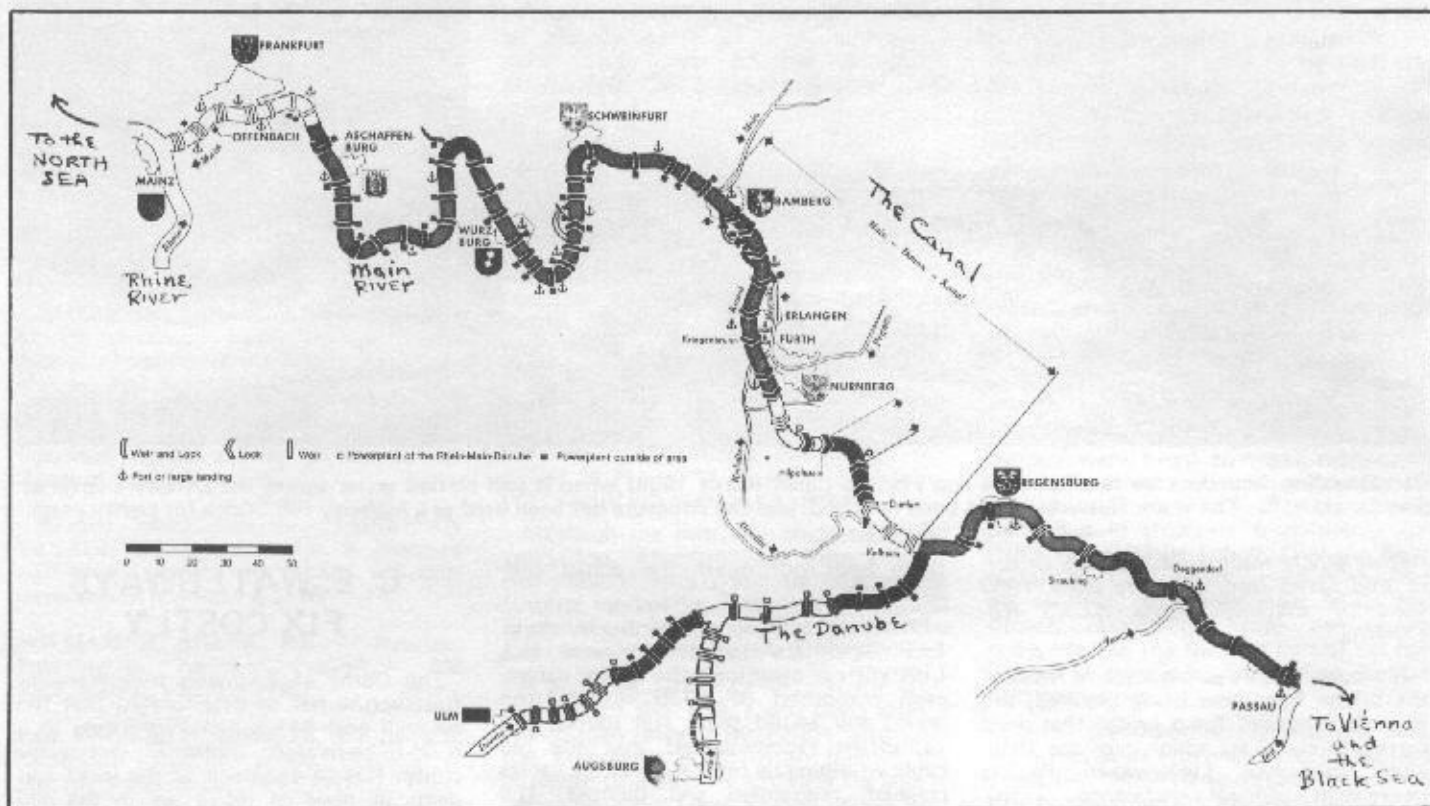
The intent of the waterways study, requested by Congress in 1976, is to develop policy guidelines to govern future Corps spending, according to Arlene L. Dietz, study manager. "We combined ongoing facility studies to help provide a coherent view of the needs of the waterways system," she says. Structures were evaluated in terms of maintenance and likelihood of increased use, but maintenance needs far outweigh any need for additional capacity, says Dietz.

As with cities and states, the Corps has for too long overlooked rehabilitation and replacement of aging structures, she says. "Ninety-seven of the commercial locks will be beyond their engineering life within the next 20 years. One-half of that group are heavily used and will likely need some major work," according to Dietz.

The report is to serve as a blueprint for developing a first-class waterway system for the country, said Bratton, but he reiterated the Reagan administration's resolve to implement user fees, ending full federal financing of water projects.

(Bob Mayo picked up this item in the November 11th, 1982 issue of ENGINEERING NEWS RECORD.)

EUROPAKANAL NEARS COMPLETION



Map of the navigation system being constructed between the Rhine and the Danube. The darker sections are already completed; the lighter sections still under construction, or in the planning stage.

One of the most ambitious waterways projects in the world, one which has inspired the imaginations of famous European leaders and economists for centuries, is nearing completion: it is the **Rhein-Main-Danube (RMD) Canal** (also called the **Europakanal**). King Ludwig I of Bavaria was the first to bring the idea to reality with his small and short-lived Main-Danube Canal built between 1837 and 1846.

The Rhein-Main-Danube Canal reaches across the middle of Europe and connects the Black Sea with the North Sea. A sophisticated series of canals and locks links the Rhine, Main, and Danube rivers, forming this 3,500-kilometer waterway system. The project is as unique as it is ambitious and, from a hydraulic engineering point of view, is a very daring one involving an investment of about \$2 billion.

The vast agricultural and industrial productivity of Europe, much like that of the United States, depends upon an economical and efficient transportation system for its viability. With the rising cost of fuel for planes, trucks, trains, and boats being a major factor in transportation systems, investments in well-planned waterway projects are extremely important.

Cargo moved via waterways on barges travels much more economically than by truck and rail. In the U.S., waterways industry proponents often point out that 1 gallon of diesel fuel will move 1 ton of cargo 70 miles by truck, 270 miles by rail, or 408 miles by barge. It has been es-

timated that the Rhein-Main-Danube connection would reduce Austria's annual freight bill by 1 billion shillings (\$60 million). Overseas grains would reach Vienna up to 30 percent cheaper, and coal and ore imports would be priced 20 to 30 percent lower in Austria's Danube Port of Linz.

The Europakanal project did not come into existence simply because of the critical energy problems of the last decade; prudent, innovative planning has been under way since 1921. In that year, construction of the Rhein-Main-Danube connection was planned under the direction of the Rhein-Main-Donau Aktiengesellschaft (RMD AG), a corporation which was formed by government agreements and entrusted with building the waterway.

The Europakanal was designed on a generous scale to accommodate large vessels and tows, so that it would not be obsolete before it was completed. The channels in the system are 4 meters deep

The accompanying article was discovered by ASC Director Bob Mayo in a recent issue of the **MILITARY ENGINEER** magazine. The author is Col. Herbert R. Haar, Jr. (USA Retired) who is the Associate Port Director for Planning and Engineering for the Port of New Orleans. Col. Haar has a B.S. degree from Virginia Polytechnic Institute, and M.S. from University of Illinois, and is also a graduate of the U.S. Army War College.

and between 43 and 55 meters wide. The 60 locks in the system, 51 of which are completed, are 12 meters wide and 190 meters long, except in the Main River portion, where they are 300 meters long. The Europakanal will accommodate 1,500-ton vessels with beams up to 11.4 meters and a total single-ton capacity of 3,300 tons.

Iron and steel, coal, building materials, petroleum products, chemicals, fertilizers, grain, ores, and feeds are expected to be the major commodities moving on the Europakanal when it is completed in 1985. At that time, 18 million tons of cargo a year will move on the waterway, a figure which could more than double when and if the second locks (forming a double lock system at each site) are built.

