

# Life on the Canals

Michael O'Brien describes life on a canal boat in the age of the Erie Canal.

MUCH OF THE ROMANCE is gone from today's modes of transportation. Sailing ships evoke nostalgia in a way that oil tankers and container vessels probably never will. A steam locomotive seems like a handcrafted work of art next to a modern diesel-electric "traction unit", and crossing the North American continent by automobile is no longer an adventure, just a long drive.

The same can be said for canal transportation. Today's barges, pushed or pulled by diesel tugs through massive locks guided by radar and control towers, are a far cry from the mule-drawn floating homes of the 1800s. The first 75 years of the 19th century were the golden age of canals all across North America and Britain. Captains and their families, steersmen,

drivers, officials of the canal company

and locktenders all made up a community known as "canallers" or "canawlers". It was a fascinating world apart that is just now fading from living memory.

Probably as soon as someone invented the boat, someone else started thinking how great it would be if this new conveyance could go somewhere besides where the rivers and lakes reached. Small boats were most likely utilized on ancient irrigation ditches to remove dirt and rocks. With society already organized to dig ditches, it was only a matter of time before the ditches were widened and deepened to form dual-purpose canals, useful for both transportation and irrigation.

The canal era in Britain started in the 1790s, 30 years before "canal fever" hit North America. The canal system in Britain grew up without centralized planning, making for shorter canals of various widths. Britain's canals were generally less wide, giving the name "narrowboats" to the vessels built to fit into the small locks.

In North America, there was a more organized drive to build canals from east to west. In Canada, canals bypassed obstacle after obstacle along the route from the Atlantic to the Great Lakes. The canals were then systematically enlarged and tied together. The first lock in

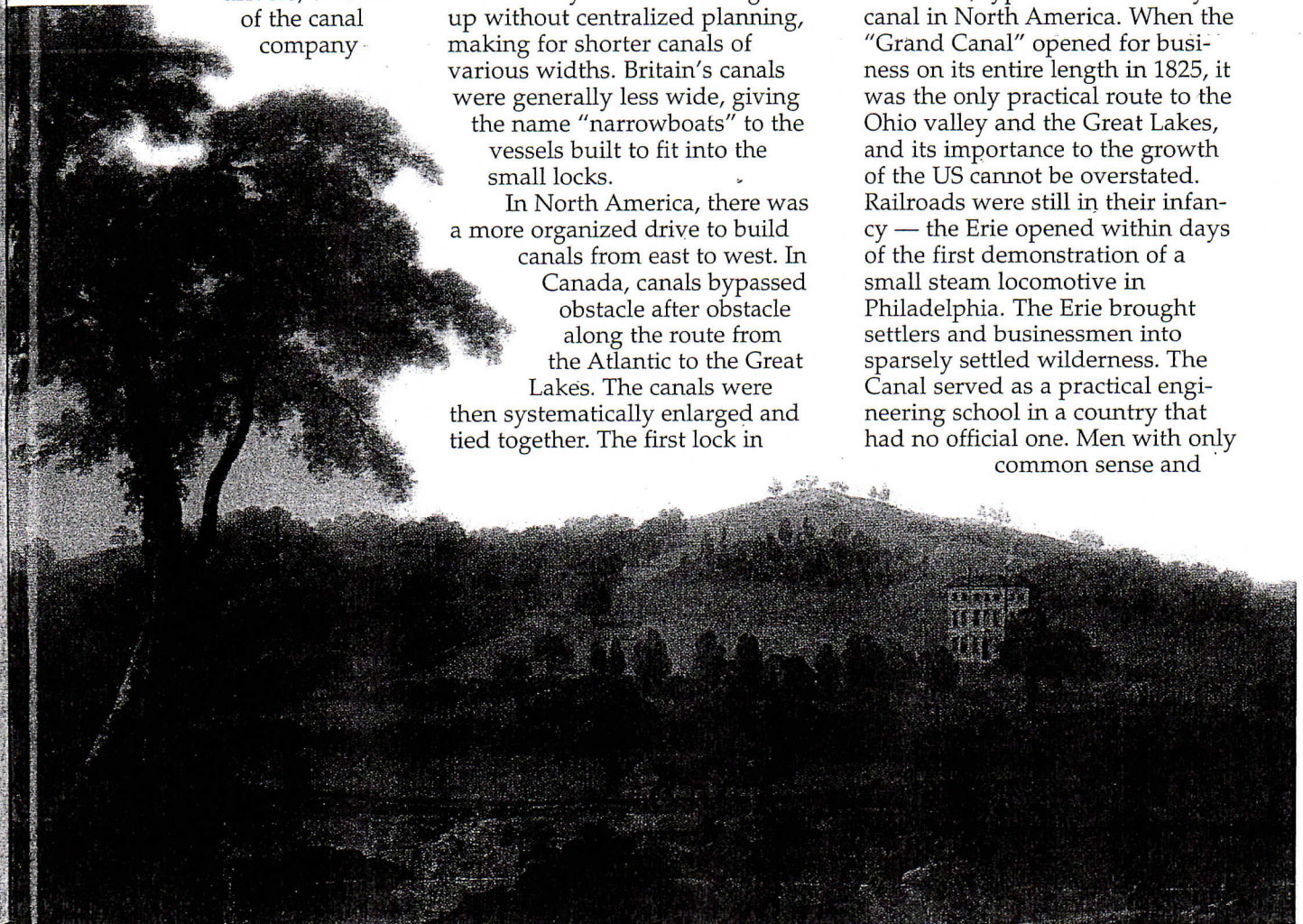
North America was one built for canoes in 1779 at the Cascades rapids on the St. Lawrence River.

