

Towpath Topics

Middlesex Canal Association P.O. Box 333 Billerica, MA 01821
www.middlesexcanal.org

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MCA ACTIVITIES

Please mark your calendars.

The **Winter meeting of the MCA** will be held in the museum on **Feb. 8th**. Our speaker, Don McElroy, will discuss issues related to the Shaffer Landfill and Iron Horse Park. Refreshments will be served following.

MCA and friends will sponsor a **bicycle tour of the canal**, south from Lowell, on **Sunday, April 12th**.

The **MCA-AMC Spring Walk** will take place on **Sunday, April 26th**.

Our **Annual Meeting** will be held on **Sunday, May 3rd, in the museum, beginning at 1:00pm**.

See the Calendar, following, for more information on our activities. Also included are meetings and tours, sponsored by other canal and related organizations, in which you may want to participate.

Please also check our web site now and then, at the URL noted above in the name-plate, which also lists canal-related events and topics of potential interest, sometimes including those that don't make it into Towpath Topics.

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PRESIDENT'S MESSAGE

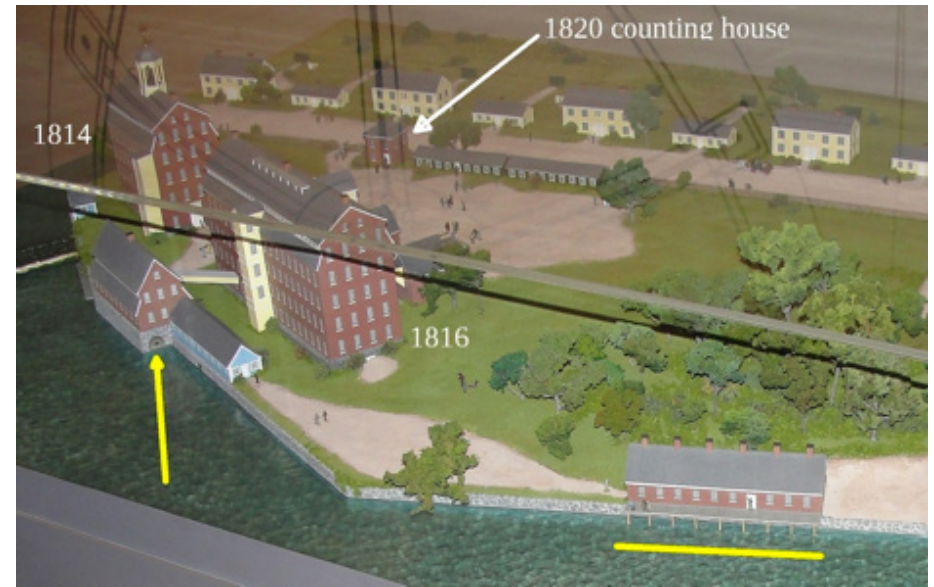
by J. Jeremiah Breen, President; jj@middlesexcanal.org

The businessmen who founded Lowell are said to have chosen the location for their new cotton mill because of the Pawtucket Falls. This slight the importance of the Middlesex Canal in choosing the location, I think. One problem in giving somewhat more emphasis to the canal than in present histories of the founding of Lowell is the larger part discussion of the development of the waterpower at the new location had in the correspondence of the businessmen in comparison to the little said about the Middlesex Canal, as reported by Prof. Patrick Malone in answer to a question after his talk on waterpower in Lowell at the April 28, 2013 annual meeting.

The founders of Lowell first built a cotton mill at Waltham. Patrick Tracy Jackson owned the most shares in that 1813 mill, 20% of the company. Two of his brothers each owned 10%. Francis Cabot Lowell owned 15%. James Gore, nephew of Christopher Gore, owned 10%.

“[Christopher Gore] invested his fortune in a variety of business endeavors, including important infrastructure projects such as the Middlesex Canal and a bridge across the Charles River. He was a major investor in early textile industry endeavors, funding the Boston Manufacturing Company and the Merrimack Manufacturing Company, whose business established the city of Lowell, Massachusetts.” http://en.wikipedia.org/wiki/Christopher_Gore. Christopher and John Gore were the largest share owners in the Middlesex Canal Company, each owning 35 shares. See Appendix C, ownership of shares, 1806, in Roberts, Christopher, *The Middlesex Canal*. Two Jacksons also owned shares in the canal.

As stated by Albert Gallatin, US Secretary of the Treasury in his report to Congress, 1808. the canal was “the greatest work of the kind ... in the United States”. The dearth of discussion of the Middlesex Canal in the correspondence of the founders of Lowell is explained by the canal being a known factor in the cost of a cotton mill at the Pawtucket Falls. Not only had it been in business for twenty years in Boston when the location of the new mill was being chosen, but the proprietors of the canal and the proposed cotton mill knew each other. Boston had a population in 1810 of only 34,000. Even if the founders of Lowell did not want to use the published rates of the canal, the investors in both companies could agree amongst themselves as business associates on an appropriate rate for canal boats hauling cotton. The amount of waterpower from the Pawtucket Falls available for sale was a matter of speculative discussion in the correspondence of the founders of Lowell, but the cost of transportation between Boston and the falls needed no discussion as it was an established fact.



How important was the canal in deciding the location of the new mill? The mill at Waltham had a covered dock as replicated in the model, above photo, at the National Park Service in Lowell, based on a contemporary engraving.

The boat portal at the Peddler's Daughter, 48 Main St, Nashua [Editor: once a canal Landing], photo below, shows what it might have looked like.



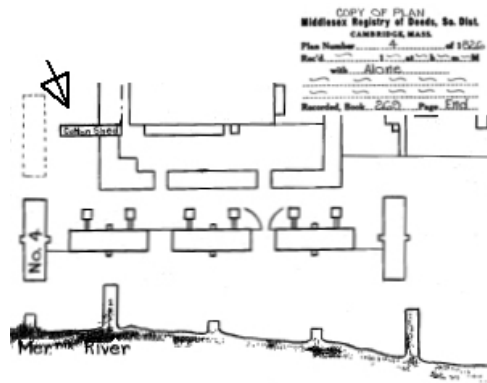
An 1825 plan of the new mill, adjacent photo, shows a cotton shed over the Merrimack Canal.