To finance the project, RMD AG was granted the right to exploit the water power of the Aschaffenburg-Bamberg stretch of the Main, the Bavarian Danube, the Altmühl, the Regnitz, and the lower Lech until the year 2050. This water power is used to operate 47 river power plants and a pumped storage plant for the railway power supply system. Thirty-three power stations were built to develop the Main, Regnitz, and Danube into an inland waterway.

Electric power is obtained as a linked product because the dams built for shipping have falls that can be used to drive turbines. By the combination of weir and lock, river power stations can be operated

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economically even where level differences are small.

The value of this additional benefit to the company is that the produced power is used to run the system's pumps and locks, and the remaining earnings from the power stations have enabled the company to finance nearly 60 percent of the total capital investments up to the present from its own resources. The power station earnings are not directly invested in construction; instead, to expedite construction, they are used to cover the cost of interest and loan redemption of capital market funds.

Despite interruptions due to economic crises and World War II, by 1962 the Main to Bamberg portion had been developed by dams. The southern branch of the Rhein-Main-Danube connection, the Danube stretch from Regensburg to the German-Austrian border, was also canalized. Here the shipping channel was improved by low-water regulation (i.e., by groins and training works) and by dredging.

In 1959, construction began on the Main-Danube connecting canal, which reaches from Bamberg to Regensburg. This canal runs between Bamberg and Nuremberg in a roughly north-south direction; it is 70 kilometers long and has a height difference of 82 meters.

There are seven locks in the Bamberg-Nuremberg stretch of the waterway, six of which have water-saving features. To reduce water consumption during lock operations, the contents of the lock chambers do not flow entirely into the downstream reach of the river, but into ponds at the sides of the lock chambers. To fill the locks, water from these ponds is used first and the remainder needed for complete filling is then taken from the upstream canal reaches. By this method, up to 60 percent of the water used in lockages can be conserved.

Since the autumn of 1972, the entire canal section up to Nuremberg has been open to traffic. All that is lacking to complete the German portion of the Europakanal is the 133-kilometer section between Nuremberg and Regensburg. Dam construction is under way below Regensburg to fully maintain the required depth regulation and standards of the Danube Commission. When completed, the dam will also provide flood protection for the region.

Three sections remain to be completed before the waterway between the Rhein and the Danube rivers can be opened: a 64-kilometer canal with seven locks between Nuremberg and Dietfurt, a 34-kilometer development with two dams between Dietfurt and Kelheim, and an 87-kilometer canal on the Danube between Kelheim and Straubing.

The Europakanal presents several challenging engineering feats. The waterway reaches its highest point at Hilpoltstein, where it is 406 meters above sea level. This section runs mainly in a cutting at the watershed divide between the Rhein and Danube. The level difference at three locks is about 25 meters.

Pump stations are being built to meet lockage water needs and to improve the water flow in tributaries of the Main River. Near the summit reach, a one-week storage reservoir is being built. Another water-conservation measure in sections of the canal with a level above ground-water level is provided by an asphaltic lining for the canal; a protective surface course prevents damage to the lining from shipping vessels.

Another noteworthy project is the construction planned by the Bavarian Water Board of the Altmühl compensating reservoir and two dams in the valley of the Bromback and Kleine Roth. This project will permit large volumes of water to be transferred from the basin of the Danube to that of the Main, and will also give protection against 500-year record flood levels.

All structures on the canal are based on the following technical data, which are valid for the entire Main-Danube Canal. The water surface width is 55 meters where the banks are sloped and 43 meters where the rock-bound canal has a rectangular cross section. The water depth of still-water reaches is 4 meters and of flowing sections 4.80 meters.

As on the Main River, the locks are 12 meters wide and only 190 meters long. At every fall, double locks are possible, but at present only a single lock chamber is being built. The standard dimensions of the locks correspond to Waterway Category IV of the international European classification. They not only permit vessels of 1,350 tons to pass, but will also take larger units up to 1,500 tons and push-type units with beams up to 11.40 meters and lengths of about 180 meters. Such push-type trains can carry 3,300 tons. The numerous bridges across the canal span it without any intermediate piers.

All along the Europakanal, special attention is devoted to landscaping and creating recreational areas. The

object is not only for the harmonious integration of all structures into the countryside, but also to remedy past landscaping mistakes such as gravel pits and refuse dumps, and to landscape the vicinity of the waterway extensively. As a result, old water areas and parts of the Ludwig Canal will be preserved and recreational areas will be created.

The Europakanal project will perhaps be the most technically advanced waterway system in the world. The \$2 billion investment, financed with federal, state, local, and private funds, features the innovative arrangement of revenue earnings from hydroelectric power plants built into the project, thereby presenting workable solutions to economic problems which are usually encountered in such large undertakings. The water saving and storage, channel lining, beautification measures, local development of port facilities in conjunction with the project, and other special features of the waterway all deserve the special attention of both proponents and opponents of updating and expanding the vast U.S. waterways system. This project is probably the ultimate in current waterway projects and is an outstanding answer to U.S. opponents of new waterway projects.

The canal system is supposed to be a free waterway, based on an early international agreement; however, it will be interesting to observe what the Eastern European countries will do to exploit further trade advantages from the waterway and whether it will result in user charges through tolls.

With the need for fuel-efficient, economic solutions to the rapid growth of cargo tonnages in international transportation, the advantages of shipping via all water routes are becoming more apparent. With careful planning and the cooperation of governmental and private groups, projects like the Europakanal will be realized in time to meet the transportation challenges of the 21st Century.



The Wurzburg Lock on the Rhine-Main-Danube Canal.

MORRIS CANAL RECORDS TO BE MICROFILMED

Original records of the Morris Canal are to be organized for microfilming by the New Jersey Department of State's Division of Archives and Records Management. Most of the engineering, financial and administrative records of the Morris Canal and Banking Company have been maintained by the State Archives since the 1970's. The project is a cooperative undertaking of the Canal Society of New Jersey, the Center for Canal History and Technology in Easton, Pennsylvania, and the State Archives.

Nearly 150 minute books and ledgers, 1,500 maps and drawings, and 25 cubic feet of correspondence, reports and photographs record the history of one of the most ambitious engineering enterprises in 19th-century New Jersey. Started in 1825, opened in 1831 and finally abandoned in 1924, the 102-mile artificial waterway from Phillipsburg to Jersey City unfortunately saw few prosperous years.

The New Jersey legislature incorporated the Morris Canal and Banking Company on December 31, 1824 to construct an inland waterway between the Delaware and Passaic rivers. Completed from Phillipsburg to Newark in 1831, the canal stretched 90 miles across the mountains of northern New Jersey using an elaborate and ingenious system of locks and inclined planes. It cost over \$2 million to build. At the time, a trip from end to end required five days. In 1836 the canal was extended 12 miles to Jersey City.

Carrying coal as its staple commodity, the canal's business and profits peaked in the late 1860's. Other cargoes included grain, iron ore, lumber, sugar, bricks, whiskey, hay and lime. Railroads robbed the canal of much of its coal and ore business after 1870, and the waterway

became obsolete, its income slowing to a trickle at the time of its 1924 closing.

In 1922, the canal and adjacent properties passed into the possession of the state of New Jersey. However, the founding corporation still exists today as a trustee board to manage the remaining canal properties. The company is attached for administrative purposes to the New Jersey Department of Environmental Protection.

The Canal Society of New Jersey (CSNJ), the Center for Canal History and Technology (CCHT), and the State Archives recognized the need to preserve and make more accessible the records of the Morris Canal and Banking Company, and in April 1983 a combined commitment of \$7,800 was made for the organizing and microfilming of the records. Hired to process and prepare the records for filming during July and August was Joseph R. Klett, a University of Pennsylvania undergraduate. Klett is supervised by Dr. William C. Wright, State Archivist, and Archives Supervisor Karl J. Niederer. Advisory assistance is provided by James Lee, Morris Canal historian and CSNJ director, and Lance Metz, historian and editor of CCHT.

