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CANALS IN THE MARITIMES

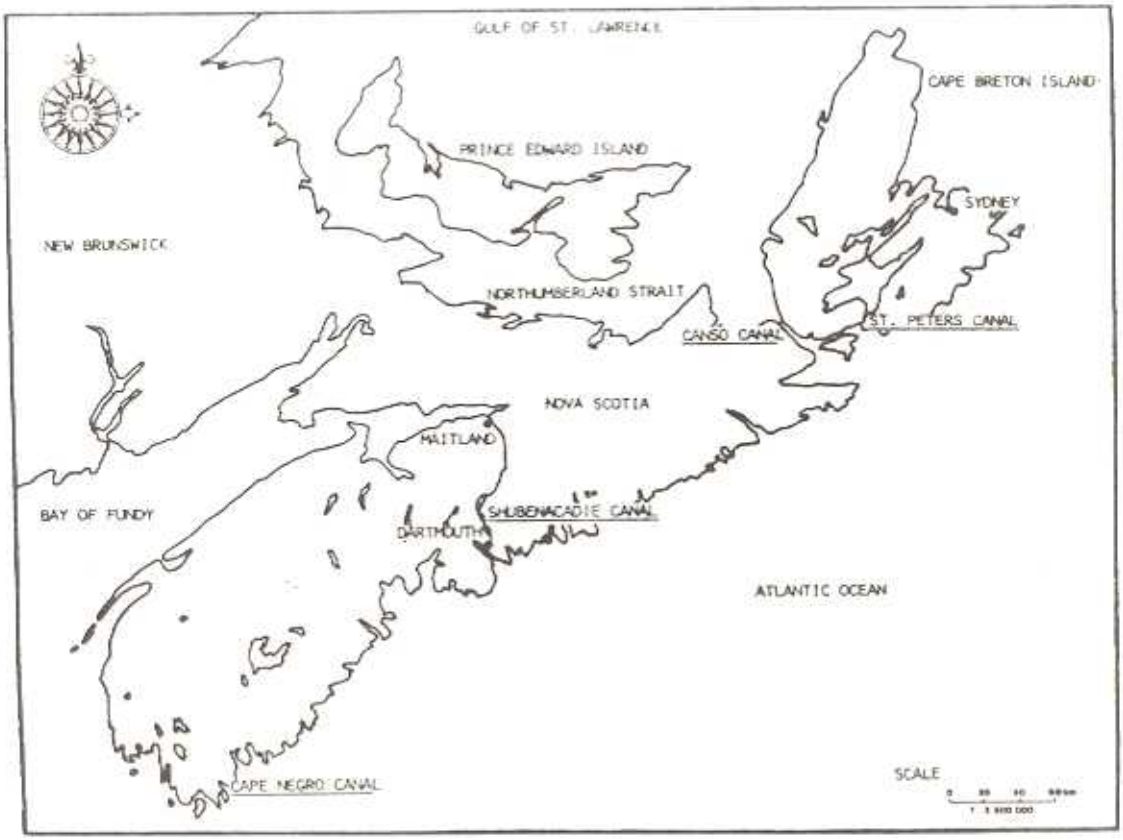
by

Colin Duquemin

The Deep Cut? "Only the Welland Canal," you say? Well, the Shubenacadie Canal boasted one, too. However, unlike the Welland Canal's Deep Cut which has been progressively improved, The Deep Cut of the Shubenacadie Canal has been neglected since 1870; today, only kayaks and canoes navigate its shallow waters, and that with some difficulty.

The Shubenacadie Deep Cut is relatively narrow. Trees on its steep upper sides and banks form a canopy through which, on a fine day, shafts of sunlight pick out a pathway. There, signs stating "Canal Walk", with an appropriate logo, invite visitors to step into local history.

Canal fever hit Nova Scotia before 1800, so the climate was right when the Shubenacadie Canal Company initiated plans to connect Dartmouth Cove, on Halifax Harbour, with Maitland on Cobequid Bay, east of the Minas Basin on the Bay of Fundy. The canal would follow an old Indian route.



Francis Hall, an engineer and keen observer of landscape, was engaged to make a survey, and he presented his report in 1824, the same year the Welland Canal Company was inaugurated. Two years later, the Shubenacadie Canal Company hired some 300 men as masons, mechanics, carpenters, limeburners, blacksmiths, axemen and labourers. Work began.