Today a bicycle can be delivered from China to most of the United States for a few dollars. Walmart can sell the bicycle for the same price in Massachusetts and California. The cost of transportation is imperceptible to the consumer. The great decrease in transportation costs as a factor in the costs of goods began with the steam engine. The first locomotive of the 1835 Boston and Lowell RR had the power of 30 horses. Today's locomotives have 1,000s of horsepower. A container ship can have 100,000 horsepower. See <http://www.gizmag.com/go/3263>.

But before the locomotive, the competition for the one-horse canal boat was the baggage wagon as described by Samuel Hadley in "*Boyhood Reminiscences of Middlesex Village*", Contributions of the Lowell Historical Society, 1911, Vol. I, No. 2, page 245, as follows:

"I can remember when the only means of transporting goods and merchandise from Boston to the north was by means of huge wains called baggage-wagons, drawn by not less than six, and oftener by eight, horses. There were regular lines of these immense wagons, and they passed through the village with such regularity that we children knew just when to expect them, and I can remember sitting with other children beside the road and awaiting the passing of these wagons, and as they passed us choosing, with other children, the particular pair of horses which we called ours, and came to know them. These great wagons were covered with canvas tops, and the goods within were securely protected from the rain by thick tarpaulins. In winter, long lines of two-horse pung sleighs, loaded with butter, cheese, apple-sauce, dressed hogs, maple sugar, and other country produce, were constantly passing on the way to Boston market, and returning loaded with supplies of all kinds, purchased or exchanged in Boston. Many of these country produce drivers stopped for the night or to bait at the Adams Tavern in North Chelmsford and at the old Middlesex Tavern."

With hundreds, eventually thousands, of bales of cotton to transport from a schooner at Boston to a mill at Pawtucket Falls, the choice between baggage wagons, capacity up to 1½ tons depending on the condition of the roads, or canal boats, capacity 20 tons, was probably not a matter for discussion.



"Following the construction of the Middlesex Canal, chartered in 1793, a series of dams, locks, and short canals were built to overcome the natural rapids and falls of the river and render the Merrimack navigable as far as Concord."

"Concord, Derryfield [future Manchester], Litchfield, and Nashua each had its line of boats, making in the aggregate quite a fleet, and this waterway for nearly forty years formed the principal channel for heavy transportation between Boston and Concord until its usefulness was destroyed by the railways."

"The Nashua Manufacturing company at once took advantage of this waterway and, securing a charter from the legislature in December, 1824, to connect the Nashua with with the Merrimack by means of a canal with the necessary dams and locks, erected the lower dam across the Nashua with its head gates, built the locks at the Merrimack river and connected the two by a suitable canal; they also put in a substantial stone wall with the necessary backing just below the Main street bridge for a wharf or landing, built a freight shed upon it and started a regular line of boats for its own freighting."

Page 134, *History of the City of Nashua, N.H.*, Edward E. Parker, Editor-in-Chief. Nashua: Telegraph Publishing Co., 1897.

As with Nashua, the waterway between Boston and Concord of the Middlesex Canal and a Merrimack River made navigable by canals around falls and rapids led to the development of Manchester NH where successful cotton manufacturing began in 1826. The development of a mill city on the lower Merrimack, downriver of the Middlesex Canal, did not happen until after a railroad was built to Lawrence in 1848.

Conclusion: Before the steam engine, if you didn't have a boat hauling the thousands of pounds of cotton used, you couldn't compete with a mill that did. Water transportation and waterpower were of equal importance in choosing the location of Lowell. But the water transportation didn't have to be the Middlesex Canal.

In 1839, the Naumkeag Steam Cotton Company was organized and built a steam-operated cotton mill in the port city of Salem, Massachusetts, eventually employing almost 2,000. With water transportation and the steam engine, a Pawtucket Falls was not needed.

J. Jeremiah Breen

CALENDAR OF EVENTS

Middlesex Canal Association (MCA) and Related Organizations

The **Middlesex Canal Museum and Visitors' Center** is open every Saturday and Sunday, noon-4, except holidays.

First Wednesday - MCA Board of Directors' Meetings - The Board meets at the Museum, from 3:30 to 5:30pm, the first Wednesday of every month, except July and August. Members are always welcome to attend.

Directions to the Museum/Visitors Center: Telephone: 978-670-2740.

By Car: From Rte. 128/95, take Route 3 toward Nashua, to Exit 28 "Treble Cove Road, North Billerica, Carlisle". At the end of the ramp, turn left onto Treble Cove Road toward North Billerica. At about ¾ mile, bear left at a fork. After another ¾ mile, at a traffic light, cross straight over Route 3A. Go about ¼ mile to a 3-way fork; take the middle road, Talbot Street, which will put St. Andrew's Church on your left. Go about ¼ mile and bear right onto Old Elm Street. Go about ¼ mile to the falls, where Old Elm becomes Faulkner Street; the Museum is on your left and you can park across the street on your right, just beyond the falls.

From I-495, take exit 37, N. Billerica, south to the road's end at a "T" intersection, turn right, then bear right at the Y, go 700' and turn left into the parking lot. The Museum is across the street.

By Train: The Lowell Commuter Line runs between Boston's North Station and Lowell's Gallagher Terminal. Get off at the North Billerica station, which is one stop south of Lowell. From the station side of the tracks, the Museum is a 3-minute walk down Station and Faulkner Streets on the right side.

Sun, Feb 8, 2015. MCA Winter Meeting will be held in the museum, beginning at 1:00pm. Our speaker will be Don McElroy, from the EPA, to discuss "The Present and Future of the Shaffer Landfill".