At the completion of the project, copies of the microfilmed records will be available to the public for research at the State Archives and CCHT. The State Archives will also produce a guide to the microfilmed and original records. Copies of the film and guide will be available for purchase from the State Archives and CCHT.

For further information contact: Karl J. Niederer, Supervising Archivist, Division of Archives and Records Management, Department of State, CN 307, Trenton, NJ 08625, (609) 292-6260.

C. & O. CANAL RESTORATION

WILLIAMSPORT, MD — The C & O Canal that cuts through the western edge of town would undergo a massive, multi-million dollar restoration if a 10-year plan presented to the National Park Service is funded, an official said yesterday.

The project would cost \$3 million to \$4 million and would give town officials the opportunity to combine canal restoration and the historic character of Williamsport into a reconstructed period town, according to Richard Stanton, superintendent of the C & O Canal National Historic Park.

The report, which was two years in the making, was issued by a local citizens committee.

Stanton said he is hopeful the project will be funded over the next decade. Already under way is a \$150,000 project to restore the wing walls of the Conococheague Aqueduct.

The park, when restored, would serve the needs of the tourist, the short-term recreationist, the long-term towpath hiker and users of the Potomac River, said Stanton.

Williamsport, the centerpiece of the 185-mile canal that winds from Cumberland to Georgetown, is particularly ripe for restoration because it was a major center of activity during the construction and operation of the waterway from 1828 to 1924, he added.

"There's no better place on the canal," said Stanton. "There was so much activity going on."

Rather than turning the canal into a recreational playground, planners want to reconstruct it into an historically correct setting suited for hiking, biking, horseback riding and camping.

Already in place at the canal, and included on the National Register of Historic Places, are the aqueduct, Lock and Lockhouse 44, the Cushwa warehouse, a trolley power station, a railroad lift bridge, the Bollman bridge, the towpath and a barge turning and loading bay.

The project calls for:

- An outdoor living history museum.
- Rewatering of the canal and turning basin.
- Restoring the trolley power station for use as a visitor's center and offices.
- Restoring the facade of the Cushwa warehouse to period appearance.
- A self-guided interpretive walk through the park.
- Restoring the lock, lockhouse, canal prism and towpath west of the aqueduct to mile 100.9.
- A visitor parking area behind the trolley barn.

(The above item appeared in the Hagerstown, Maryland HERALD-MAIL for July 2nd, 1983. It was clipped by the Preservation Society of Cumberland, Maryland.)



Float sponsored jointly by the Canal Society of New Jersey and MacCulloch Hall at the recent July 4th Parade at Morristown, N.J. "George MacCulloch" (on the right) was portrayed by Jim Lee. The float included a P-A System which played nostalgic canal era music. (Photo courtesy of Bill McKelvey, Jr.)

FLORIDA BARGE CANAL

(The following item appeared in the *ORLANDO SENTINEL* for August 4, 1983 and was clipped for us by Bill Etchberger.)

TALLAHASSEE — Gov. Bob Graham and the Cabinet Wednesday called on Congress to kill the Cross Florida Barge Canal, a project halted 12 years ago when it was less than one-third complete.

In a resolution by Attorney General Jim Smith, the panel voted 4 to 0 to recommend against completion of the canal.

Graham and the Cabinet also asked Congress to appropriate enough money to buy canal lands in the Oklawaha River Valley, within the Ocala National Forest.

"A high priority today is to reduce the federal deficit," said Graham before the vote.

"This project does not meet the test of necessity that would warrant its moving forward even in the best of times," he said.

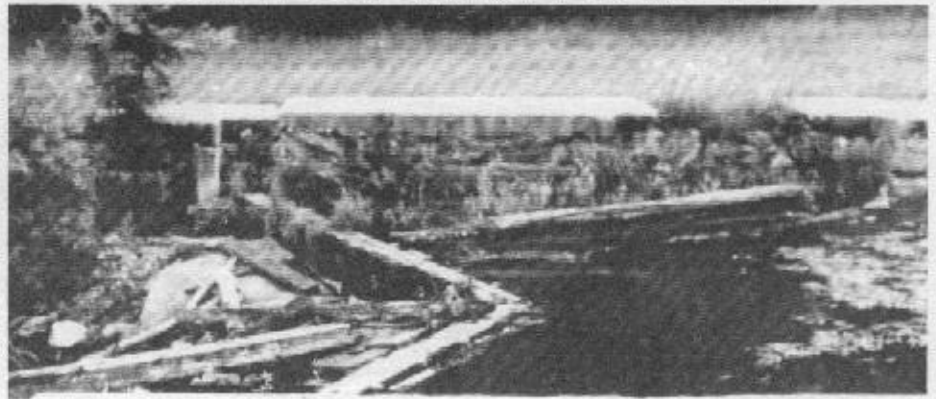
"The facts of life are the barge canal is dead," Smith said. "Let's get it behind us and I think we'll have a good life in Florida without the Cross Florida Barge Canal."

Before the vote, Graham and the Cabinet heard from canal opponents who said it would damage the environment and supporters who said it would enhance Florida's economy.

Hank Fishkind, an economist with the University of Florida, said the U.S. Army Corps of Engineers estimated in 1979 that it would cost \$366.8 million to complete the 110-mile waterway.

With inflation, Fishkind said, the estimate is up to \$523 million.

PORTAGE CANAL HISTORY



The downstream Lock on the Portage Canal, near Portage, Wisconsin as photographed in 1975 by the late Herb O'Hanlon.

By Frederica Kleist

With the building of the Fort and the Military Road and the much used Fox-Wisconsin Trail between the two rivers a better means of transporting goods across this marshy strip was needed. Since Fort Winnebago had been built, people began settling in the area. The Erie Canal had been constructed in the East. It was a time for Change.

In 1834, the Portage Canal Company was chartered by Michigan Legislature. Digging of the canal began in 1838, but was abandoned. The first canal was started parallel to Wauona Trail. It was not until Wisconsin became a state that anything was done about the canal. In 1851, there was an unfinished canal . . . One small boat reportedly went through it. In May of 1851, the Steamer the John Mitchell tried to pass from the Fox River through the canal to the Wisconsin River, the Steamer Enterprise was coming from the Wisconsin River, neither would yield, so neither went through the canal.

In 1856, a small steamer, the Aquila, coming from Pittsburg by the way of the Ohio and Mississippi, ascended the Wisconsin to Portage, entered the Fox through the existing canal and descended the Fox River to Green Bay.

In 1853, the Fox-Wisconsin Improvement Company was formed to build the canal. A new route, which is the present one, was chosen. In 1855, the City of Portage purchased from the Fox-Wisconsin Improvement Company a parcel of land for a right of way to construct a bridge across the canal to connect Wisconsin Street. The Fox-Wisconsin Improvement Company went into bankruptcy.

In 1866, the Green Bay Mississippi Canal Company acquired title to the canal. They were interested in the water power rights. In 1872, the Green Bay and Mississippi Canal Company sold the canal to the United States. In 1874, the Corps of Engineers, Department of Army started at the Fox River end and completed the canal in 1876.

June 30, 1876, the first boat, the Boscobel, went through the finished canal. According to the Fort Winnebago Lock Tender's Book date from 1878 to 1908 such boats as City of Portage, Gussy Girdon, U S Dredge, U S Scows, Boscobel, Fox, U S Steamer Winneconne, Ellen Hardy, Weston, U S Neenah, Perkins, Steamer Dekorra, Steamer Montello, George Lacy, and the Steamer City of Berlin passed through the canal. The canal was also used by pleasure craft and other cargo boats. Several boats were of the 300 ton size. Starting in the early 1900's until the Fort Winnebago Locks were bulldozed in and replaced by an earthen dam and the Wisconsin River Locks welded shut, the canal was used by many pleasure boats.