Within years, construction costs exceeded the Company's capital. Further shares were floated and properties mortgaged to secure additional funds. In 1831, the workers, who had only been paid intermittently, walked off their jobs. The Shubenacadie Canal Company remained in existence for another 20 years, but no more work was undertaken, and eventually the properties were foreclosed.

In 1853, the Inland Navigation Company was formed, and it purchased the partly completed canal. New plans called for major changes. The canal was completed during the late summer of 1861.

The Shubenacadie Canal started at Dartmouth Cove, the gradient up to Sullivan's Pond being overcome by an incline plane. The Canal utilized the Dartmouth Lakes, now Lake Banook and Lake Micmac. The lift from sea level to Lake Banook was 55 feet (168 m). Locks #2 & #3 took the Canal to the Deep Cut.

THE DEEP CUT

Excavating the 1.4 km Deep Cut between Lock 3 and Lake Charles took 3 years of hard labour by many men. The bedrock had to be blasted out with black powder and then moved by hand and simple machinery from the bottom of the excavation to the banks high above.

SHUBENACADIE CANAL DEEP CUT: INTERPRETIVE MARKER

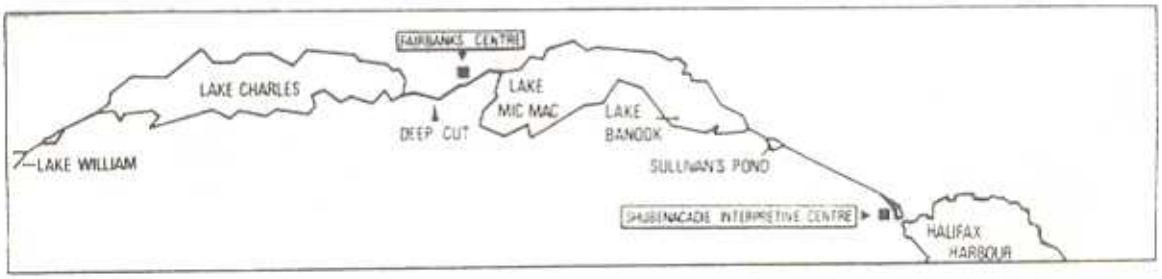
The Deep Cut connected with Shubenacadie Lake, now Lake Charles, the highest lake in the system. Total life to this point was 90 feet (300 m). From Lake Charles, water flowed to Cobequid Bay; from Lake Micmac, water flowed in the opposite direction to Dartmouth Cove. Beyond Lake Charles a second incline plane at Portobello connected with Lake William. Northwards, the Schubenacadie Canal used the Shubenacadie River to Cobequid Bay.

The Shubenacadie Canal was a chain of seven lakes and one river. The waterway was 53 1/2 miles (86 km) long.

The small steamer, Avery, was built in 1856 and 1857 at the lower end of Lake Charles. Navigation opened in late 1861 with the Avery, named after the president of the Inland Navigation Company, making a round trip to Maitland with passengers and cargo. But the Inland Navigation Company was bankrupt.

The properties and works of the Company were seized by the sheriff and sold to the new Lake and River Navigation Company which operated the Shubenacadie Canal from 1862 to 1870. Timber and coal were moved by twelve scows pulled by three steam tugs. Profits, however, were small, and in 1870 the operation was sold again.

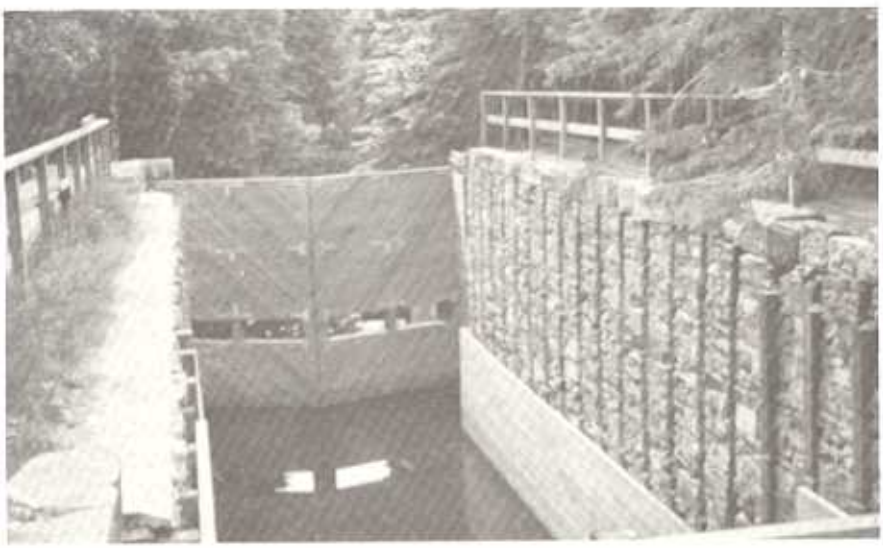
The Canal was operated for a very short time by F.B. Fairbanks. He became involved in a lawsuit concerning a gold strike on canal property, and during this time two fixed bridges were put across the Canal to carry a railway and highway respectively. Navigation on the Shubenacadie Canal ended.