The US had dozens of small canals in operation along the east coast by 1825, but it was the opening of the Erie Canal in that year that began the golden age of canals for the young country. The Erie was 363 miles long and contained 83 locks, but was only four feet deep to save money. It connected New York City to Lake Erie via the Hudson River.

Through this and other canals constructed in the boom that followed, huge quantities of raw materials flowed east and finished goods flowed west.

## Canal Boat Passengers

The way of life that evolved on the Erie Canal was, with minor variations, typical of life on any canal in North America. When the "Grand Canal" opened for business on its entire length in 1825, it was the only practical route to the Ohio valley and the Great Lakes, and its importance to the growth of the US cannot be overstated. Railroads were still in their infancy — the Erie opened within days of the first demonstration of a small steam locomotive in Philadelphia. The Erie brought settlers and businessmen into sparsely settled wilderness. The Canal served as a practical engineering school in a country that had no official one. Men with only common sense and





## Locks

Locks are a means of raising or lowering the level of a canal or river. In Europe, the use of the lock began in the 1400s, although much controversy surrounds its origins. The Italian Domenico brothers built a lock in Viterbo, Italy in 1481, but the Dutch have locks that they say predate this by a century. Both countries claim the idea as original and uninfluenced by the Chinese invention five hundred years before, and the truth may never be known. Locked canals quickly spread across Europe, with one of the supreme achievements being the linking of the Mediterranean Sea with the Atlantic Ocean by the Canal du Midi through France in 1681.

"Locking" a canal boat was a deceptively simple-looking procedure that could and did go wrong to the extent of ruining locks and sinking boats. Experience and judgment were needed for a fast and efficient transit.

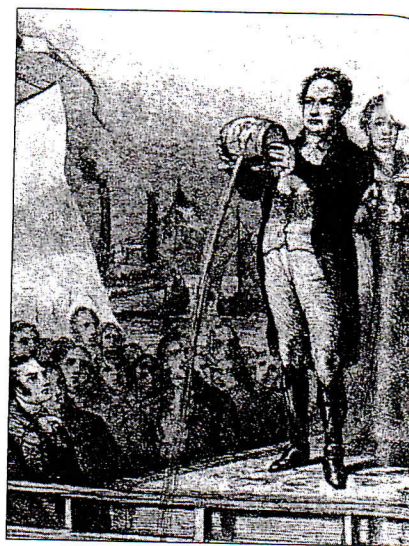
The key to getting a boat through a lock quickly was finding it unoccupied and open. "Open" meant that the water level in the lock was at the same level as the boat approaching the lock. If you needed to "lock up", the water level in the lock needed to be low. If you needed to "lock down", the lock needed to be full. Boats were often made to wait until another boat came through if the lock was at the wrong level for them, so that the water would not be wasted by emptying the lock with no boat in it. In the "rough and ready" early days of the Erie Canal, many a fight broke out over this, and over who got to go through the locks first.

Locktenders, who worked the locks for the boats, were usually men, though not always. They lived next to the locks with their families in "lockhouses" built for them by the canal company. They often raised produce in gardens by their houses and sold them to the boatmen. Some ran dry goods stores or taverns in addition to their lock-tending duties, but they all had to be there every day and night during the boating season. They were alerted to approaching boats either by a horn left tied to a post along the towpath or by simply shouting. This was to give the locktender time to open the gates or change the water level.