The canal today is a sadly neglected waterway, that is on the National Register of Historic Places.

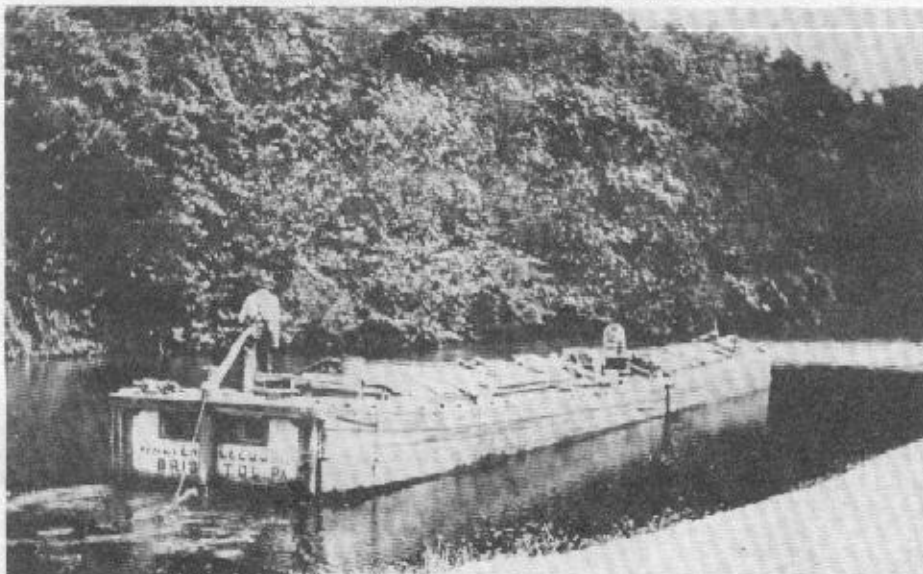
DEQUEMIN NEW HEAD OF CCS

A St. Catharines historian and environmental studies teacher, **Colin Duquemin**, was elected President of the Canadian Canal Society at the second annual meeting held July 15-16, 1983 at Fenelon Falls, Ontario. He succeeds Donald Smithies, Peterborough museum curator, founding president.

Other officers elected were: Vice-President, **Hayward Madden**, Livonia, N.Y.; Treasurer, **George Carl**, Port Colborne (Ontario); Secretary, **Robert R. Taylor**, St. Catharines. Directors: **Christopher Andreae**, London; **Heather Ott**, Port Colborne; **Peter Styromo**, Toronto; **Maurice Smith**, Kingston, **Donald Smithies**, Peterborough. Honourary Legal Counsel, **Marvin Kriluck**, St. Catharines.

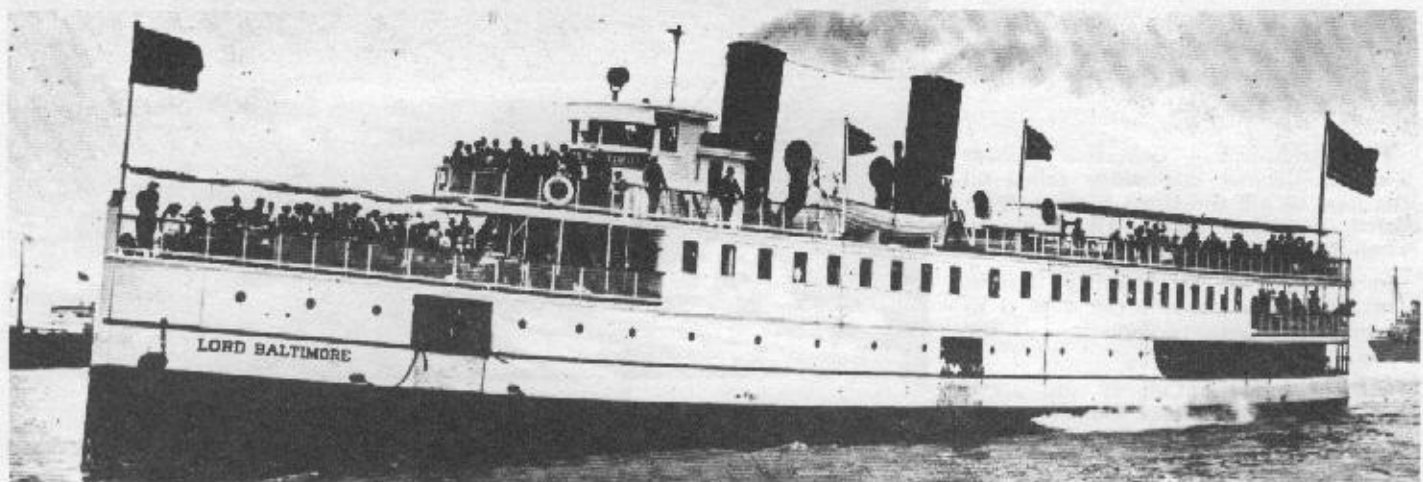
CCS plans a combined meeting with ACS at Peterborough, Ontario in the Spring of 1985.

ON THE LEHIGH CANAL



Tandem Canal Boat on the Lehigh Coal and Navigation System (1895) with Captain John Waters at the tiller. The photo was sent us by ACS Member Richard C. Osterhout of Bensalem, Pa. who adds that the boat was named Walter F. Leedom for his Great Grandfather, a coal merchant at Bristol, Pa.

NIGHT BOAT FROM PHILADELPHIA



The LORD BALTIMORE, which supplied overnight service between Philadelphia and Baltimore for three-quarters of a century, via the Chesapeake and Delaware Canal. (Photo courtesy Mariners Museum, Newport News, Va.)

By the Rev. Richard S. Bailey

The steamboat came early to the Delaware River, but for geographical reasons the City of Brotherly Love, despite its commercial importance, never became a center for the typical American night lines. Ten overnight steamers left New York every evening during the height of the steamboat era; nine sailed daily from Baltimore, going down the Bay and up the rivers of the Chesapeake; but what of Philadelphia? There was little activity of this sort. Boats ran north to Trenton or south to Wilmington and even Cape May, but these were day trips, usually sections of the long haul from New York to Washington. Philadelphia was not a steamboat city. But there were a few night boats, and rather unusual ones at that - long since forgotten, but they were there.

The most important was the Ericsson Line, the night boat to Baltimore, which ran through the Chesapeake & Delaware Canal and down the Bay. It was made possible by the Canal, and literally the Canal shaped the boats. This inland waterway had been dreamed of since the late 1600's and was finally realized in 1829. Twelve miles long, it ran across the neck of the Delmarva Peninsula and finally eliminated the tiresome coach journey from New Castle on the Delaware to Frenchtown at the head of Chesapeake Bay. There were three locks to control the water levels and very small locks they were - 200 feet long and 25 feet wide; so ships using the Canal could not exceed those dimensions. This ruled out the sidewheelers and promoted the use of the screw propeller, then relatively new, and so the Ericsson Line took its popular name from the American inventor of the screw, John Ericsson.

Officially the company was the Baltimore & Philadelphia Steamboat Company, incorporated in 1844 by two families, the Shrivvers of Baltimore and the Cadwaladers of Philadelphia. Their original intention was the moving of freight. Four small steamers began the service: ERICSSON, BALTIMORE, CUMBER-

LAND, and PIONEER. The boats left each city at 1:00 p.m., arriving the next morning. Later the departure time was advanced to 3:00 p.m. Larger boats were soon needed and in 1855 the company built HENRY L. GAW and RICHARD WILLING, adding JOHN S. SHRIVER two years later.