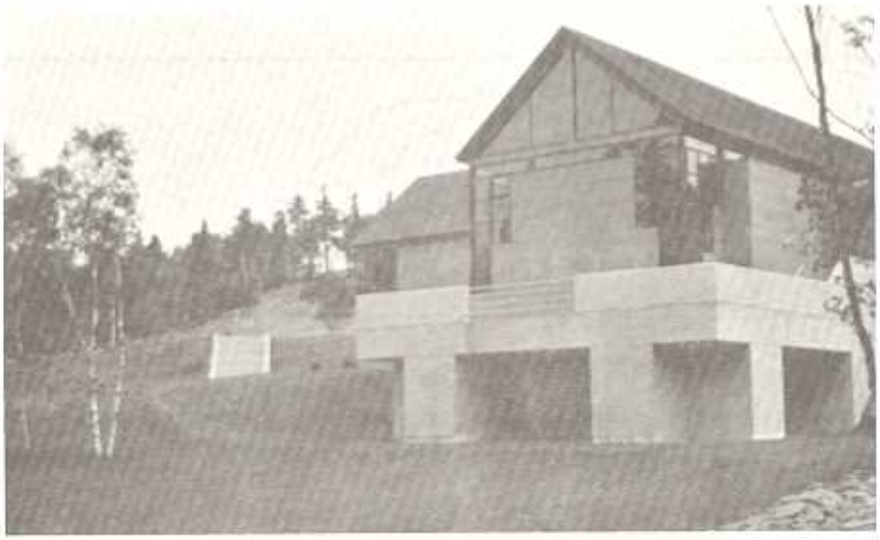
STYLIZED MAP OF THE DARTMOUTH SECTION OF THE SHUBENACADIE CANAL: ADAPTED FROM PROMOTIONAL LITERATURE.

The walk today along the high banks of the Deep Cut from Lake Charles is one of expectation; this is fulfilled at Lock #3 which is an excellent example of interpretation.

Since early 1984, when the Minister of Development for the Government of Nova Scotia signed an agreement with the Federal Government, more than $4,000,000 have been spent in rehabilitating two sections of the Canal: the first section is on the Dartmouth waterfront, and the other is between Lake Charles and Lake Micmac. The scale of this development is evident just beyond Lock #3. The Canal Walk passes behind a modern structure which suggests that it is a small art gallery, or theatre; it is, indeed, an interpretation centre with a 100 seat theatre.