The Shaffer brothers have offered to give the one mile of canal between Gray and Pond Streets, the southern boundary of the Philip Shaffer Family Corp.'s 106 acres, to the Middlesex Canal Association. The Association must take all 106 acres not just the twelve acres of canal. Mr. McElroy is the remedial project manager for Iron Horse Park. UGT Iron Horse Park LLC is developing a photovoltaic facility on land owned by Dow Chemical Co., on both sides of the canal west of Iron Horse Park, with wetland restrictions and UGT making it possible for the canal towpath to remain in use as a footpath.

The Middlesex Canal Association, and the Commonwealth's Middlesex Canal Commission would like to know the feasibility of the future Philip Shaffer Canal Park being connected via a footpath on the former route of the canal through Iron Horse Park proper (owned by B & M Corp?) to the canal

on Dow Chemical property west of Iron Horse Park.

Other issues of interest include: development of the towpath west into Iron Horse as a part of a waterfowl observation path, access to the smallpox cemetery, the marking of the historic canal on EPA plans of Iron Horse Park, and anything else of significance to the MCA and residents of Billerica.

Refreshments will be served following the presentation.

Walks along the Delaware & Raritan Canal in New Jersey. Various weekends. These walks are sponsored by the D&R Canal Watch. For additional information contact Bob Barth at 201-401-3121 or bbarth@att.net.

Sat, February 7 – 10:00am. BEGIN THE JOURNEY: Hike 5.7 miles from **Bulls Island to Holcombe-Jimison Farmstead Museum** (the meeting place; parking lot at the canal) or choose the 3-mile walk to Prallsville Mill. Leader: Pamela V'Combe, 609-635-2783.

Sat, February 21 – Light rail trip. Details to be announced. *This D&R Canal Watch program is co-sponsored by the Friends for the Abbott Marshlands and D&R Greenway Land Trust.*

Sat, February 28 – 10:00am. Hike 5.3 miles from **Fireman's Eddy to Prallsville Mill** (the meeting place) or choose the 2.6-mile walk to the Holcombe-Jimison Farm. The tour will include the historic remnants of the feeder canal outlet lock to the river, other historic canal structures and expansive views across river. Leader: Pamela V'Combe, 609-635-2783.

Sat, March 14 – 10:00am. Hike 5.3 miles from **Fireman's Eddy to Washington Crossing** (the meeting place) or choose the 4.1-mile walk to Church Road in Titusville. Leader: Pamela V'Combe, 609-635-2783.

Sat, March 28 – D&R Canal Watch 5K Fun Run, Washington Crossing State Park. For more details, visit our website, www.canalwatch.org.

Sat, April 18 – 10:00am. Hike 6.2 miles from **Washington Crossing to Ellarslie, the Trenton City Museum in Cadwalader Park** (the meeting place) or choose the 2.4-mile walk to Scudder's Falls. The tour will pass by Wilburtha and Upper Ferry Road and will include historic canal structures: several stop gates, a spillway, an aqueduct, and other historic features. Leader: Pamela V'Combe, 609-635-2783.

Sun, April 19 – 1:00-3:00pm. Explore the **Abbott Marshlands** and learn about Charles C. Abbott, naturalist, doctor, and archeologist. 157 Westcott Avenue, Hamilton. \$5 per person. Group is limited to 20 people. Register by contacting Bob Barth, 201-401-3121; bbarth@att.net.

Sat, May 2 – 10:00am. Hike 4.5 miles from **Whitehead Road to Ellarslie, the Trenton City Museum in Cadwalader Park** (the meeting place) or

choose the 2.5-mile walk to the Trenton Battle Monument. Questions? Contact Bob Barth at 201-401-3121 or bbarth@att.net.

Sat, Mar 7th, 2015. Society for Industrial Archaeology, 28th Annual New England IA Conference, Fire Alarm and Telegraph Building, 230 Park Avenue, Worcester, MA (new conference location). More information is available on the chapter web site: <http://nec-sia.org>.

Sat, Mar 7th, 2015. CSNY Winter Symposium, Rochester, NY – Canal Society of New York State Winter Symposium and Meeting. Monroe Community College, Warshoff Conference Center (Rochester, NY). 8:00am to 4:00pm. \$50 preregistered, \$60 at the door. Includes lunch and snacks.

Eight high quality presentations are planned. The central theme will be an update on the construction and planned opening of the Erie Canal Heritage Park at Port Byron given by CSNYS, NYS Thruway and Canal Corporation representatives. Bookending around this presentation will be the story of two sets of five locks, the 19th-century Flight of Five under restoration in Lockport, NY and the 20th-century Waterford Flight (also five locks) celebrating its 100th birthday.

Other topics to be covered are: Erie Canal Draftsman, David Vaughn; Lake Biwa Canal, Japan; Chittenango Canal Boat Museum; Chemung Canal. CSNYS members will receive a preregistration form. Others may preregister by sending a check for \$50 made out to Canal Society of NYS to Dave Kipp, 61 Thistledown Drive, Rochester, NY 14617. For more information, visit www.newyorkcanals.org.

Weekend, April 10-12, 2015. Canal Society of Indiana. “Fruhling Kanal Ausflug mit Freuden” - The Spring Tour of the Canal Society of Indiana will have a German theme as it explores the Wabash and Erie Canal in Jasper and Dubois Counties. The tour will be based in Evansville, Indiana, see <http://www.canadiancanalsociety.org/documents/2015-04-csi-spring-tour.pdf> for details.

Sun, April 12, 2015. Middlesex Canal Association’s Spring bicycle tour. Meet 9:30am at North Station (commuter rail) and take our bicycles on the 10am train to Lowell. Riders meeting the group at Lowell meet at the train station at 10:40am. This year an early group will take the 8:00am train from North Station to allow more time in Lowell and breakfast at the historic Owl Diner (www.owldiner.com, aka the Four Sisters).

Route visits the Pawtucket and other Lowell canals, the river walk, Francis Gate, and Middlesex Canal remnants in Chelmsford. Lunch at Route 3A mini-mall in Billerica. Quick visit to Canal Museum, then on to Boston. A long day of exploration (35 miles end-to-end) but sunset is late.