In the 1890's two new ships were built, designed specifically for the overnight passenger traffic. These were ANTHONY GROVES JR. (1893) and ERICSSON (1897), both built in Philadelphia. They were both 199 feet long with a beam of 23 feet: every inch of lock space was used. Design-wise they followed the pattern of the Old Bay liners: three decks, single stacks, with the boilers and machinery amidships. Length-wise they compared favorably with other night boats, but seen head-on the effect was rather strange. They were so very narrow! The Bay liners averaged a 50 foot beam, side-wheelers up to 75 feet; but the Ericsson boats were stuck at 23 feet. You might think they had been put in a press and squeezed up tight. And how they must have rolled when the water was rough! In fact, ERICSSON once did tip over, onto its side, in the Delaware on Feb. 16, 1898. She was caught in a gale of wind and one passenger was drowned. As a result, some of her upper deck cabins were removed when she was recommissioned, which rather spoiled her looks.

An official company brochure describes these two boats as follows: "The steamers of the Ericsson Line are large and have greatly improved passenger accommodations, affording every comfort. The saloons are well furnished and pleasant. The staterooms, situated on the saloon deck, are cozy and comfortable, are lighted by electricity and heated by steam, both under control of the passenger. Large stairways lead from this to the upper, or promenade deck, upon which are located the pilot house, officers' quarters, and smoking room. Below the saloon deck is the large well ventilated and well lighted dining room."

Now some exaggeration is expected in literature of this sort, but consider the

actual dimensions involved! The ships had a beam of 23 feet. On the saloon deck there was a row of cabins along each outer wall. If we allow that these were 7 feet by 7 feet to permit the length of the berths, we have used 14 feet and have only 9 feet left as the width of the saloon. That is a long narrow passage, allowing at the most space for nothing more than a few straight chairs along the walls between the cabin doors. The stairways would be in the saloon also, going down to the main deck and up to the promenade deck.

The promenade deck above boasted a narrow railed open deck all the way round, which would have made the inside corridor even narrower, for there were staterooms on this deck also. Going downstairs from the saloon, one came to the entrance hall or lobby, on the main deck toward the stern. Here the passengers boarded the ship, picking up stateroom keys at the purser's window. Behind this was the dining room at the extreme stern and since deck space was required outside this was where the crew might handle docking lines. The Ericsson dining rooms were also small.

Edward Vallandigham, in his book *Delaware and the Eastern Shore*, describes his experience of the Ericsson Line as follows: "If you have chosen your time aright, you find yourself astern on the upper deck of the little steamer at half-past five of a fine spring evening, well on your way downstream, with Philadelphia fading behind you, and the gracious panorama of the Delaware defiling before your eyes, clothed in the mingled light of the westerling sun and a three-quarter moon already well up in the sky. The whole voyage seems like an adventure in toyland. There is just room on the upper stern deck for half a dozen passengers and the officer who paces back and forth in the narrow space, cheerfully answering questions, and convincing the company that they are the guests of the ship. You sup in a little saloon at one of half a dozen impeccably neat tables and look out of the window beside your shoulder

(Continued on Page 9)

(Continued from Page 8)

upon water, sky and shore, while you eat much the kind of delicate but sufficient meal that good housewives serve at evening all over the Delaware and Maryland Peninsula. Your stateroom looks like a bit of mere stage setting, so tiny is it, so dainty in its make believe aspect.

"If the boat seems small, you have more than ever the sense of making play when you reach the entrance of the canal at Delaware City. Standing on the upper deck at the prow, you tower above the puny lighthouse with its malignant red danger speck menacing your eye. Soon after the vessel passes the locks, the canal widens into what looks like a lovely river, and its umbrageous shores beneath the moon are as romantic as those of many a natural stream. One smells the odor of magnolia blossoms, sees the dim cattle feeding upon gently sloping pastures, hears the croon of sleeping birds in the thicket, and can almost reach from the tiny cabin window and snatch bits of the foliage as the tiny steamer threshes slowly along its journey of fourteen miles to the final lock at Chesapeake City."

When ANTHONY GROVES and ERICSSON came on the line, RICHARD WILLING and GENERAL CADWALADER were released from night duty, and the company experimented with daylight trips during the summer months. These were so well received that in 1903 two new ships were built, designed especially for day use. These were the sisters PENN and LORD BALTIMORE, no doubt the best remembered of the fleet. They were the same size as the others for obvious reasons, but having only a handful of staterooms, their public rooms were much larger and the open deck space quite generous. Also the dining room was placed on the promenade deck forward and was much more spacious. And they were fast: the fastest things on the Bay, capable of better than twenty miles per hour. Both were built in

Wilmington by Harlan & Hollingsworth, and were designed with lower, sleeker lines, each having two smokestacks with a pronounced rake suggestive of their speed. Since they moved through the canal during the day, they became well known, and it was a common pastime to "go watch the boat go through". They left each city at 8:00 a.m. and reached their destination at about 6:00 p.m., of which time three and a half hours were used in the transit of the canal.

The Ericsson Line prospered until after the first World War, but then, as with all steamboat lines, business began to drop off. In 1919 the U.S. government bought the canal and began to rebuild it, widening it and eliminating the locks. The Company's response to this was to scrap PENN and use her engines in a new ship, JOHN CADWALADER (1926), 219 feet long with a beam of 43 feet 6 inches. She was built in Wilmington by Pusey & Jones and was a fine ship although she lacked the special character of the earlier vessels.

LORD BALTIMORE continued on the day route until 1925, running on alternate days until she was scrapped in the early thirties. Meanwhile ANTHONY GROVES JR. ran opposite JOHN CADWALADER on the night run until she was finally laid up in 1932. ERICSSON, from which most of her staterooms had been stripped, was kept as a spare boat, and JOHN CADWALADER continued the passenger service alone. ERICSSON was sold in 1936, and passenger service was discontinued in 1937 as the company could not afford to install the fire protection devices required after that year. After this JOHN CADWALADER continued to carry freight for a few years; then all operations ceased forever when she burned at Philadelphia on May 21, 1942.

NEW CANAL TRIP LIST AVAILABLE

Jan F. Van Peppen, President of Chippenham Travel, has agreed to handle the American Canal Society list of canal boat rides and other boat trips and cruises of interest to canal enthusiasts. For a copy, write to Chippenham Travel, 7127-A Forest Hill Avenue, Richmond, Virginia 23225 (preferably with a stamped, self-addressed envelope) or call (804) 320-8800. There are quite a number of canal boat rides available now in this country, and many river and coastal cruises of related interest.

Chippenham Travel can also help you with bookings when desired, and can supply travel literature. We asked Mr. Van Peppen if he could handle our trips list, because we frequently have inquiries from home and abroad about inland and coastal cruises, which are best handled by a good travel agent who keeps up with such things. He has already added a St. Lawrence Seaway cruise, not on our list. Chippenham Travel can also help you with canal (and other) trips abroad, including the arrangement of tailor-made canal society group tours.

Bill Trout

BOOK REVIEW

THE WELLAND CANALS: A COMPREHENSIVE GUIDE, by John N. Jackson and Fred A. Addis. St. Catharines, Ontario, Welland Canals Foundation, Lincoln Graphics, 1982 \$9.95. Paper. ISBN 0-961156-0-1.

This 140-page volume, 8½ inches square, with its clearly reproduced illustrations numbering over 150, projects all four of the Welland Canals (the first beginning operation in 1829); to connect the Upper and Lower Great Lakes. The authors, John N. Jackson, Professor of Applied Geography, Brock University, St. Catharines, Ontario; and Fred A. Addis, The Printery, Port Colborne, Ontario, have compiled this work with three groups of readers in mind; residents of the Niagara Peninsula, summer tourists to Niagara, and as a field guide for groups who visit the Canal throughout the year. Both authors are Directors of the Welland Canals Foundation, the initiators of this book; and their acknowledgement also includes fellow Directors and their support.