Once the water was at the proper level and the gates were open, the mules towed the boat towards the lock. They headed up a ramp next to the lock, and the steersman guided the boat into the lock with the way left on it. This was the tricky part. The boat had to be kept straight, of course, but it also had to be stopped before it rammed the end gates. The steersman on duty "snubbed" the boat to a halt in the locks by winding a rope around a bollard on the lock wall and gradually tightening it. Stopping too short blocked the opening, and the boat had to be pulled in by hand. This was embarrassing, but not as costly as ramming the gates.

The locktender then leaned against the giant timber swing-arm that shut the lock gates, and pushed them closed. Wooden cleats were often set in the ground by the swing-arm to give traction, and the boatmen usually lent a hand.

The locktender or one of the boatmen then walked out onto the gate itself and turned a lever that opened valves called "paddles" (one-foot by two-foot sections of boards that were pivoted in the middle) to let the water in or out. Someone then pushed the gates at the opposite end open. The mules were hitched up, and they pulled the boat out of the lock. The whole process took less than 20 minutes, but only if the lock was open. In one famous incident on the Erie Canal, traffic was tied up for three days after the locktenders gave up and walked off the job in the middle of a terrific jam.



New York Governor DeWitt Clinton celebrated the completion of the Erie Canal by pouring a keg of Lake Erie water into the New York City Harbor.

determination as qualifications built 18 aqueducts and 83 locks that raised the canal 565 feet between the Hudson River and Lake Erie. The "staircase" of five locks at Lockport lifted the water 70 feet, and was one of the engineering marvels of the age.

With the Canal's opening, shipping that had cost \$100 per ton suddenly dropped to less than \$20, then to less than \$10. Immigrants by the thousands used the Erie to move west. For the first 20 years of its existence, passenger traffic was a large part of the Canal's trade.

The "packet" boats that carried passengers were narrower and faster than the heavy cargo boats, which had to make way for the packets in the canal and at the locks. This special treatment was much resented, and it is one of the reasons that few canallers mourned the loss of the passenger trade to the railroads in the years leading up to the US Civil War.

As the longest canal in the world, the Erie attracted tourists, some famous, most not, and they all seemed compelled to write about the experience. Much of this writing was devoted to the tight accommodations on the packet boats. One anonymous packet passenger described his vessel succinctly.



"Right in the bow, carefully cut off from the rest of the boat, was a tiny cuddy for the crew. Next back of this came the ladies' dressing room and cabin, sometimes a separate room, sometimes cut off from the main cabin only by a red curtain. Next was the main cabin, 36 to 45 feet long, which was saloon and dining room by day and men's dormitory by night. Back of this was the bar, and finally, at the very stern, was the kitchen, almost always presided over by a Negro cook, who usually was bartender also."

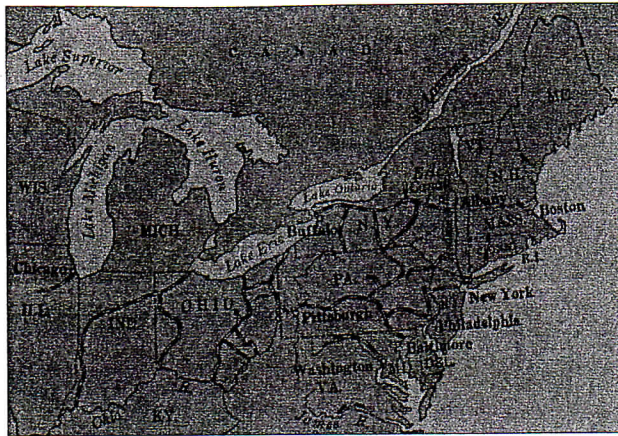
Tops on the list of dislikes was ducking under all the low bridges, followed by the sleeping accommodations. Charles Dickens, one of the celebrity passengers who traveled the Erie, was dismayed when he first saw his berth.

"(I found) suspended on either side of the cabin three long tiers of hanging book shelves designed apparently for volumes of the small octavo size...I began dimly to comprehend that the passengers were the library, and they were to be arranged edgewise on these shelves 'till morning."

One traveler awoke in the middle of the night to the sensation of being crushed to death.