Riders can board northbound trains at other stations or catch southbound trains at 1:07pm or 3:14pm to return to Boston early. Complete Lowell line schedules can be downloaded at <http://www.keolis.com>. Participants responsible for one-way train fare [\$9.25 from Boston to Lowell]. For changes or updates, see <http://middlesexcanal.org>. Leaders Bill Kuttner (617-241-9383) & Dick Bauer (857-540-6293).

Sun, April 26, 2015. Joint MCA-AMC Spring Middlesex Canal Walk. Meet at 1:30pm at the Middlesex Canal Museum and Visitor Center in the Faulkner Mill in North Billerica. The walk will be for 2-3 hours, rain or shine, over generally level wooded terrain and streets. The route follows the canal for a round trip of under 3 miles south of the Concord River. Sites to be visited include: two guard locks; an anchor stone and the ‘peninsula’ at the opposite ends of the floating bridge that once carried the towpath across the Concord; the 1825 iron bolt pond-level reference; the “deep cut”; a small-pox memorial marker; stretches of canal some of which are still watered; and possibly the impending photovoltaic facility on High St. The Museum and bookstore will be open from 12:00pm-4:00pm. Phone 978-670-2740. L Robert Winters (617-661-9230; robert@middlesexcanal.org), CL Roger Hagopian (781-861-7868 to 10pm), CL Marlies Henderson.

Weekend, Apr 24-26, 2015. Joint Pennsylvania and Ohio Canal Societies’ tour of the Beaver Division of the Pennsylvania Canal. The annual meeting of the **American Canal Society** will be held in conjunction with this event. The day long tour will run along the Beaver and Shenango Rivers between Rochester, PA and Sharpsville, PA. HQ: Hermitage Quality Inn (3200 S. Hermitage Road, West Middlesex, PA 16159). Steve Fritz of the U.S. Army Corps of Engineers will speak on Friday evening, April 24th about planning navigation improvements on the upper Ohio and lower Monongahela rivers. Saturday speaker, John Kokoski of the Greenville Canal Museum. For more information contact Dave Wright (wereallwright@gmail.com). Register through <http://pacanalsociety.org>.

Weekend, Jun 5-6, 2015. This New York and Canadian Canal Societies tour will examine the pre-Seaway canals along the St. Lawrence River and will be based in Cornwall, Ontario.

Weekend, Sept 7-10, 2015, World Canals Conference, Ghent, Belgium. Conference will include boat trips on Ghent’s inland waterways and the Port of Ghent, and visits to the project of Waterways & Seacanal and Flanders Field. www.wccghent2015.com.

Weekend, Oct 16-18, 2015, Pennsylvania Canal Society tour of the Northern Schuylkill Navigation.

Fall 2015 (date to be determined): **CSNY, Genesee Valley Canal** (section to be defined) Mid-October

Spring 2016 (date to be determined) **CSNY, Buffalo, Tonawandas, & Lockport.**

Week, Sept 18-21, 2016. World Canals Conference 2016, Inverness, Scotland.

Week, Sept 24-28, 2017. World Canals Conference 2017 will be based in Syracuse, New York. 2017 will mark the 200th Anniversary of the start of construction on the Erie Canal.

FOR FUTURE PLANNING

Tentative Dates for the Annual Meeting and Fall activities are as follows:

Sun, May 3, 2015 – Annual Meeting

Sat, Oct 4, 2015 – Bicycle tour of the canal, north from Charlestown

Sun, Oct 18, 2015 – MCA-AMC Fall Walk, TBD

Sun, Nov 1, 2015 – Fall Meeting

These dates may change slightly based upon the personal schedules of trip leaders and speakers. Please check website a few weeks before for any changes.

TOM DAHILL & FAMILY HONORED

(Derived from the Arlington Advocate of Nov. 14, 2013)

Around Veteran's Day last year, the town of Arlington designated the intersection of Broadway and Allen Street as Dahill Corner, to honor the national service of three generations of Dahills (none were drafted, all volunteered).



Arlington Selectmen placed the oval marker, shown here, on a pole near to where the Dahill residence has long stood.

Among those honored - Tom Jr. enlisted in the Army Air Corps right after graduating from high school. He served in the South Pacific during WWII, flying 36 combat missions as a navigator in B-24 bombers. A painter in civilian life, Tom went on to chair Emerson College's Fine Arts Department for 23 years, and has taught at the Fine Arts Museum. **Tom is the source of much of the organization and art work in the Middlesex Canal Museum.**

Also during WWII, Tom's sister Helen enlisted in the Navy's Hospital Corps. Helen served at Bethesda Naval Medical Center in Washington, D.C., caring for wounded soldiers and sailors. After the war, she and her husband, Tony Farinacci, raised eight children.

The family jokes that Charles went "overseas to Cuba". A Navy man, he served for a short time aboard the USS Auburn, a command ship that supported amphibious forces. After leaving the Navy, Charlie began working in the mail room of the Boston Globe. He stayed with the Globe for 43 years, eventually working as a foreman in the Billerica plant.

Tom's younger brother Robert served in a Navy Construction Battalion (aka Seabees) during the Korean War - building docks, seaplane ramps and personnel quarters, and deconstructing bases. Thereafter, Robert served for 20 years as a Massachusetts State Trooper.

Charles' daughter noted "There's definitely a feeling in the family of giving back," though, she added, "we know how lucky we are." To their great good fortune, no one in the family has ever been injured or killed.