The Canals have been viewed as an engineering system, as landscape, and as an attraction to industry, involving ships and their trade along its routes. Beginning with the need for a canal, Part I portrays the "characteristics" of the Welland Canal, and the changes in the Second, Third and Fourth Canals, including some re-routing and alignment, brought about "as the economy, trading patterns and technological abilities continue to progress." Part II features the main points of interest along the Canals with the help of a doublespread map, and pertinent details in the history of the area centered on.

"Ships and Trade on the Canal" (Part III) includes a veritable "dictionary" of ship terminology, fleet and ship names, a pilot's duties, movement and control of vessels, operating costs, trade, traffic, tolls and "wharfage" charges.

Part IV will be useful to researchers as it lists where publications in both English and French may be obtained free of charge, also colleges offering officer training courses; The Welland Canal Mission's contribution as an interdenominational ministry; "Canal Data," with bridges and lock locations, traffic and products shipped; and a "Chronological Outline" which includes all four Welland Canals, from 1818 to 1979. Addresses to write to for tourist information, associations, libraries and museums where reference material is available, general interest courses at Brock University, and societies with canal interests have been listed. A Bibliography of historical works devoted to the Welland Canals terminates the text.

Illustrated with early engravings, portraits, maps, charts and other layouts; excellently reproduced photographs from the authors' collections and other sources, expand this volume to a pictorial history, supplementing its informative text. To revert back to its subtitle, this compilation is indeed a "Comprehensive Guide" for which the authors deserve sincere acclamation.

(The above review is reprinted from INLAND SEAS, Fall 1982. Copies of the book may be obtained by sending a check or money order for \$9.95 to John N. Jackson, Dept. of Geography, Brock University, St. Catharines, Ontario, L2S 3A1, Canada.)

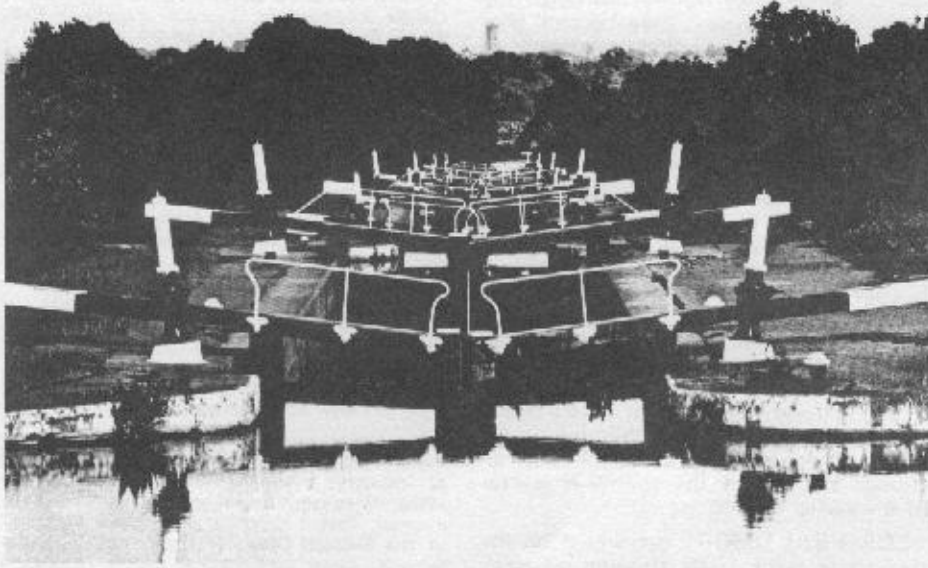
A Sunbury paper says, the cast-iron outlet lock in the Philadelphia and Sunbury Railroad Company's basin, at that place, is nearly completed.

(From Scientific American, Vol. 9 (Dec. 31, 1853), p. 124 submitted by Carl Larson, ACS.)



The ANTHONY GROVES, JR., built in 1893 in Philadelphia by Charles Hillman, steams up the Patapsco River into Baltimore. (Mariners Museum)

STAIRCASE LOCKS, HOW (NOT) TO OPERATE



Looking down the Flight of Five Locks on the Grand Union Canal at Hatton, England (Courtesy British Waterways Board)

By David W. Beach, ACS

When faced with the inevitable changes in elevations required by the canal route, the builder constructed locks. When the required elevation change exceeded the practical limits of a single lift, generally 10 to 12 feet, a series or flight of single locks were constructed with a short pond between the locks. In some cases topographic features and economy made possible the construction of a staircase lock utilizing a common gate between two locks. While the principles of lock operation are the same for single locks as for staircase locks, the vacationing canaller may view the staircase lock with alarm, since the opportunities to go astray are greatly increased. The author has negotiated a number of staircase locks in England and has gone astray.

Mr. Thomas Telford, as a young brilliant canal engineer in the very early 1800's, chose to include a three-rise staircase at Grindley Brook on the LLangollen Canal. The British Transport Waterways, in its first Inland Cruising Booklet, devoted one and a half pages to the operation of these locks. By following the step by step procedures set forth, any reasonably experienced canaller should have no difficulty. No so! Difficulty was encountered in the middle lock. By controlling the flow of water from the full top lock with the ground paddle, the boat rose in the prescribed manner to the required full middle lock level. Great! No! Unfortunately, the level of the top lock was still greater than the middle lock, which continued to fill. It now looked as though something had indeed gone astray. The boat was making a valiant effort to float onto the towpath and the portly lady passenger with her knitting on the stern seat appeared concerned for her life. Fortunately, the cause of the problem was quickly located. A pre-

vious boatman had left the topmost ground paddle partially open, against all rules of lock operation. Once closed and the water stopped, the situation was brought under control. The indignity of the moment went unobserved by any bystanders or other boatmen, since this trip was undertaken well before canalling became popular. However, water marks around the middle locks indicated that others had been treated to the same experience.

A second experience with staircase locks took place some years later on a beautiful, warm, Sunday afternoon outside of Chester at the Three Rise Northgate Lock. On this occasion a downhill trip was undertaken, accompanied by a second boat whose skipper indicated familiarity with this particular set of locks. As we approached the locks, all was in readiness with a full top lock, an empty middle lock, and a large waiting audience of bystanders.

The two boats proceeded side by side into the top lock and were lowered as programmed into the middle lock. The "experienced" skipper then proceeded down the staircase adjusting paddles to move the boats into the third lock. Within a few minutes both boats were high and dry in the middle lock. Both wives, in the midst of preparations for tea, looked up in consternation at a sea of gaping onlookers. It was clear that the onlookers were enjoying the performance, knowing nothing of lock operations. Common sense soon showed up. Not only had the experienced skipper opened the ground paddle to drain middle locks to the lower lock, he had also opened the lowest set of ground paddles which permitted over draining of the middle lock. The ground paddle openings were soon properly set but extra water was required to float the boats on through.

The granddaddy of English staircase locks is the Bingley Five Rise on the Leeds & Liverpool Canal. This staircase accomplishes a rise of sixty feet and is preceded by a 3-step staircase with a rise of thirty feet. The Bingley locks were completed in 1774, at a time when the American colonies were scarcely thinking of such undertakings. The colonies did, however, achieve at least one such comparable undertaking with the five rise on the Erie canal at Lockport, New York. Utilizing modern material, the Lockport installation was modified to two steps with a lift of 49 feet.

After the previous experiences with staircase locks, the thought of Bingley brought on fear and trepidation. With five steps, the number of "go astrays" appeared astronomical. Our fears were further compounded when we heard of one boat that had been caught high and dry partway between two locks, leaving the boat sloping violently downward across the sill. The cause of this misadventure had been an inattentive skipper, whose only error had been to adjourn to the nearby pub partway through his descent.

The day of our ascent of the three rise and five rise was a record setting warm Sunday afternoon. With many small rubber crafts, inner tubes and swimmers filling the canal. The towpath was swarming with bystanders watching the unusually large number of boats going both ways. The stage was set.