"Above me was a noise like thunder: it was my companion of the upper story...the weight which pressed on my chest was caused by his body... I tried to push, to cry out — in vain. He lay like a rock on my chest...I bethought of my breastpin...with great difficulty I succeeded in reaching the pin, which I pressed with a firm hand into the mass above me. The thrust of my breastpin caused his body to jerk upward, allowing me to escape. As he returned to his former position with greater force, the canvas split still wider, and more than half asleep, he was sitting on my bed...calling out, 'Help! Murder!'"

Nathaniel Hawthorne asked to sleep on deck



By 1850, canals had spread across much of the northeast US.

during his trip, but found that this was strictly forbidden. Despite the trials, a voyage on a packet had a special appeal, as Dickens relates.

"The fast, brisk walk upon the towing path, between that time and breakfast, when every vein and artery seemed to tingle with health: the exquisite beauty of the opening day, when light came glancing off



In Lockport, NY, canal boats climbed up and down a series of locks like a flight of stairs.

from everything; the gliding on at night so noiselessly, past frowning hills sullen with dark trees and sometimes angry in one red, burning spot high up, where unseen men lay crouching round a fire, the shining out of the bright stars undisturbed by any noise of wheels or steam or any other sound than the limpid rippling of the water as the boat went on; all these were pure delights."

### Canal Culture

With the arrival of the railroads in force in the 1850s, the Erie Canal stopped carrying passengers, and bulk cargoes like coal, grain and lumber became its lifeblood. As many as 250 boats per day might pass through a single lock, and in 1865, more than 7,000 boats worked the "Big Ditch".

By then, the frontier aspects of the Canal and the towns along it had worn off, and hard-working, respectable men took over the

cargo trade. Canallers came from all walks of life to begin with, but a community that perpetuated itself came into being as time passed and sons followed fathers onto the canals. Richard Garrity's family owned an Erie Canal boat, and he worked and lived in canal boats and tugs from the age of two in 1905 to his retirement. He paints a sobering picture of what raising a family on a canal boat meant.

"When we were boating lumber...in 1914, the last year (Mother) was on the boat, she cooked for the steersman, Father, herself, and seven children. The table had to be set and cleared off twice; there was not room enough for everybody to eat at the same time. The dishes were washed in a dishpan on the cleared off table. The water for laundering the clothes had to be dipped up from the canal and heated in the wood burning stove in a copper wash boiler. The laundry was done by hand, by rubbing the clothes on a washboard in a galva



**Canal Tourist Destinations**

While many canals have either been enlarged or filled in, there are still places where you can visit and get a feel for life on a canal during the Golden Age.

Established on 21 December 2000, the Erie Canalway National Heritage Corridor incorporates all four of New York's navigable canals, sections of the original Erie Canal and over 200 municipalities along the Canal Corridor. You can try your hand at captaining a boat or ride a bike along the 230 miles of Canalway Trail.

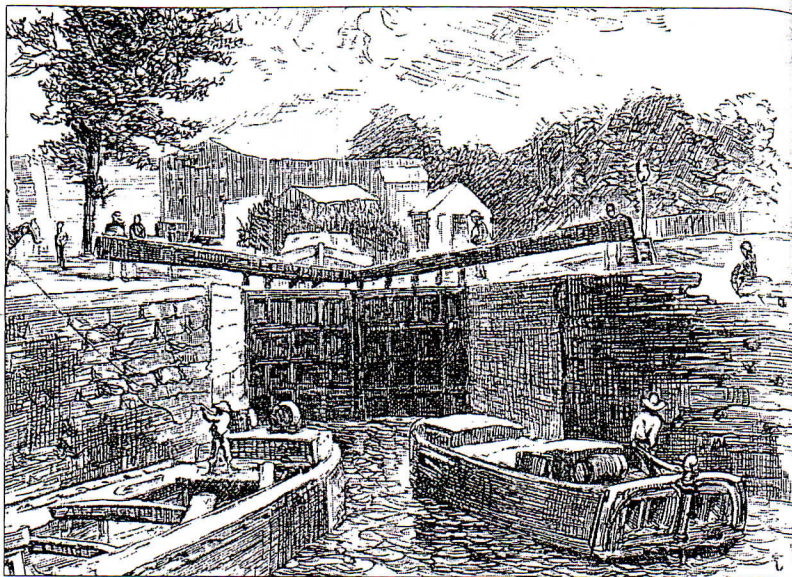
Tourists can see a 96-by-17.5-foot Erie Canal wreck excavated in 1992 at Chittenango Landing, New York. A dike keeps the vessel submerged under six inches of water, to which chemicals are added for clarity and preservation.