Full story at:

<http://arlington.wickedlocal.com/article/20131114/NEWS/311149788>

More photos at:

http://arlington.wickedlocal.com/photogallery/WL/20131114/PHOTOGALLERY/311149786/PH/401_629

RECREATION

A gospel tale along the lines of Henry David Thoreau

by Marlies Henderson

Growing up during the glory days of the Middlesex Canal, Thoreau lived to see the early railroad endeavors and outlived the Middlesex Canal Corporation which was disbanded in 1860 due to the very success of those railroads. True to his motto that in 'Wildness is the Preservation of the World', he may not necessarily have been enamored by engineering feats, but nonetheless he ventured on a portion of the canal in 1839

one quiet September Sabba-day, journaling the playful outing for print in the 1849 publication *A Week on the Concord and Merrimack Rivers*:

“But now at length we heard this staid and primitive river rushing to her fall, like any rill. We here left its channel, just above the Billerica Falls, and entered the canal, which runs, or rather is conducted, six miles through the woods to the Merrimack at Middlesex, and as we did not care to loiter in this part of our voyage, while one ran along the tow-path drawing the boat by a cord, the other kept it off the shore with a pole, so that we accomplished the whole distance in little more than an hour. This canal, which is the oldest in the country, and even has an antique look beside the more modern-railroads, is fed by the Concord, so that we were still floating on its familiar waters. It is so much water which the river lets for the advantage of commerce. There appeared some want of harmony in its scenery, since it was not of equal date with the woods and meadows through which it is led, and we missed the conciliatory influence of time on land and water; but in the lapse of ages, Nature will recover and indemnify herself, and gradually plant fit shrubs and flowers along its borders. Already the Kingfisher sat upon a pine over the water, and the bream and pickerel swam below. Thus all works pass directly out of the hands of the architect into the hands of Nature, to be perfected.”

Tolerant of Thoreau incorrectly rating the canal as “the oldest in the country” we find he did foresee that Nature would “recover and indemnify” herself - on a portion not obliterated by human development. We’re offered a recreated recreational landscape: An overgrown “harmony in scenery” partially accepted into wetlands thanks to busy beavers.

J. Jeremiah Breen had the vision to remember Thoreau for the 2014 Fall Walk: A hike sponsored by the Middlesex Canal Association and the Boston Chapter of the Appalachian Mountain Club, starting and ending the activity by the Billerica Falls, following the mostly dry canal bed and Turning Basin to the Concord River Red Lock, and then on along the berm-side of the canal by Lowell Street, via the tow-path called McLennan Way, crossing Brick Kiln Road past which flooding halted dry passage to Canal Street into Chelmsford.

Often feeling like the lone voice in Billerica wilderness, I proclaim the outdoors as the way to go: It will nurture mental and physical health.

Following a long line of prophets before me, Thoreau included, I zealously hold on to values of sustainability and connectivity which foster livability and ultimately the much sought-after economic growth. My allies are historical groups and trails committees, the Middlesex Canal Association among them. Asked to volunteer preparation of the Fall Walk, the task seemed daunting. I shot the Sheriff and the Deputies an email begging for assistance. Their reply was favorable and I proceeded to contact abutters and town departments involved.

Finally it was ‘all systems go’, and I catered to the food and beverage needs of an inmate crew, and now I realize that I unwittingly hosted an unlikely crew of angels. In one accord we trimmed brush, and moved mountains of illegally dumped trash. A four day project was miraculously completed in half the anticipated time.



On October 19 forty-four participants showed up to follow in the footsteps of Thoreau who described the same riparian route having coursed it 175 years ago. You bet Nature recovered, and praise to those inmates for their trail clearing efforts - and the Sheriff who made this Community Work Project a priority! Sheriff Koutoujian declared he was glad that the Middlesex County House of Correction was able to assist the Association with this cleanup, because the Middlesex Canal holds a special historical significance for his Office; the principal driver in

the design and construction of the Canal was Loammi Baldwin, who also happens to be the very first Middlesex County Sheriff, appointed in 1780. His Office looks forward to continuing to work with the Middlesex Canal Association in the future. The Sheriff said, “Projects where our CWP (Community Work Program) crews can help clear trails and public areas for active and passive recreation are projects I want to do more of in the future.”



While beavers foiled our objective to enter Chelmsford, Thoreau was able to journal the remainder of his trip, “As we passed under the last bridge over the canal, just before reaching the Merrimack, the people coming out of church paused to look at us from above, and apparently, so strong is the custom, indulged in some heathenish comparisons; but we were the truest observers of this sunny day.” Having walked a segment of Thoreau’s Sunday on a contemporary Sunday, I cannot say we experienced similar judgment regarding observing the Sabbath, but preparing the way and walking in the wilderness was an inspiring experience.

EXTRACT FROM THE HISTORY OF CHELMSFORD, MASSACHUSETTS

by the Rev. Wilson Waters, M.A., B.D.

[Following are passages extracted from Rev. Wilson Waters’ *History of Chelmsford*. In addition to describing features of the canal, and its operation, this piece also provides insight into the importance of the canal to the local people, and their industries, in their own time. Transcribed by Bill Gerber]

THE LIFE OF LONG AGO (p-419)

Sending knees and other timbers for building small vessels at Salem and Boston was quite an industry. North Billerica was one shipping point for things that went by the Canal.

BOSTON STAGE (p-441)

On the Canal a packet boat left Middlesex Village, Mondays, Wednesdays and Fridays, at 7 A. M., reaching Boston (or Charlestown) at 2 P. M., and returned on the other three week days. Fare, 75 cents. Carriages were in readiness to convey passengers from Middlesex Village to Belvidere, or from Charlestown to Boston.

The Rev. Dr. Packard, writing at Middlesex Village, May 11, 1832, says: “... The canal seems at times crowded with boats and rafts, and our factories are in successful operation.”

SOME REMINISCENCES (p-447)

On the road to Middlesex, our first neighbor was Captain Bowers, then came the Howards. Middlesex Village, at the head of the canal, the highway to Boston, was an enterprising locality for a series of years; Bent & Bush carried on a hat factory, a window glass factory was also in operation; Fairbanks, English & West India goods; Luke Merrill, English and West India goods. Then there was North Chelmsford, which was called Newfield.”

CHELMSFORD GRANITE (p-673)

The H. E. Fletcher Company’s quarries have furnished granite for the First National Bank of Boston, part of the Albany State Capitol, about twenty stories of the Bankers’ Trust Company building in New York City, for the Camden Court House in New Jersey, for the Presbyterian church in Savannah, Georgia, for the base and approaches to the post office at New Orleans, for the Frick mansion, and many other residences on the North Shore, for the lower story of the new wings of the State House in Boston, and also many miles of curbing and paving for New England towns and cities. The granite for the lower portion of the Forsyth Dental Infirmary in Boston also came from these quarries.