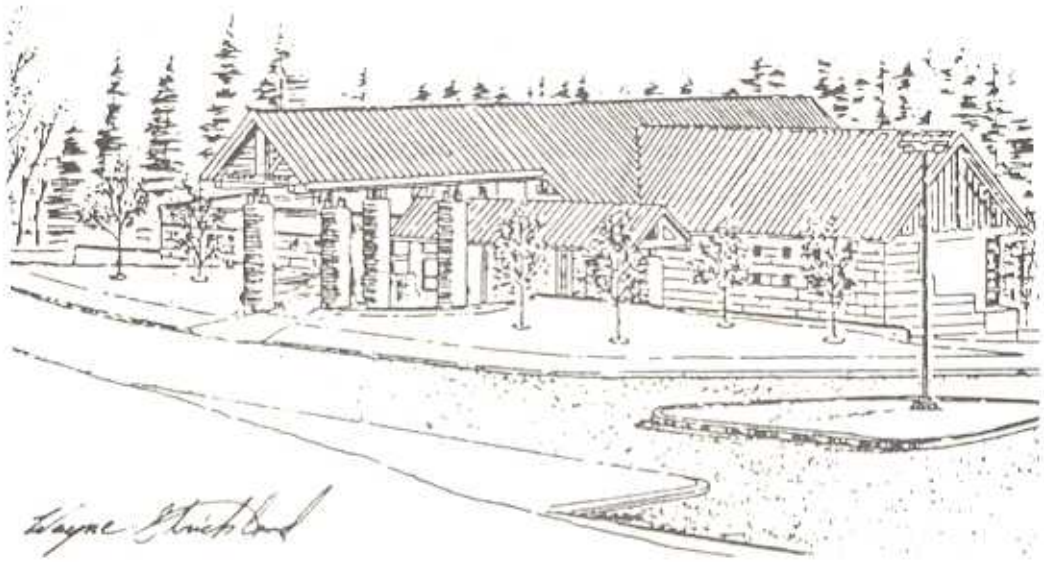


LOCK INTERPRETATION: SHUBENACADIE CANAL, 1987
Photo: Colin Duquemin



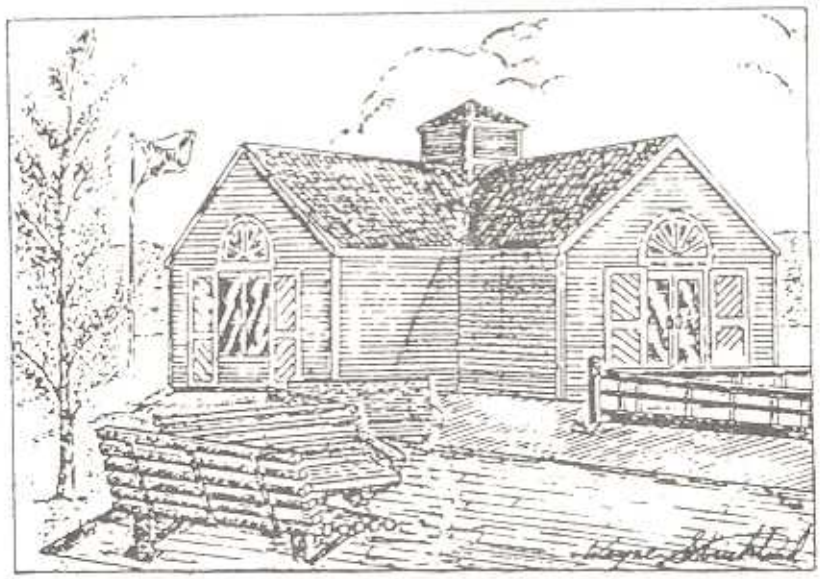
REAR VIEW OF THE FAIRBANKS INTERPRETIVE CENTRE: SHUBENACADIE CANAL, 1987.
Photo By Colin Duquemin

The Exhibit Hall at the Fairbanks Interpretive Centre is spacious and attractive. The Centrepiece is a working model of the Shubenacadie Locks. There are further displays of Canal artifacts, construction techniques and an illustrated narrative of the development of the Canal.



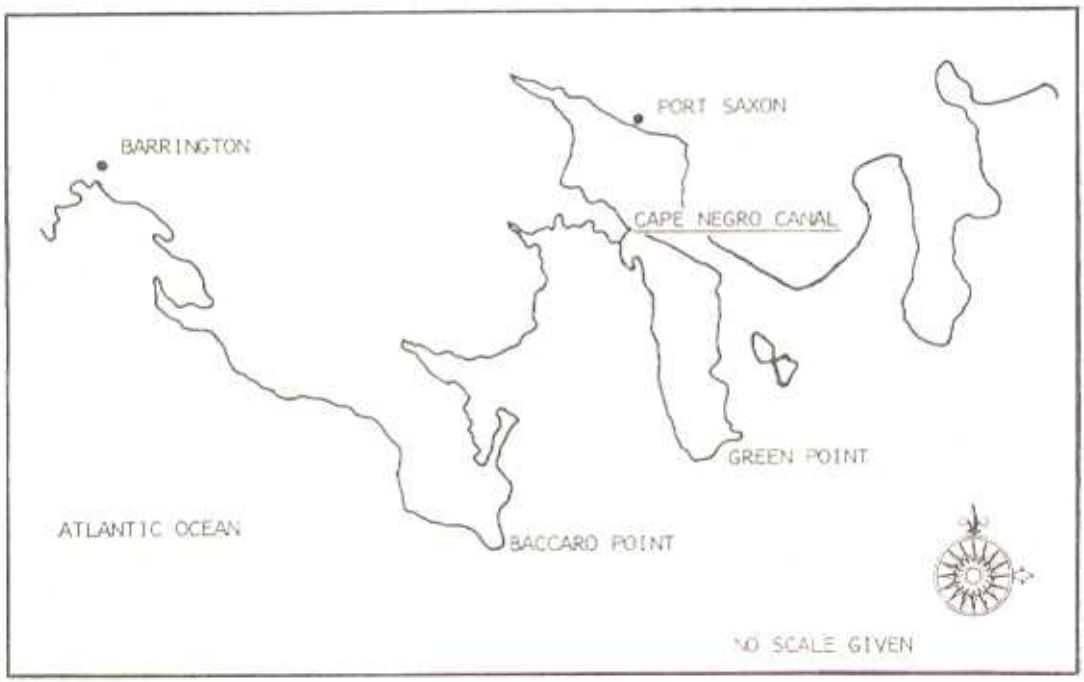
THE ENTRANCE TO THE FAIRBANKS INTERPRETIVE CENTRE, SHUBENACADIE CANAL:
FROM PROMOTIONAL LITERATURE

