

***“It was on a pleasant May morning
that a steam vessel was riding at anchor,
opposite the town of Buffalo,
on Lake Erie.”***

[*The 1st sentence in the anonymous 1845 “Helmsman of Lake Erie”*]

***Navigation and Winter Ice on Lake Erie from 1821 to 1845,
with References to Water Levels***

(With an Appendix of Newspaper Clippings dealing with Lake Erie and Buffalo Harbor)

by
NORMAN BARRY

The very first sentence of the anonymous “Helmsman of Lake Erie” has been a subject of heated discussion since its first appearance in over a dozen American newspapers between August 30, 1845 and January 2, 1846. On September 12, 1845, The editor of the *Buffalo Commercial Advertiser* was the first to call into question one apparent mistake in the first sentence and to question whether the writer had any familiarity with the Great Lakes:

“THE HELMSMAN OF LAKE ERIE. — The story under this head in today’s paper will recall to the recollection of many readers the heroic and self-sacrificing devotion of McBride, the Helmsman of the *Erie*, who, during the awful burning of the boat, remained at his post until nearly consumed by the flames and when further help was unavailing. The story is well told, but by one more familiar with the nav[i]gation of the ocean than that of the lakes. Boats do not ride at anchor off Buffalo.”

Since that day in September, the editor’s judgment has been accepted as “Gospel truth,” even though his memory of details of the year 1841, the year of the tragic conflagration of the *Erie*, to which he refers, was faulty: McBride, one of the wheelsmen of the *Erie*, was *not* on duty at the time of the blaze. Could the editor have forgotten a few other details pertaining to “wind and weather?”

The object of this short investigation is to try to zero in on climate in the Buffalo area in the year 1841. A collection of old newspaper clippings (see Appendix) will serve as the basis of findings.

The first point worthy of consideration is that “pleasant May morning,” which was not commented on by the editor of the *Buffalo Commercial Advertiser*. Was the month of May “pleasant,” in that harbors were free of ice and the Lakes were navigable?

“The Helmsman of Lake Erie” was published in 1845. That year had a relatively short winter. As early as March 10 (*cf. Appendix, Text No. 15*), navigation of the Erie was announced. By April 4th, (*cf. Appendix, Text No. 18, April 12, 1845*) the *Buffalo Commercial Advertiser* could report: “Buffalo harbor is nearly free from ice.” In fact, as *Text No. 16, April 10, 1845*, clearly documents, the early spring warming led to unparalleled flooding and the devastation of property in a number of communities along the Niagara River. In other words, the opening

season for shipping in 1845 offered decidedly no low water levels and, one month later, Buffalo Harbor experienced a number of “pleasant May mornings.” There was also no necessity for ships “to ride at anchor” as the harbor facilities and water level were sufficient to accommodate ships.

But what about the month of May in general? Just how long was Lake Erie and Buffalo Harbor blocked with ice? The following excerpt (*cf. Appendix, Text No. 10, Sept. 11, 1840*) is revealing:

“The town of Buffalo stands at the eastern corner of Lake Erie in the state of New York, and contains a population of about 16,000. As regards the number of its inhabitants, and the extent of its commercial transactions, it is the most important place on the lakes, being in fact the New York of the western regions.— From the month of June till the month of December inclusive, during which period the navigation of the lakes is generally open and unimpeded by ice, between forty and fifty steamboats, varying from 200 to 700 tons register, are constantly plying between Buffalo and the several ports on the shores of the lakes.”

The quotation above, originally printed in *Hunt's [Merchants' Monthly] Magazine* with the heading “The Lakes,” provides a general rule of thumb that the Great Lakes were navigable from June to December in the 1820's and 1830's. The month of May, and particularly the first half, was often a treacherous month for navigation on the Lakes. In the years 1821 (till May 13), 1824 (till May 14), 1835 (till May 7), 1836 (till May 11: Lake Huron was blocked), ice still clogged the Lakes. The data provided can only be regarded as a sampling, yet it is probably representative.