From Geo. P. Merrill’s “Stones for Building and Decoration”:

“It was not, however, until early in the present century that granite began to be used at all extensively in and about Boston, when the material was introduced in considerable quantities by canal from Chelmsford, thirty miles distant. It was from Chelmsford stone that was constructed in 1810 the Boston Court-house; in 1814 the New South Church; and about the same time the Congregational house on Beacon street; the old Parkman house on Bowdoin square; University hall in Cambridge; and in 1818-19 the first stone block in the city, on Brattle street.”

It is stated in the “Fletcher Genealogy” that Gardner Fletcher, in 1822, engaged in the stone business in Chelmsford, which he carried on successfully for twenty years. He furnished the columns for Quincy Market in Boston.

The Merrimack Boating Company was organized Jan. 17 1812, John L. Sullivan, agent. The first boat reached Concord, N. H., in the autumn of 1814 and it was nearly a year later that ‘regular trips were made. Business was continued until 1822. when it [the Merrimack Boating Company] was bought by the Boston and Concord Boating Co., which was to continue as long as the Middlesex Canal was kept open.

[For description see Travels in N. E. and N. Y., by Timothy Dwight, Vol. I., pp. 406-7.]

THE MERRIMACK COMPANY’S RATES OF FREIGHT, 1816 (p-815)

Per Ton: Names of Agents, Landing Places, Up, Down.

Stephen Ambrose, Concord (upper), \$12.50, \$8.50.

Samuel Butters, Concord (lower), 12.00, 8.00.

Caleb Stark, Pembroke, 11.50, 7.50.

Richard H. Ayer, Dunbarton, 10.50, 7.00.

Samuel T. Kidder, Manchester, 9.25, 6.50.

N. Parker, Merrimack (upper), 6.00, 4.50.

Adams & Roby, Thornton’s, 4.50, 4.00.

James Lund, Litchfield, 4.50, 4.00.

Coburn Blood, Dracut, 4.50, 4.00.

Levi Foster, Chelmsford, 4.50, 4.00.

Noah Lund, Billerica, 3.50, 3.00.

Jothan Gillis, Woburn, 2.50, 2.50.

William Rogers, Medford, 2.00, 2.00.

Thomas Kettell, Charlestown,

David Dodge, Boston, Furniture \$24 to \$30 per ton, according to weight and room. Empty hhds. from Concord, 50c. tierces, 25c. bbls. 18c. hf. bbls. 11c. each. Hhd. staves, \$10. per M. Barrel staves, \$6 per M.

J. L. Sullivan. Concord, N. H., April 20, 1816.

“The boats employed on the Middlesex Canal were required to be not less than forty feet and not more than seventy-five feet in length, and nine feet and one-half in width. The boats coming to Chelmsford could carry twenty tons of coal, those going to Concord, N. H., from six to fifteen tons, depending on the height of the water in the river.” The following are extracts from the “Regulations relative to the Navigation of the Middlesex Canal,” dated 1830.

Passage Boats are to be drawn at the rate of four miles an hour.

Luggage Boats are to be drawn at the rate of two and an half miles an hour.

Rafts are to be drawn at the rate of one and an half miles an hour.

Passage Boats going the same way shall not pass each other.

Luggage Boats going the same way shall not pass each other.

Rafts going the same way shall not pass each other.

No Boat or Raft shall be passed through any lock after dark.

Traveling on the Canal being permitted on Sundays in consideration of the distance from home at which those persons using it generally are: It may be reasonably expected that they should not disturb those places of publick worship near which they pass, nor occasion any noise to interrupt the tranquility of the day.

Therefore, it is established that no Signal-Horn shall be used, or blown on Sundays: but if the approach to the Locks is not perceived, the Lock- Tenders must be personally notified.

MANUFACTURING, THE NORTH VILLAGE (p-665)

The early mills at North Chelmsford are described in Chapter I. ...

In the foregoing account of Early Mining Operations is recorded the development of the iron industry by William Adams and others, until the organization of the Chelmsford Foundry Company.

The stone-ore, pig-iron, hard coal, sand and other materials used in a foundry were brought from Boston to North Chelmsford in canal-boats, by way of the Middlesex Canal and Merrimack River, till 1853, when the canal was given up. The boats were “poled” up from the head of the canal into the pond below the grist-mill dam, and the freights transferred to carts and conveyed to the places of their use. Castings were frequently sent to Boston by the same route.

TRAVELS IN NEW ENGLAND AND NEW YORK

by Timothy Dwight, S.T.D. LL. D

Late President of Yale College

[Following are passages extracted from Dr. Timothy Dwight’s “Travels ...”. In his piece, Dr. Dwight provides a brief description of the Middlesex Canal, also the Pawtucket Canal, Judge Samuel Blodgett’s canal around Amoskeag Falls on the Merrimack, and a canal [unknown to the editor] intended to reach Lake Winnipisauki. Of greatest value, he includes a copy of a report prepared by the Proprietors of the Middlesex Canal about the Canals of the Merrimack River. Transcribed by Bill Gerber]

TRAVELS – CONTENTS OF VOLUME I – LETTER XXXIX (P-7)

Bedford – Billerica – Tewksbury – Middlesex Canal – Andover – Phillips Academy – Theological Institution – Lieutenant Governour Phillips – Brad-

ford – Haverhill – Bridge over the Merrimac at Haverhill – Dry Rot in Timber – Canal from the Merrimac to Lake Winnipiseogee – Depredations of the Indians – Story of Mr and Mrs Dustan - - - - - 394

Dear Sir From Concord to Billerica the country consists of the same easy slopes and flat valleys which have been already described In this tract lies Bedford a small township of scattered plantations We saw a few houses around the Church of a decent appearance ... [(p-395)] On this part of our road is crossed the Middlesex canal, the most considerable work of the kind in the United States. Its length is near thirty miles from Charles River to the Merrimac. To the Merrimac it descends from Concord river, in five miles and three quarters, twenty one feet; and from Concord to Charles River through the remaining distance, one hundred and seven feet. The former of these descents is compassed by means of three locks, the latter by means of thirteen. The design of forming this canal was to introduce from the countries on the Merrimac, and its head waters, into Boston, the great quantities of timber, and the artificial produce, which they furnish. The canal was completed in 1801; and has ever since been in operation. It is doubted whether the proprietors will very soon obtain the interest of their money... although every friend of the community must earnestly wish that they may be liberally rewarded for their enterprise and public spirit.