There is another interpretation centre further down the Canal. The Shubenacadie Interpretive Centre was built by the Province of Nova Scotia. It sits beside the Canal which is navigable by small craft from Dartmouth Cove. The Shubenacadie Interpretive Centre has character, too, reinforced by its location within sight of the working Dartmouth harbourfront.



SHUBENACADIE INTERPRETIVE CENTRE, SHUBENACADIE CANAL:
FROM PROMOTIONAL LITERATURE

The old Shubenacadie Canal as a tourist attraction is given emphasis by another level of government, namely the City of Dartmouth. Shubie Municipal Campgroud, which is operated by the City, contains not only a well-managed campground with all facilities, but also a playground, tennis court, sports field and picnic area. Sited close to Lake Charles on which there is a small beach, Shubie Municipal Campground is linked by a well-used trail to the Canal Walk at the Deep Cut. The City of Dartmouth appears to be an enthusiastic partner in today's enterprise.



CAPE NEGRO CANAL, NOVA SCOTIA: A FISHERMAN'S CANAL

Cape Negro is close to the most southerly point of Nova Scotia, and it juts out into the Atlantic Ocean. There is shares tempestuous seas with its neighbour, and local off-shore waters can be hazardous for smallboat fishermen. Inshore, however, the deeply incised bays are relatively sheltered, and they offer a safer passage and a sound anchorage.

The greater part of Cape Negro lies to seaward, and it is connected to the mainland by a low-lying isthmus. Here the incoming tide flows across the flats from the bays either side, but the waters do not meet, except by way of the Cape Negro Canal. Even the movement ofwater in the Canal appears to be up and down rather than flowing. The "banks" of the Canal are made up of large rocks through which saltwater streams with the upcoming tide. The "banks" are almost covered by spring tides.

CAPE NEGRO CANAL, 1987. A ROAD UP THE CAPE IS CARRIED OVER THE LOW-LYING ISTHMUS ON A HIGH BANK. A FIXED BRIDGE TAKES THIS ROAD OVER THE CANAL.
Photo By Colin Duquemin

By its very nature and difficulty of access by land, it is only possible to give estimated figures for the length, breadth and depth of the Canal. It appears to be up to 250 yards (228 m) long, irregularly 15 feet (4.6 m) wide and five to six feet (1.5 - 1.8 m) deep.

It is said that fishing vessels up to 40 feet (12 m) in length can pass through the Cape Negro Canal to avoid passage around the head- land. As there is a relatively low road bridge at one end of the canal, it is presumed that these are fishing boats with little, if any, super- structure. Transit by small boats with a low profile could be undertaken with few difficulties. A lay-by has been built into the Canal to overcome the problem created by approaching craft.

The Cape Negro Canal has been in existence for at least 125 years. The boat canal is shown as such on the Topographical Township Map of Shelbourne County, Nova Scotia; published by A.F. Church & Co., Bedford, 1864.

CAPE NEGRO CANAL, 1987. THE NORTHERN TERMINUS.
Photo By Colin Duquemin

There are two other canals in Nova Scotia. One crosses the Canso causeway which links Cape Breton Island by land with the mainland; the other is in the south of Cape Breton Island and it is located across a narrow isthmus separating Bras d'Or Lake from the Atlantic Ocean.

The Strait of Canso once separated Cape Breton Island from the mainland of Nova Scotia, and it allowed the unhindered passage of ships from the Gulf of St. Lawrence to the Atlantic Seaboard. A causeway was built across the Strait in 1955 which provided direct road and rail access to Cape Breton Island; it also impeded the passage of shipping. A single lock canal across the causeway has, for the most part, overcome the latter problem.