We had rented a brand new boat so the owner had sent along one of his lads for the first day of the maiden cruise. Under his guidance, we eased into the bottom lock as another boat left. Then, as we prepared to close the gates and start working the paddles, we discovered that the British Waterways Board provides a full-time lock tender at this location! Both ascents on this occasion were faultless — and yes, the nearby pub was visited with the boat builder.

To those who have not tried the English Canals, our experiences should not dampen their expectations. Lock operation only requires common sense. Canalling in England is wonderful!

MIDDLESEX PLANS

The Middlesex Canal Society has determined the following priorities for the Middlesex Canal:

1. Continuing stabilization and cleaning of the Dignon Road-Brown Street section in Billerica owned by the Association, with the addition of signs identifying the canal.
2. Surveying and possibly excavating the site of the stone locks in Lowell near the outlet to the Merrimack River.
3. Developing a coordinated plan for stabilization and re-use of canal sites in the Concord Mill Pond area.
4. Increasing awareness at the Ox Bow section in the Wilmington Town Forest of the presence and importance of the canal by signs and graphics.

"WHAT'S IN A NAME?"

(Continued from Page 1)

KENNY GIRL, ANGLO-SAXON, SCANDINAVIAN, SICILIAN, ORIENTAL, TURK, ROMAN and RUSSIAN. AGNOSTIC, SABBATH-KEEPER, MAID OF JUDEA, CRUSADER, PURITAN, QUAKER, GOLDEN RULE, and GOLDEN GATE were most likely were clues to the owner's religious beliefs. Names with a Christmas spirit were: VIXEN, SILVER BELL, GLITTERING STAR and GLAD TIDINGS.

The following names were indicative of boat use: WAREHOUSE, BARGE CANAL, and LE YARE'S AUCTION BOAT. ROUND TOP CEMENT, BARTHLOLOMAY BREWING CO., RICHMOND CEDAR WORKS, HECKER JONES JEWELL MILLING CO., and QUAKER MILLS were probably company-owned canal boats, and perhaps BUFFALO ENQUIRER was a newspaper boat.

Some boats were named for banks: CITIZEN'S BANK, STATE BANK OF OHIO and UNION BANK. Money was certainly on the minds of the names of these boats: FINANCIER, CASHIER, LEGAL TENDER, GREENBACK, REVENUE, REBATE, and SPECIE. CORN EXCHANGE, MARL TRADER, U.S. MAIL, LIME TRADER, TOBACCO PLANT, HARDWARE, ZINC, PETROLEUM, ROCK and FLAG STONE surely indicated cargoes carried. ANTHRACITE, BLACK DIAMOND, CARBON and COALDALE were probably coal boats.

Some captains thought highly of their boats: DIAMOND, EMERALD, GEM, GOLD DUST, and RUBY. PLY, PROGRESS, RETURN, RAMBLER, VENTURE, WANDERER, SUPPLY, EXCHANGE, CARRIER, ACTIVE, TRANSIT, TRANSPORT, FREE TRADER and GLIDE were quite descriptive of what canal boats do. These names proudly proclaimed vessel condition: TIP TOP, SUPERB, NONPAREIL, RADIANT, (or hopeful condition:) NEVER-SINK, but who would call their canal boat SHODDY?

Sometimes a fleet of boats were given a two-part name such as: OCEAN with second names like: FAVORITE, PEARL, QUEEN, STAR, WAVE, SPRAY. STAR OF THE SEA, SEA BIRD, SEA DOG, ROLLING WAVE, SEA SERPENT and SEA GULL were other names of sea origin - or perhaps these vessels ventured out into the ocean.

Speed was of utmost concern to these boaters: URGENT, QUICKSTEP, RED RACER, QUICK RETURN, but it's quite a stretch of the imagination to name a 4-mile per hour canal boat ROCKET or THUNDERBOLT. JUMBO and LEVIATHAN must have been large boats and EXPERIMENT, NEW IDEA and NEW STYLE might have been new types of canal boats.

Shippers might be more inclined to engage RELIEF, RESCUE, HANDY, AID, LIBERATOR or SUPPORT. But what would a shipper think of a boat names TERRIBLE, TERROR, PANIC or WATER WITCH? Wouldn't one be afraid



The Reconstruction "BEN FRANKLIN" exiting the Duck Creek Aqueduct on the Whitewater Canal at Metamora, IN. The BEN FRANKLIN prior to launching was shown in AMERICAN CANALS November 1982. (Photo by Ed Boss.)

to use BEN CROOK, GREAT PIRATE, PRIVATEER, CONTRABAND, or DEFIANCE?

STORM, TEMPEST, TORNADO, TRADE WINDS and SUNSHINE'S owners must have had the weather on their minds. Perhaps MIDNIGHT, MOONLIGHT, NIGHT SCENE and TWILIGHT worked late hours.

Many canalboats had geographical names: AFRICA, AMAZON, ARKANSAS TRAVELER, ASIA, AUSTRALIA, BALTIC, BRAZIL, CARRIBBEAN, CHIHUAHUA, CUBA, DANUBE, DUBLIN, EGYPT, EQUATOR, GRENADE, LINCOLNSHIRE, NORWAY, OLD GERMANY, PALO ALTO, PARIS CITY, ROCKY MOUNTAINS, SHANGHAI, SHILOH, SOUTH AMERICA, VIENNA and VOLGA. It is interesting to note that SAINT BERNARD, ROB ROY and WHEAT CITY were based at Piqua, Ohio, and Canal Fulton.

Some unique Morris Canal boat names from the 1850's were: NEW ARK, HERO, MOUNTAINEER, JERSEY BLUE, WIRE ROPE, BIG THUNDER, LADY'S FRIEND, ECHO and UNEXPECTED.

UNCLE SAM, STAR SPANGLED BANNER, STARS & STRIPES, STATES RIGHTS, OUR FLAG, LIBERTY, FLAG OF OUR UNION, GODDESS OF LIBERTY, FREEDOM, UNION FOREVER, UNION VOLUNTEER, HAIL COLUMBIA, THE SPIRIT OF THE NORTH, and THE UNION DELIGHT, were probably named in the spirit of civil war patriotism. There were political names such as CZAR, DEMOCRAT, DICTATOR, LOYALIST, AUTOCRAT, VETO and SOVEREIGN, even EMRESS, PRINCESS, QUEEN, DUKE, and DIADEM.

APOLLO, HERCULES, MINERVA, PHOENIX, PLATO, UNICORN, VULCAN, ZEPHYR and ZEUS were obviously taken from mythology. Military/naval canal boat names included: BLACK WARRIOR, DREADNAUGHT, BLOCKADE, ZOUAVE, DRILL, FLOATING BATTERY, WAR EAGLE, MAN-OF-WAR, SOLDIERS BOY and GLADIATOR. Would you believe that Nuclear Submarines were named after canal boats: THRASHER, TRIDENT, SCORPION, NAUTILUS and NEPTUNE?

There were boats named CARP, DOLPHIN, FLYING FISH, SHARK, PORPOISE, STURGEON and WHALE. Animals were frequently chosen as canal boat names: ELEPHANT, HIPPOPOTAMUS, LEOPARD, PANTHER, REINDEER, LION, TIGER, BRAHMA, MOOSE, and ANTELOPE. RATTLER, ALLIGATOR and RATTLESNAKE were kind of scary names. Many canal boats were named after birds: OWL, PEACOCK, MAGPIE, ROBIN, SPARROW, SWAN, WHIPPOORWILL, WILD PIGEON, FLOATING DOVE, ALBATROSS, BLACK SWAN, KINGFISHER, NIGHTINGALE, CONDOR, ARCTIC DOVE, HAWK, GRAY EAGLE, BROWN THRASHER, GOLD FINCH, and FALCON. Boats names for insects such as FLY, HORNET, WASP and FIRE FLY were rare.