The Rideau Waterway, a Canadian National Historic Site and a designated Canadian Heritage River, consists of a series of beautiful lakes and rivers connected by canals. It stretches from Kingston, at the top of Lake Ontario, to Ottawa, Canada's capital.

The Paw Paw Tunnel is still open for visitors to the Chesapeake & Ohio National Park. The 3,100-foot-long tunnel through the Allegheny Mountains was part of the Chesapeake and Ohio canal from Washington, D.C., to the Ohio River. In addition to the tunnel, hundreds of original structures, including locks, lockhouses and aqueducts, serve as reminders of the canal's role as a transportation system during the Canal era, and the canal's towpath provides a nearly level, continuous trail through the spectacular scenery of the Potomac River Valley.

CanalWay Ohio, designated by Congress as the Ohio & Erie Canal National Heritage Corridor in 1996, is a 110-mile heritage greenway with three primary routes: The Ohio & Erie Canal Towpath Trail, the CanalWay Ohio National Scenic Byway and the Cuyahoga Valley Scenic Railroad.

The Illinois & Michigan Canal State Trail follows the historic route of the I & M Canal. The canal became the final link in an all-water route between the east coast and the Gulf of Mexico. Built between 1836 and 1848, the canal helped transform Illinois from a sparsely settled wilderness to a prosperous, populous state. Currently 61 miles in length, this trail offers visitors scenic hiking, bicycling and snowmobiling opportunities.



Boats lined up to pass through the locks.

nized tin tub. Sometimes to get a toddler out from underfoot and into the fresh air, (Mother) would tie the child on top of the cabin with a short piece of clothesline, so that it could move about but could not fall off the cabin or into the canal."

Sanitary conditions also left much to be desired.

"There were no built-in bathroom facilities on a canal boat in those days. Some canallers fashioned a wooden toilet seat which fitted on top of the open bucket for more comfort; others just sat on the rim. There was a joke amongst canal boatmen that a drowned canaller could always be identified by the imprint of a ring around his rump from sitting on a bucket."

**Working the Canal**

Canalling involved long hours, but not much hard work. Early canal boats in the Old World and in China had often been pulled by gangs of unfortunate men, but Erie Canal boats were always pulled by animals. To start with, horses, oxen, mules and even donkeys were used. The ceremonial first boat through the canal in 1825 that carried New York Governor DeWitt Clinton was pulled by four white horses, and packet boats always used horse teams. By the 1860s packet boats were gone, and motive power had

been standardized at two teams of three mules who pulled in rotation and lived in stables built into the front of the boat. Mules were preferred for their intelligence, sure-footedness and stamina.

Drivers were often called the "hoggee", an old English term for a lowly farm laborer. They walked along the towpath beside or behind the mules in all weather, day and night, usually barefoot. Packet boat drivers sometimes rode one of the horses, but cargo boat drivers were not allowed to, as the boats were heavily loaded. This rule was sometimes broken, especially on dark nights, but riding was frowned on and punished by captains whenever possible. The driver's main task was to restrain the team when something startled them, and to keep them going fast enough. Mules, it seems, walk slowly when unattended.

The steersman took turns at the tiller with the captain, who was often the owner. Whoever was steering had to lend a hand when changing teams, going through locks, or passing the towline of a faster-moving boat over his own. In the later years of the Erie Canal, two or even three boats were bound in line with cables



and steered by a system of winches that pulled the lead boat to the left or right. The second boat was used as crew quarters to allow the family on the first boat more space and privacy.