THE CANSO CANAL AND SINGLE LOCK, 1987. PHOTOGRAPH TAKEN FROM THE COMBINED ROAD AND RAIL SWING BRIDGE AT THE SOUTH EAST END.
Photo By Colin Duquemin

The Canso Canal is sited on the Cape Breton Island side of the causeway. Work on the lock started in 1953, and it was fully operational by 1957. Overall, the Canso Canal is .78 miles (1.2 km) in length. The lock is 820 feet (250 m) long, 80 feet (24 m) wide, and it will accept ships with up to 28 feet (8.3 m) draft. Two sets of double steel gates are located each end of the lock to take into account tidal difference between each side of the causeway; the difference can be as much as 10 feet (3 m). A combined road and rail swing bridge, which crosses the Canal at the south-east end, is integrated with the electrical operation of the lock.

Viewing the lock is not particularly convenient; access is denied by a high and ugly wire fence and gate which are entirely compatible with the austere block buildings from which the lock is operated. What little parking there is lies in front of the fence dominated by a board announcing the name of the facility and its operation by the Canadian Coast Guard. The environs of the lock, mostly grass on the mainland side, are well maintained.

The Canso Canal is well used. Freighters and fishing vessels make up the bulk of the traffic. Pleasure boats, motor and sail, use of the Canal both ways to cruise the Atlantic Seaboard on the one side, and the Gulf of St. Lawrence and the Northumberland Strait on the other. The increasingly popular summer cruise ships of a size able to transit the lock are being wooed by ports such as Sydney and, for the moment, they seem to be keeping to the northern passage around Cape Breton Island.

Pleasure craft make up the bulk of the traffic through the St. Peters Canal to the east; these range from canoes through to sailboats and power cruisers. A recent trend in pleasure craft is the conversion of enclosing fishing vessels to motor cruisers, and these are now seen going through the Canal in increasing numbers.

ST. PETERS CANAL, 1987.
TWO CONVERTED FISHING VESSELS LOCK THROUGH AS MOTOR CRUISERS.
Photo By Colin Duquemin

A narrow isthmus separates the most southerly bay of Bras d'Or Lake from the Atlantic Ocean. The St. Peters Canal passes through this isthmus. The locality was possibly the site of one of the first permanent European settlements in North America. It was established by the Portugese in 1521 and known as San Pedro until 1537. In the 1630's French merchants built the fortified settlement of St. Pierre in the vicinity. Nicholas Denys, a Frenchman, took over the leadership of the community in 1650. The isthmus had long been crossed by the Micmac Indians, and Denys encouraged the Micmacs to bring pelts to the settlement in exchange for trade goods. The old Indian portage became a haulage road over which Denys' ships could be hauled from one shore to the other.

St. Pierre was virtually destroyed by fire in 1668/1669, and no further development took place until 1713 when the French moved Acadian colonists to Cape Breton Island following the loss of mainland Nova Scotia to the British. One of the new settlements, Port Toulouse, was built close to the ruins of St. Pierre.

Port Toulouse soon became a major supply base for the fortress at Louisburg some 74 miles (120 km) to the north. To protect the base, the French built a fort nearby; both were destroyed by the British in 1758 after the fall of Louisburg.

British settlers moved in after 1758, and fortified the vicinity with Fort Dorchester in 1793. When the present village of St. Peters was founded in th 19th century, the site of the old Denys "haulover" road was used. Skids were again used so the vessels could be hauled across the isthmus into Brad d'Or Lake for a shorter and more protected route to the growing settlement around Sydney.

With an increasing volume of traffic, a proposal was made for a canal across the isthmus. Francis Hall was engaged to make a survey in 1825. Two further surveys were made before work began in 1854. The canal was completed in 1869 and opened under the control of the Government of Canada. An enlargement was made to the St. Peters Canal between 1875 and 1881; the present lock dates from major reconstruction of the Canal from 1912 to 1917.

The lock of the St. Peters Canal is 300 feet (91.44 m) long, 47 feet 4 7/8 inches (14.45 m) wide, and it can accept vessels with a 16 foot (4.88 m) draft. There can be a difference of up to 4 1/2 feet (1.4 m) between the water level of Bras d'Or Lake and St. Peters Bay, thus both entrances to the lock have double pairs of mitre gates.

Visitors to the St. Peters Canal are welcome: Parks Canada personnel show an enthusiasm for their work when talking to their guests whether they arrive by car, or by boat. There are picnic tables on the well-maintained grounds, and these facilities are complemented by those of the Battery Provincial Park adjacent to the Canal. The Nicholas Denys Museum above the lock displays a photgraphic record of the construction of the St. Peters Canal.