And now for the year 1841, the year in which the steamboat *Erie* caught fire and sank, the year often thought of as the “historical core” behind the legend of John Maynard. When was the Lake navigable? On April 7, 1841 (*cf. Text No. 11*), the *New-Hampshire Sentinel*, reporting from the *Buffalo Commercial Advertiser*, issued “Good News for Merchants”:

“GOOD NEWS FOR MERCHANTS. — The *Buffalo Commercial Advertiser* of Saturday says that the ice in the harbor began to move out on that morning, and but a small patch near the light-house remained. A brief period and the whole harbor will be entirely free. The harbor at Erie, 90 miles from Buffalo, is free from all obstruction.”

The short winter of 1841 meant that the year 1841, like 1845, allowed early navigation. Thus “a pleasant May morning” is not in conflict with either year.

But what can be said about water level? Was the water level in 1841 the same as in 1845? *The Living Age* (Text No. 14, July 13, 1844), reporting from the *Brooklyn Star*, in an article entitled “The Rise and Fall of the Great Lakes,” says the following:

“In 1841 the waters of Lake Erie receded to such an extent that the Erie Canal, for several miles, was left without water, and great fears were entertained in that vicinity that this ebbing of the lake would continue so long and to such an extent that this portion of the canal would for a time be rendered useless.

During the prevalence of strong easterly winds, this end of the lake was greatly affected during this general subsidence of its waters.”

What could “receding waters” mean for a steamer heavily laden? In 1839, *The North American & Daily Advertiser*, quoting from the *Buffalo Commercial Advertiser* (cf. Appendix, Text No. 8, June 20, 1839), reported that the water level at Buffalo Harbor had fallen:

“The *Buffalo Commercial Advertiser and Journal* of Wednesday says, ‘the water in the harbor to-day is thirty inches lower than it has been for three years. In many places, vessels having heavy cargoes cannot come up to the wharf. N. E. wind.’”

The situation in 1841 was even worse than in 1839. Consequently, it is entirely feasible that a heavily laden ship would be obliged to “ride at anchor” even though, under normal conditions, this would not have been necessary. The editor of the *Buffalo Commercial Advertiser*, although commenting on the 1841 disaster, did not consider the frighteningly low water level of the Lake and the Erie Canal in 1841.

In conclusion, the first sentence in the John Maynard sketch is historically correct if the allusion is indeed to the year 1841 and, as the editor of the *Buffalo Commercial Advertiser* firmly believed, to the loss of the *Erie* on August 9 of that year. Whether the anonymous author was an amateur who “got lucky” or an expert on the Lakes, who knew what he was talking about, is another question.

(June 2008, updated February 2011)

APPENDIX

The opening of navigation at Buffalo is documented for the years 1830 to 1838 in **Text No. 8**.

For water levels from 1860 to the present, cf.

<http://www.glerl.noaa.gov/pubs/brochures/lakelevels/lakelevels.pdf>

Relevant passages dealing with winter, ice and water level are highlighted in red.

Text No. 1

Saturday morning, May 15, 1824

Independent Chronicle and Boston Patriot

(Boston, Massachusetts)

(Semi-Weekly)

Vol. LIX, No. 4492

p. 1, c. 4

The *Buffalo N. Y. Journal* states, that Lake Erie is now free of ice and that navigation has in consequence opened briskly. The same paper adds: “The bustle produced by arrivals, departures, discharging cargoes, taking in return lading, &c. exhibits our harbor, at this time, a pleasing contrast to the icy scenery of a winter view. The false and slanderous assertions that Buffalo Creek furnished the sands which formed the bar at its junction with the Lake, were so often and so positively made, for a while public confidence in the utility of our harbor was considerably shaken; but the unerring test of experience has proved those statements entirely false, to those who ever thought them otherwise, and there no longer remains doubt of the superior advantages of Buffalo Harbor over any other found, or to be found, at this end of the

Lake. In accordance with this opinion of business men, backed by the science of the best engineers of the United States, several new locations have recently been made upon the shore of the harbor, where large storehouses are now erecting, with spacious docks in front for the transaction of business. *The present depth of water, at the entrance of the harbor from the Lake is thirteen feet.*”

Text No. 2
(Included due to its historical significance.)
Tuesday morning, November 8, 1825
Salem Gazette
(Salem, Massachusetts)
Published on Tuesdays and Fridays

Vol. XXXIX, New Series Vol. III, No. 89
p. 2, c. 5-6

OPENING OF THE ERIE CANAL
Buffalo, Oct. 27.