Only a few canal boats were named for trees: OAK, ELM, WILLOW, MAGNOLIA, BIG TREE, PINE TREE and LIME TREE. Flowers were equally uncommon: TULIP, ROSE, MIMOSA, GLADIOLA and PRIMROSE.

The following is a sampling of some of the most unusual boat names: CHESTER HAIR, FLORY'S REVENGE, JOHN PICKUP JR (said the wife to the husband about their child?), SAGE SCHUYLER, SAMPSON'S RIDDLE, CORNER STONE, MUCHER, PEACH BLOW, STAB MERRY, WAMBA, ALONZO B. GENEROUS, YAPHANK, YAZOO, SAFETY FUND, X-10-U-B, TRANCHEMONTAGNE, AMOS YELL, SNODGRASS, ANASTASIUS, SHOO-FLY, SILENT FRIEND, FLUSH, ZORA, BENTRU, ICH DIEN ("I Serve" in German), HINDOO, 1776, ROCK OF GIBRALTER, PRINCIPPIO, FAIRPLAY, and BULLS EYE (could it have been a Lehigh boat?)

Other unique canal boat names were: GO OUT AND LOOK, FEARLESS AND FREE, HERE I AM, RIGHT OF WAY, SIX DAYS, PRIDE OF THE WEST, LADY OF THE LAKE, BOARD OF TRADE, TRY ME, LOVERS' LEAP, LOST AND FOUND, and LOVERS' RETURN. I DON'T KNOW, WHAT'S IT TO YOU, and I'LL TELL YOU AFTER A WHILE. The latter two, from the Morris Canal, must have irritated the toll collectors when they asked for the name of the boat.

The following names remind me of the fancy "handles" which truckers give themselves on their C.B. Radios: SWEET ARROW, GALLANT HERO, FLOATING CITY, BUSTER, SWAMP FOX, AUDITOR, GOLD HUNTER, INVESTIGATOR, GONDOLA, NOAH'S ARK, MERMAID, OLD ABE, CLARA BELL, ECHO, BIRD HILL BOY, HAWKEYE KING BIRD and GIPSY QUEEN. In a way, weren't canal boaters the truckers of the past?

The shortest names were: B, C, DK, JO, PO, ARK, DOT, GUY, JOB, ORO, SAM, TOM, and UNO. I judge the following to be X-rated: WILLIE PECOR, FANNY, TON TIT, FREE LOVE and SUCKER STATE. My favorite canal boat names are: WILLIAM, WILLIE, BILL, UNCLE BILL and ELIZABETH McKELVEY.

DELAWARE AND RARITAN CANAL SURVEY



Typical cement-lined lock on the Delaware and Raritan Canal as it appears today. The upper gate has been replaced by a weir, with wicket gates to control the flow of water. (Photo by Bill Shank)

By James C. Amon

It is hard to think of the Delaware and Raritan Canal without thinking of it as historic. The very idea of navigation canals is archaic — they just don't make them anymore. Furthermore, the canal's inclusion on the State and National Registers of Historic Places certifies it as historic. Finally, one look at the canal confirms its age — it is a bit fuzzy around the edges, and hand-laid stone walls and other signs of nineteenth-century craftsmanship abound.

But what exactly is it about the canal that makes it an important historic place? If a master plan is to be made for the development of a Canal Park, how should it deal with the canal's historic qualities? If a regulatory program is to be administered to protect the park, what regulations would be appropriate for its historical aspects? The D & R Canal Commission was created with the charge to prepare a master plan and to administer a protective program, and these are the questions its members asked themselves.

To help find the answers the Canal Commission hired two preservation architects, David Gibson and Steven Bauer, to make a study. The first thing they told the Commission was that a remarkable number of the canal's historic structures — the spillways, locks, culverts for passing streams, and homes for the bridgetenders and locktenders — were still in place. These should be recorded, protected from routine repair work or the ravages of time, and considered for selective restoration.

The architects also pointed out that the character of the area through which the canal flows is as important as the struc-

tures. Areas that retain their nineteenth-century character greatly enhance the canal's historic appearance; where the twentieth century has made its mark the canal suffers. Luckily, the nineteenth century is still much in evidence along the canal's sixty-mile length. It is intact in the natural lands and the agricultural areas that are still plentiful. It is evident even in developed areas. Mr. Gibson and Mr. Bauer found thirteen communities that they believe might qualify for registration as historic districts.

The Canal Commission agreed to sponsor historic surveys in eight of those communities: Raven Rock and Lambertville in Hunterdon County; Titusville, Port Mercer and Princeton Basin in Mercer County; and Griggstown, Blackwell's Mills and East Millstone in Somerset County. In each of these places the Commission worked with local groups, sharing the labor involved in making nominations to the National Register of Historic Places. The nominations for Titusville and East Millstone have already been accepted for the State Register.

The most important product of this survey work is not the nomination of these historic districts but the knowledge gained. The community groups that worked on the surveys are now far more aware of their town's architectural heritage, and their awareness has begun to promote preservation and restoration.

Two other products of the survey are more tangible. First, the Commission now has a computerized file of detailed information on approximately 1,400 buildings surveyed. Print-outs have been made listing the buildings by age, architectural style, historic and architectural signifi-

cance, providing planning tools for the Commission and the participating municipalities.

Second, the Commission has published a summary of the results of the survey, *Delaware and Raritan Canal State Park: Historic Structures Survey*. This 80-page, spiralbound book combines a history and an inventory of the D & R Canal with the history of each community that was studied. It is illustrated with drawings, photographs and maps. It also contains a chapter on the history of American architectural styles, illustrating each with photographs of examples along the canal. Copies are available at \$8.00 ppd. from the D & R Canal Commission, CN-402, Trenton 08625, payable to State of New Jersey.

(The author is executive director of the Delaware and Raritan Canal Commission.)

CANAL CALENDAR

September 22-25, 1983 - Heritage Canada Foundation Anniversary Conference in Toronto. Write: Albert V. Benolt, The Heritage Canada Foundation, P.O. Box 1358, Sta. B. Ottawa, Ont. K1P 5R4.

September 30 - October 1, 1983 - Pennsylvania Canal Society Fall Tour along the D. & H. Canal. Headquarters: Holiday Inn, Port Jervis, N.Y. Contact: Grace Elliott, 300 N. Ohioville Rd., New Paltz, N.Y. 12561.

October 2-5, 1983 - Special Tour along the Muskingum River on the stern-wheeler "Valley Gem", Marietta to Zanesville. (A "sell-out")

October 7-10, 1983 - Steamship Historical Society Fall Meeting in Pittsburgh, PA, including a two-night cruise on the DELTA QUEEN, Pittsburgh to Wheeling, and return. (The cruise is a "sell-out")

October 15-16, 1983 - Canal Society of Indiana Bus Tour of the Wabash and Erie Canal, from Wesselman Park to the Sterling Brewery, Evansville, Indiana. Write: June and Lloyd Davis, 7911 Taylor Ave., Evansville, IN 47715.

October 22, 1983 - Canadian Canal Society tour of the Grand River Canal, Port Maitland to Caledonia. Write: Christopher Andrea, Historical Research Ltd., 61 Lonsdale Drive, London, Ontario N6G 1T4.

October 23, 1983 - Smithsonian Associates Tour of the Eastern Division, Pennsylvania Canal, by Bill Shank. Contact: Karen Gray, Smithsonian Tour Office Washington, D.C. 20560 or phone (202) 357-2756.

October 28-29, 1983 - Canal Society of Ohio tour of the Hocking Canal from Athens to Logan. Headquarters: Nelsonville, Ohio. Contact: John Droege, 2937 Neil Ave., #312C, Columbus, Ohio 43202.