The only commodity already floated down the Merrimac is Lumber. A Company has been incorporated for opening a navigable communication between the Merrimac and the Winipiseogee. Should this design be accomplished, an immense quantity of lumber, now useless, would find an easy passage to a market. The shares of this Company were subscribed in 1796. At that time also a canal was nearly completed out of the Merrimac, round the Amoskeag falls, into the Merrimac again. Of this work Judge Blodget is the author. Another canal commencing above the Patucket falls and intended to conduct boats out of the Merrimac into Concord River, (Mass.) and down that river into the Merrimac again, was nearly finished at the same date. It is to be hoped that they will not miscarry from want of skill, or capital; and that their efforts may hereafter be extensively beneficial .*

* The following account of these works, drawn up by a Committee of Directors of the Middlesex Canal, cannot fail of being acceptable to the reader.

“The Committee of Directors, pursuant to the intentions of the Board, having visited and examined the Canals in New Hampshire at the Falls of Merrimac river, in which the proprietors of Middlesex Canal are interested, report – That having proceeded to Concord, they embarked there on the river at the Landing Place of the Merrimac Boating Company, and at the distance of two miles below, entered the channels formed in

Turkey Falls, to admit the passage of boats. This Fall, they understood, was naturally impassable, and its improvement came within the plan of the Bow Canal. Accordingly, the Dam which raises the river to fill that Canal, backs the water over those Falls; and although they are still swift, are not difficult of ascent. The length of these channels, formed by removing rocks, is about half a mile.

The entrance to Bow Canal is nearly a mile lower down the river, on the westerly side. It consists of strong stone abutments, raised fourteen feet, and twelve feet thick, to support the guard gates, and defend the Canal in high freshets. Near them begins the dam, which is thrown across the river at the head of the Falls. It measures four hundred and fifty feet in length, and from seven to twelve feet high; formed of very large timber and plank, and loaded with stone, and strongly bolted to the ledges on which it is founded. From the guard gates, for five hundred and sixty feet, the Canal is dug principally in stone, and partly in gravel, thirty feet wide, and eight feet deep. It is then carried by a wall and embankment, twelve feet high, for three hundred and sixty feet, across a cove of the river; it then enters a small hill or ledge of rock, through which it is carried for three hundred and twenty feet, sixteen feet deep and twelve feet wide thence the Canal was dug in gravelly ground two hundred feet to the Locks. The descent into the river below the Falls, which are twenty seven feet perpendicular measurement, is effected by three Locks, which are supported by walls of split stone, which average seven feet in thickness, twelve feet high, and measure, both sides the locks together, five hundred and twenty feet in length. The lower Lock being sunk four feet below the lowest water mark, a channel was made from thence to the channel of the river. The whole is about one third of a mile.

Your Committee give these outlines of this and the works to be subsequently mentioned, that the Board may have some data to compare with the expense of them.

The property of the Bow Canal consists of the ground it occupies, and four acres of good land contiguous, and a house thereon for the residence of the Lock Tender.

By the Act of Incorporation this proprietary, is divided into two hundred shares. The whole expenditure thereon, including the channels of Turkey Falls, has amounted to near \$20,000.

Bow Canal went into operation for rafts in 1812, and to the 31st May, 1813, received \$290,51; the year ending 31st May, 1814, received \$497.01; the year ending 31st May, 1815, received \$868.78. The present year, besides the toll on rafts, it will have the advantage of the ascending

business by the boats since the 1st July last.

The management of this Canal is in the same hands, and similar to the Middlesex, as far as local circumstances will allow. The current expenses will be the constant wages of one man, and occasionally of two others – and moderate pay to the officers of the Corporation.

From Bow Canal to Hooksett, six miles, the river is unobstructed and gentle, its width is generally about two hundred yards.

At the head of Hooksett Falls stands a small island, which gives its name to the place. To this island a Dam is thrown from a large ledge of rocks, which stands ninety feet from the western shore. This space is occupied with a high and thick wall, which supports the guard gates, and defends the work from high freshets.

The Canal consists of two spacious basins between the main Dam, which forms one side, and the shores the other; and of two locks, supported by strong stone walls. The fall is seventeen feet perpendicular measurement. The Corporation purchased the Mill privileges at this place, and eight acres of land. Considerable work had already been done, which was made subservient to their object. This proprietary is divided into one hundred shares, and has cost fifteen thousand dollars. The toll received on rafts in the year ending the 31st May, 1814, was \$336.78; and to 31st May, 1815, \$454.47. The present year will have additionally the benefit of the ascending trade. The Canal and the Mills, and the roads which meet here, are inducing a rapid settlement of this vicinity and the general business encreases.

From Hooksett Canal to Amoskeag a distance of eight miles the river is unobstructed wide and gentle.

Amoskeag Canal, the greatest work of the kind in New England, except Middlesex, though not owned in any part by our Corporation, is, however, principally in the hands of proprietors in the Middlesex Canal; and, it being of great importance in the chain of water communication, formed by the rest of our works, we are happy to state that, for the most part it, is new and permanently constructed, and that what remains of the old work will probably be renewed the ensuing year.

On leaving Amoskeag Canal you enter on that section of the river, nine miles in extent, converted by law into the Union Canal, comprehending in that space, six distinct falls; at each of which and at several intermediate places, work has been done. The first Lock is at Merrill's Falls, erected at the foot of this rapid, near the Eastern shore, supported and protected by strong walls, from which dams formed of timber and stone,

extend from the one side to the shore, and from the other to the head of the falls, and obliquely nearly across the river; forming a still basin or Canal in this instance, one hundred and forty rods in length.