Yesterday being the day fixed upon for the first opening of the whole line of the Erie Canal, our village, at an early hour, was thronged with yeomanry of the country, who, alive to the subject, had assembled in vast numbers to witness the attendant ceremonies of starting the first boat.

At about 9 o'clock A. M. the public procession began forming in front of the Court House, in which the various societies of mechanics appeared with the appropriate badges and banners to distinguish each, the whole preceded by the committees, strangers, &c., in the following order, viz. Military Officers in uniform, Professional Men, Civil Officers, Governor of the State, &c.

The whole when formed, moved down Main-street to the head of the Canal, where the Boat “Seneca Chief,” elegantly fitted, was in waiting. Here the Governor, Lieut. Governor, the New-York Delegation, with the various committees from different villages, including that of Buffalo, were received on board, and after mutual introductions in the open air, Jesse Hawley, Esq. delivered a patriotic address. Every thing being now ready, the signal was given, and the discharge of thirty two pounder from the brow of the Terrace announced that all was in readiness and the boats under way! The “Seneca Chief,” of Buffalo, led off in fine style, drawn by four gray horses, fancifully caparisoned, and was followed by the “Superior,” next to which came the “Commodore Perry,” a freight vessel belonging to the Pilot line, the rear being brought up by the “Buffalo” of Erie, also a freight boat of the Washington line. The whole moved from the shore under the discharge of small arms, from the Rifle Company, with music from the band, and the loud and reiterated cheers from the throng on shore, which were returned by the companies on board the various boats.

The procession was then re-formed, and returned through Cayuga-street to the Court House, where Sheldon Smith, Esq. delivered a well written and highly gratifying address, after which was sung by the choir to the tune of “Hail Columbia,” an ode adopted to the occasion.

There being too great a concourse to be accommodated in any one public house, the procession divided, on leaving the Court house, and the Corporation, Military officers, &c. dined at the Eagle Tavern, while the various Mechanic Societies, by previous arrangements of their own, sat down together at the Mansion House. The following are selected from the Toasts drank at these places.

The Erie Canal — The combined result of nature and act — the present generation are proud of the work, and its diffusive benefits will be perpetuated to remotest generations.

The completion of the Erie Canal — a memorable era in the annals of our State.

The State of New-York — She has added another wonder to the world — her prosperity, in the full fruition of its blessings, will guard with grateful recollections the rich bequest of their fathers.

De Witt Clinton — The completion of the Erie Canal is the best commentary on his judgement — while contemplating its usefulness, posterity will never fail to associate the name of its projector.

The memory of Governor Morris and his associates — powerful auxiliaries in the field of internal improvement.

Ohio — She is alive to her interests, the grand work is begun, its completion will add another link to the chain of internal improvement.

The Canal Commissioners, Engineers, and Work- [c. 6] men of the Erie Canal — well done, good and faithful servants.

The festivities of the day were closed by a most splendid Ball, at the Eagle Tavern, where beauty, vieing [sic] conspicuously with elegance and wit, contributed to the enlivening enjoyment of the scene.