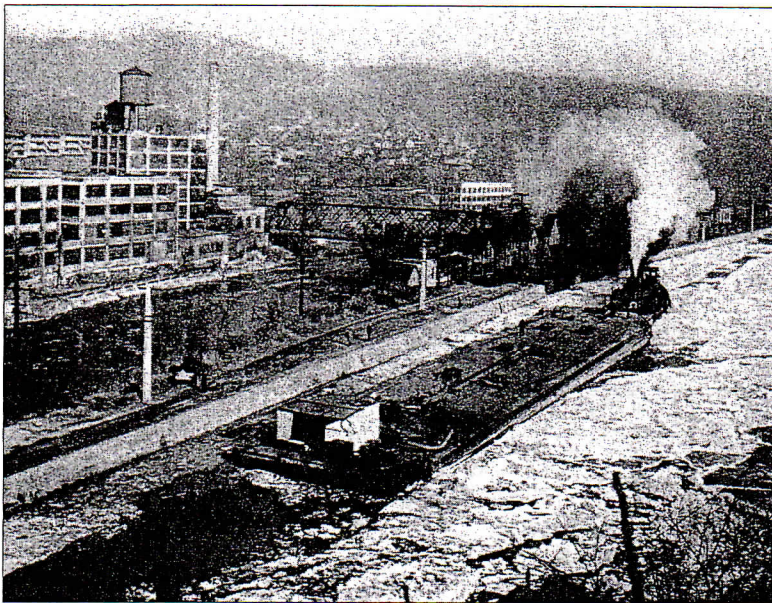
Drivers and steersmen worked 12 hours each day, changing every six hours, usually at 7:00 a.m. and 1:00 p.m. They were awakened an hour before the shift started to harness the spare mules and eat. When they were ready, the boat tied up to a handy tree and the teams of mules were rotated. The retiring driver and steersman cleaned the stalls, bedded down their mules and tried to get some food and rest before the next shift.

Garrity was glad to see mules replaced by tugs in his lifetime, but not because of the extra work caring for them. "The end of animal power on the canal was welcomed by most of the canal men, because they knew the animals were overworked. It was hard and tedious for a team pulling for six long hours on the towpath."

The towpath itself was a mixture of hard-packed clay and gravel sprinkled with small stones. It was not on a fixed side of the canal; it moved from left to right in response to terrain problems encountered by the builders. The towpath switched sides on cleverly designed towpath "change bridges" that allowed the mules to cross over in front of the boat without detaching the towline.

The 83 locks on the canal were the bottlenecks that slowed down traffic. To begin with, only one boat at a time could go through them. They were doubled when the canal was enlarged in 1862. The stretches between locks were called "levels", each a different height above sea level. The longest was 64 miles.

Most of the locks had two swinging gates at each end with valves, or "paddles", set in them to let water in or out. Paddles could be used to help free a boat stuck in the lock. Fully loaded canal boats were never completely level, and since there was only a few inches clearance on each side in the lock, this tilt could make



After the original Erie Canal lost its traffic to the railroads, it was straightened, widened and reopened as the Erie Barge Canal in 1918.

them stick. A paddle could then be opened, and the resulting rush of water would "swell" the boat out. The canal company discouraged swelling since it wasted water. Garrity related how this affected the canallers.

"If the locktender happened to be a good fellow, he gave the boats a swell without being asked. Some of them would not give the boats a swell unless they were first given the price of a couple of beers, which in those days cost a nickel...if the boats were hung up hard in the lock, some of the locktenders held out for a quarter. A loud argument might take place, but it was pay or be stuck."

In all the written accounts, there is a marked difference in the tone of people who worked in the boats as adults and the ones who grew up on them. For the canallers who were children, life on a canal boat was a magical, golden memory of quiet summer fields, friendly canal folk and an endlessly changing panorama of farms, villages and locks. The accounts from the

adults who worked the boats mention some of these things, but they also talk about long hours, lonely walks down endless towpaths, lack of sleep, and trying to find work in the off season. All canals closed in the winter, when the water was drained from the channel before it froze over and the months-long task of clearing debris from the

bottom and repairing weak spots could begin.

**End of the Canal Era**  
Good or bad, all things come to an end.

Railroads underbid, bought out and harassed to death most of the smaller inland canals in Britain and North America. Those that were left swelled to gigantic proportions to accommodate huge barges or even sea-going ships. The Erie Canal was straightened, shortened, enlarged and given massive new locks to become the Erie Barge Canal in 1918. The sec-

tions not utilized in the new construction fell into disuse or were filled in. Canallers got jobs on tugs, hired on to companies that owned fleets of barges or drifted into new fields of employment.

Today, modern canallers live on their boats for weeks at a stretch and then take a similar amount of time off. They would not dream of having their families with them. Most boats are diesel powered, or are moved by powerful tugs.

The old canals are all a memory now, relegated to leafy obscurity in the woods or nostalgic revivals by enthusiasts who are first cousins to steam locomotive devotees. Britain maintains its canals for recreational boating, and the Canadian government does likewise for some of its canals. In the US, you may visit the remnants of canals in state parks, walk down quiet towpaths, find the ivy-grown stones of old locks and dream yourself back into a way of life long-gone. 