In great freshets, when Uie river is rendered unnavigable, the Lock is overflowed. As the wafer subsides, the works reappear for use and are calculated for a variation of the surface, perpendicularly for eight feet. Precautions appear to be taken to guard against the effects of winter; and the experience of five seasons proves them secure.

The other Lock, viz at Griffin's, Short, Goff's, Coos, and Moor's Falls, are constructed on similar principles, varying in position, or strength, of the works, according to circumstances. In several instances, considerable difficulties were to be surmounted by dint of labour, and places were pointed out where channels had been formed by the removal of masses of rocks from under water, by the force of powder and machinery.

Descending the river five miles further, we came to Cromwell's Falls; where a lock has likewise been built, under the same Act of Incorporation, by a subsequent grant of the Legislature, with a separate rate of toll. The toll of the Union Canal above described, is seven and a half cents a ton per mile, or sixty seven cents per ton; and by a recent Act of the Legislature, a toll on rafts has been granted. The cost of Union Canal, including Cromwell's, may be estimated in round numbers at 50,000 Dollars; which, however, will be reduced, (to the proprietors,) twenty thousand, by the avails of the lottery, granted in aid of this expensive and hazardous undertaking. This Canal has begun to receive toll, and is under a like system of management.

After descending the river fifteen miles further, your Committee entered Wicasee Canal, and passed the Lock therein. This work being in the same County as the Middlesex, may be considered as an appendage thereof. It consists of a natural passage between Tyng's island and the North shore, which was cleared out and deepened, and a substantial Lock built, to raise the height of Wicasee Falls, which are on the other side of the island in which falls there are dams to check the water back in a low state of the river, to save the expense of digging the Canal deeper. The cost was about 14,000 Dollars, and there is a separate toll. This work opened the river for fifteen miles, and may be considered essential to its navigation. Proceeding from hence three miles down the river, we reached the head of Middlesex, fifty two miles from the lower landing in Concord – the upper landing being on the East side, five miles higher up.

Your Committee, after viewing this chain of water-communication, see no reason to doubt its effectual operation; and are confirmed in the opinion,

which six years ago prompted the Board of Directors to the undertaking, that it was necessary to the final success of the Middlesex Canal. A few years of experience are wanting, to show the extent of the usefulness of these improvements, and the effects they will undoubtedly produce. The kind of business expected to result from them, has already commenced. The landing places and stores already mentioned, have been established at Concord, for the deposit of merchandize and produce, in their way to and from Boston. A regular system of transportation is actually carried on, which there is every reason to think will actually increase; and, bringing the real accommodation of eighty-five miles of water carriage directly into the heart of the country, may be expected to attract a considerable accession of trade to our State and metropolis.

In closing their report your Committee, (having had an opportunity of inspect its the proof impression of a map of New Hampshire, on a large scale, now preparing for publication,) beg leave to advert to the supposed practicability of opening a water communication between the Merrimac and Connecticut river, in the direction of Windsor, in the State of Vermont, between Sugar river and Sunnapsee Lake, from which it takes its rise; and the Contoocook, which has its Northerly source in or very near the same, and discharges eight miles above Concord, by which water carriage from Boston might be encreased to three hundred miles; not with a view of engaging the Corporation in any additional expense, already too great; but to lead the Board to consider, at some convenient time, the means of calling the public, and even Legislative attention to an object of so much importance to the whole community, at least so far as to ascertain its practicability, and probable cost from actual survey. This point indeed might be settled for a few hundred dollars. The Committee have only to add, that they found the Middlesex Canal in an improved state and perfect operation.

Committee

Aaron Denton Andrew Sigourney Benjamin Weld B Joy

I beg leave to return my thanks, in form, to the Massachusetts Historical Society for the honourable, and successful efforts, which they have made, to preserve the knowledge which still remains of the persons who have lived, and the events which have taken place, in New England and elsewhere in the United States, since their colonization. Their collections contain a large fund of valuable information, which was rapidly passing into oblivion, and will be remembered with gratitude, as well as with high respect, by their intelligent countrymen, in every future period.

MISCELLANY

Nameplate - Excerpt from a watercolor painted by Jabez Ward Barton, ca. 1825, entitled "View from William Rogers House". Shown, looking west, may be the packet boat *George Washington* being towed across the Concord River from the Floating Towpath at North Billerica.

Back Page - Excerpt from an August, 1818, drawing (artist unknown) of the Steam Towboat *Merrimack* crossing the original (pre-1829) Medford Aqueduct, probably on its way to service on the Merrimack River.

Estate Planning - To those of you who are making your final arrangements, please remember the Middlesex Canal Association. Your help is vital to our future. Thank you for considering us.

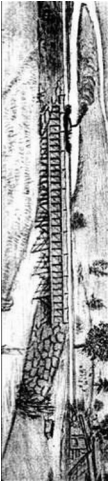
Museum & Reardon Room Rental - The facility is available at very reasonable rates for private affairs, and for non-profit organizations' meetings. The conference room holds up to 60 people and includes access to a kitchen and rest rooms. For details and additional information please contact the museum at 978-670-2740.

Web Site - As you may have noted in the nameplate, www.middlesexcanal.org is the URL for the Middlesex Canal Association's web site. Our webmaster, Robert Winters, keeps the site up to date, thus events and sometimes articles and other information will sometimes appear there before we can get it to you through Towpath Topics. Please do check the site from time to time for new entries.

Back Issues - Fifty years of back issues of Towpath Topics, together with an index to the content of all issues, are also available from our web site at <http://middlesexcanal.org/towpath>. These are an excellent resource for anyone who wishes to learn more about the canal and should be particularly useful for historic researchers.

Canal Boat Rides - The American Canal Society maintains an annotated list of more than two-dozen canal boat ride concessions that operate at various places in the eastern USA and parts of Canada. The list can be found at www.americancanals.org/Canal_Boats/Canal_Boats.htm. Go take a boat ride!

Towpath Topics is edited and published by **Bill Gerber** and **Robert Winters**. Corrections, contributions, and ideas for future issues are always welcome.



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