The manner in which the “Seneca Chief” was fitted up by the committee does them credit; nor can we omit a more particular mention of two paintings which were executed here, and sent down on board. one was a view of Buffalo harbor, a section of Lake Erie, Buffalo Creek, and its junction with the canal, &c. the whole representing the scene exhibited at the moment of starting the “Seneca Chief.” The piece does credit to the artist. The other is purely a classical emblematical production of the pencil, and is, so far as our opinion will be taken, an excellent design for such an occasion. The piece, on the extreme left, exhibits a figure of *Hercules*, in a sitting posture, leaning upon his favorite club, and resting from the severe labor just completed. The center shows a section of the canal, with a lock, and in the fore ground is a full length figure of DE WITT CLINTON, clad like a Roman, in the Toga and sandals, with head uncovered and hair cut short. He is supposed to have just flung open the lock gate, and with the right hand extended (the arm being bare) seems in the act of inviting *Neptune*, who appears upon the water, to pass through and take possession of the watery regions which the canal has attached to his former dominions. The god of the sea is on the right of the piece, and stands erect, in his chariot of shell, which is drawn by sea-horses, holding his trident, and is in the act of recoiling with his body as if confounded by the fact disclosed at the opening of the lock. Naiads are sporting round the sea horses, in the water, who as well as the horses themselves seem hesitating, as if half afraid they were about to invade forbidden regions not their own. The artist is Mr. Catlin, miniature portrait painter, now in this village; and we think the design alone, to say nothing of the execution, would do credit to any individual.

Besides the paintings, the boat carried two elegant kegs, each with an eagle upon it, above and below which, were the words, “*Water of Lake Erie.*” These were filled from the Lake, and on arrival at New-York, will be emptied into the ocean. We mentioned in the enumeration of boats only those which started with the “*Seneca Chief,*” but another, and perhaps the most novel of the whole, started about 2 hours later, and overtook the party we presume at Lockport.— This was “*Noah’s Ark.*” literally stored with “creeping things.” She is a small boat, fitted for the occasion, and has on board, a bear, two eagles, two fawns, with a variety of other animals and birds, together with several fish — not forgetting two Indian boys,

in the dress of their nation — *all products of the West*. This “Ark,” left in company with “the Mars,” of Dunkirk, built and dispatched as an oyster boat.

Owing to an unusual heavy gale of wind from the south west, which prevailed here throughout the whole day, the return salute was not heard at this village. We learn, however, that it was distinctly heard by the people stationed at the gun six miles from us, who discharged their piece in this direction, but without effect. The sound was just three hours in passing both ways, as it returned at 1 o’clock, P.M.

Text No. 3
Friday, June 23, 1826
Richmond Enquirer
(Richmond, Virginia)

Vol. XXIII, No. 13
p. 2, c. 3

At the late session of Congress, an appropriation of \$15,000 was made for improvement of Buffalo Harbor; \$5,000 for the improvement of the Buffalo Light House, and \$6,000 for building a new Light House at Dunkirk.

Text No. 4
SATURDAY JANUARY 31, 1829. [PRICE 2d.]
THE MIRROR OF LITERATURE, AMUSEMENT, AND INSTRUCTION.
No. 354.

The Mirror of Literature, Amusement, and Instruction was a weekly magazine of literature and culture, published in London by J. Limbird.

Publication History

The Mirror of Literature, Amusement, and Instruction began publication in 1822. The volumes and numbers restarted in 1842 and 1846. It ceased publication in 1847

THE CONTEMPORARY TRAVELLER.

* * * * *

LAKE ERIE.

Lake Erie has few of the fascinations of scenery to boast of, apart from the large mass of waters it exhibits--in tranquility, or in motion, sometimes most vehement. It is only at its west end that it is adorned by islands. The Morasses, earthy scaurs, or gentle uplands of its coasts, are only remarkable for their large walnut and buttonwood trees, which, in a dense umbrageous belt, shut out all view of the interior from the traveller on the lake, except at the partial clearances. Neither is the vicinity of this lake agreeable as a residence, in the western half, at least in the summer. The heat then, although not thermometrically extreme,