A ship canal was once proposed for the isthmus of Chignecto close to the Nova Scotia and New Brunswick boundary. Changed to a marine railway, little remains of the incomplete works across the isthmus. A local trailer court at Tidnish Bridge boasts an abandoned culvert as a attraction to the locality.

ST. PETERS CANAL, 1987.
A PAIR OF MITRE GATES AT THE EAST END OF THE LOCK.
Photo by Colin Duquemin

Editor's Note: The following is an extract from a paper entitled The History of Canadian Inland Navigation System which was presented to the Canadian Society of Civil Engineers Centennial Conference in Montreal during May, 1987. The authors, Society member Walter Webb and E. Dumalo, have graciously agreed to the use of parts of the paper in several issues of Canals Canada.

THE MILITARY CANALS: COTEAU DE LAC, SPLIT ROCK, TROU-DE-MOULIN, FAUCILLE AND CASCADES

After the work on the Sulpician canal at Lachine in the early years of the eighteenth century there was little navigation work carried out until 1779. The colonies were preoccupied with the wars and politics of Europe. The Seven Years War resulted in Canada becoming a British Colony with the Treaty of Paris in 1763. Then followed the American Revolution and its spillover into Canada with the Americans attacking Montreal and Quebec City in 1775.

The need of better defences and transportation was no doubt a major factor in Governor Frederick Haldimand enlisting the services of Lieutenant Twiss, Commander of the Royal engineers and Thomas Carleton, commander of the Montreal Garrison, to plan a canal system between Lake St. Louis and Lake St. Francis. The first canal was built at Coteau-du-Lac, some 274 m long with three locks each 12.1 m long by 1.8 m. wide and 0.76 m deep. Two blockhouses and other buldings were also contructed. Thus Coteau-du-Lac became the site of the first lock canal in North America. While the major reason for building the canal was military, it is reported (Normand Lafreniere, 1983) that the merchants were encouraged to use it for commercial purposes: paying a toll of 10 shillings per "batteau". Then in 1783 three more canals were built in the area; Faucille, Trou-du-Moulin and Split Rock.

Between 1804 and 1817 these "military" canals were rebuilt to accommodate the larger Durham boat that was coming into use. These improvements resulted from the increased traffic - Loyalists moving to Upper Canada and the War of 1812 with the Americans. This latter event also resulted in activity on the Ottawa - Rideau route. In 1804 the Faucille and Trou-du-Moulin canals were replaced by the Cascades Canal - 457 m long with three locks. Then in 1817 the canals at Cascades, Split rock and Coteau-du-Lac were rebuilt to a width of 3.6 m and a depth of 1 m and were able to accommodate the Durham boats; 24 m long and 2.7 m - 3 m wide. This ended the military canal construction on the St. Lawrence.

ANNOUNCEMENT:

About 300 marine historians and enthusiasts will attend the 3rd annual Welland Canal Rally and William Hamilton Merritt Lecture program at Brock University October 6-7-8. This popular event is co-ordinated by the Welland Canals Foundation in co-operation with the St. Lawrence Seaway Authority and Brock University. Some sections of the program are open to public registration.

The biggest group this year, about 200, are members of the Steamship Historical Society of America , one of America's largest marine organizations making its first official visit to the Welland Canal corridor. The Society program will get underway Thursday afternoon, October 6, and conclude Saturday evening October 8 with a presentation by Father Peter VanderLinden, Detroit, a prominent marine heritage authority.

Participation in the entire three-day program is through SHSA membership but the Welland Canal Rally starting at two p.m. Thursday at the Welland Canal Control Centre, the Merritt Lecture, and the Friday morning, October 7, presentation by Bruce McLeod, vice-president, western region, The St. Lawrence Seaway Authority, and following canal tour is open to all interested. This non-Society participation ends at noon Friday. Fee registration is $15. (Cdn.) including continental breakfast Friday morning and bus fee and registration can be made through Welland Canals Foundation, P.O. Box 745, St. Catharines, Ontario L2R 6Y3, telephone (416) 682-7203.

UPDATE ON WOLFE ISLAND CANAL

Readers of the last two issues of "Canals Canada", and those who participated in last fall's field trip, may be interested in knowing how plans are coming along to reopen the Wolfe Island Canal.

In response to a recent letter from your editor, Douglas R. Fluhrer, Commissioner, Parks and Recreation, City of Kingston, provided the following update: "In regards to 'progress to date' on the reopening of the Wolfe Island Canal, I can proudly report that the 3,000 foot break wall is well underway. It was contracted out at 3.4 million dollars and construction began in early April of this year.

As you will recall, this break wall will provide protected waters for an additional 725 berthing slips. This facility was required before the Canal can be opened in order that Kingston will be able to accommodate the anticipated increase in recreational boating traffic from the United States when the Canal is opened.

Presently, engineers are updating costs and everyone continues to be optimistic that this project should be underway soon.

All the best to you and your Canal Society members."

Here's a bit of nostalgia for those who were part of last fall's field trip. This view of the Wolfe Island Canal may look much different in a few years if plans to rehabilitate the Canal can be carried through. Photo: George Hume

LETTER TO THE EDITOR:

from Dr.J.H.Vandermeulen, Ph.D., Chairman, Shubenacadie Canal Commission, Fairbanks Centre, 54 Locks Rd., Dartmouth, N.S. B2X 2W7

"I believe from one of our members, Mr. Syd Gosley, that you are already aware of our existence, but I thought there might be no harm in confirming it. The commission was formally appointed in the spring 1987 by the government of Nova Scotia, principally to take charge and oversee the remnants of the 19th century Shubenacadie Canal system. The canal was constructed in the 1820's-60's to provide a water-way transportation system from Halifax on the Atlantic cost to Maitland on the Bay of Fundy, right across the main trunk of the province. In the process the canal passed through some of the loveliest Nova Scotia forest and pasture lands, several Acadian settlements and numerous Indian settlements.

Today's canal operations include all the original locks (9) and the locations of two inclined marine railways. Nothing is left of the latter but plans include reconstruction of one of these. Of the locks, the rock facings of four are intact & two have been reconstructed. Plans are underway to at least stabilize remains of the others.

Center of the Commission is the Fairbanks Center, a new modern visitors center located on the outskirts of Dartmouth, sister-city of Halifax. The canal passes directly through Dartmouth on its way to the other coast of Nova Scotia on the Bay of Fundy side.

We have several plans on the table, for reconstruction, for rebuilding at least one of the canal barges, for archaeological and historical exhibits, and I will write you again when everything 'firms up' a little. In the meantime - I want to extend a warm welcome to all your readers who may want to consider a visit to our province. The door is open, and the latch is out!"

(Editor's note: The above letter compliments very nicely the article, found elsewhere in this edition of the Newsletter, by Colin Duquemin, entitled "Canals In The Maritimes".The C.C.S. congratulates Dr. Vandermeulen and the Shubenacadie Canal Commission on their accomplishments & looks forward to hearing about future developments.)

FIELD TRIP NEWS

The spring field trip met with great response, and superb weather, this past May 14. Participants travelled from Brock University in St. Catharines to the Welland Canal and then south to the city of Port Colborne. The route then followed the north shore of Lake Erie to Port Maitland, Dunnville, and into Port Dover. Following lunch at the Erie Beach Hotel, time was given to stroll the streets of the picturesque community. Later, in Brantford, we learned something of the Grand River Canal System and viewed a former water-powered site. The day was climaxed with a delicious meal at the Old Mill Inn in Ancaster.

Many thanks to John Burtniak and Colin Duquemin who so capably organized the trip. The fall meeting will be held in Toronto with our President, George Hume, arranging what promises to be a most interesting and informative field trip in the provincial capital. Watch your mailbox for more details on this later in the summer.

EDITOR'S NOTEBOOK

Society member , and former President, Colin Duquemin, has had the opportunity to see, over the years, a great deal of Canada. His willingness to explore the back roads as well as the main highways has enabled him to discover many interesting but lesser known sites across the country. It has also made it possible for him to see virtually all of Canada's canal systems, past and present.

This first-hand knowledge, along with his ability as a researcher and writer, has been a great asset to our Society, as is shown in the article "Canals In The Maritimes" that he has graciously produced for this issue of Canals Canada.

Another Society member, and writer, Rene Beauchamp, would like everyone to know that he publishes a book each year. The most recent title is Index '87 of Seaway Ocean Vessels (And Others). The cost is $5.00 including postage. Members who are interested in obtaining the book should order directly from:

Rene Beauchamp
9041 Bellerive
Montreal, P.Q.
Canada H1L 3S5

HAVE A SUPER SUMMER!

Sherman Zavitz

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APPLICATION FOR MEMBERSHIP

Please enroll me as a member of the CANADIAN CANAL SOCIETY

I enclose my membership fee of $ .....

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Membership fees:		
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	Family	$15.00
	Contributing	$25.00