is peculiarly oppressive, relaxing, and long continued. The steaming swamps, which are almost universal, are full of putrifying substances, occasioning the bilious remittents there so prevalent. The water in common use is heated, and ill-tasted. Mosquitoes, sand, and black flies abound, and, extending their attacks to the domestic animals, aided by a fly nearly an inch long, almost drive them distracted. There are circumstances also, in social life, which render this region a disagreeable residence, but which are gradually disappearing. Its extreme fertility, the moderate sum of its annual heat, and its facilities of communication with other countries, will, in progress of time, render it the seat of a dense population, and a principal granary of the western continent. Wheat, maize, and tobacco, are cultivated with equal success. The returns of the agriculturist are large, secure, and of excellent quality. The last-named article has been grown in considerable quantity about the river Detroit, near the head of the lake, and favoured, in a small remission of duty, by the British government, is sent to England, after having undergone an inland carriage, to Quebec, of 814 miles. Salt springs exist in almost every township, accompanied, in one or two cases, by large beds of gypsum. Bog iron ore is common on the north-east side of the lake, and is worked. The water communications of these countries are astonishingly easy. Canoes can go from Quebec to Rocky Mountains, to the Arctic Circle, or to the Mexican Gulf, without a portage longer than four miles; and the traveller shall arrive at his journey's end as fresh and as safely as from an English tour of pleasure. It is common for the Erie steam-boat to take goods and passengers from Buffaloe [sic], to Green Bay and Chicago, in Lake Michigan, a distance of nearly 900 miles, touching, at the same time, at many intermediate ports. In about three years, in addition to the canal connecting Lake Erie with tide-water in the Hudson, another will be excavated across the southern dividing ridge, to communicate with the Ohio. Near its place of junction with this river, a canal from the Atlantic, across the Alleghanies [sic], will enter the Ohio. Lake Erie will then also have a steady line of water transport to Baltimore, on the Chesapeake, and New Orleans, on the Mississippi. The surveys, preparatory to these projects, have been in execution for two years; there is no doubt of their practicability.

We cannot even hazard a conjecture as to the number of inhabitants around Lake Erie. They are numerous, and daily augmenting; but with incomparably greater rapidity on the south side of the lake, distributed between the States of New York, Pennsylvania, and Ohio. Ohio, which occupies the largest portion, in 1800, had 45,000 inhabitants; in 1810, 250,760, and, in 1820, 581,434. At present, it cannot have less than 750,000 inhabitants, and there is ample room for more. There are few or no Indians on the north borders of the lake. The Mohawks are placed high up the river Ouse, and the Hurons, from four to ten miles up the river Detroit.

The winds are generally either up or down the lake, and in summer they are in the former direction for two-thirds of the time. In the middle of this season they are commonly mild, but occasionally in perfect tornadoes, accompanied with tremendous lightning and heavy rain. The gales begin in

October, and are both violent and dangerous. Many lives are lost annually. The winters are mild and short. **The inhabitants do not reckon on the ground being covered by snow more than three or four months. They turn their cattle into the woods in March and April, but the lake remains full of floating ice until May. On the 12th of May, 1821, the steam-boat could not proceed on account of the ice. From an adjacent eminence, the lake was seen to be covered with it in one compact mass, as far as the eye could range.** As might be expected, remittent and intermittent fevers are very prevalent in the autumn. The febrile action rises high, and there is usually a topical affection conjoined; to this the stimulating diet and frequent use of spirituous liquors, and exposure to heat, mainly conduce.

Brande's Quarterly Journal.

Text No. 5

Monday evening, December 2, 1833

The Connecticut Courant
(Hartford, Connecticut)

Vol. LXIX, No. 3593
p. 3, c. 4

BUFFALO HARBOR. — On Monday we counted SIXTY-FOUR sail in our harbor, including NINE steamboats, all heavily laden with Merchandize for the 'far West.' So great was the rush of passengers to the Ohio, on her leaving the wharf in the morning, that they were obliged to force some on shore. Our wharves are all bustle, and crowded with freight.

Text No. 6

Friday Afternoon, May 15, 1835

The Baltimore Gazette and Daily Advertiser
(Baltimore, Maryland)

Vol. 83, No. 13,807
p. 2, c. 6

BUFFALO.

On the 6th inst. this harbor was still closed with ice — but Steam Boats had made their way to Fort Erie and Black Rock, through loose ice, the previous day.

Text No. 7

Thursday, May 19, 1836

The Mercury
[New York City]

Vol. VIII, No. 20
p. 4, c. 2

DETROIT, May 10. — *Ice in Lake Huron.* — We learn from passengers who arrived from Fort Gratiot, on Saturday, that there is so much ice yet in Lake Huron, above Sagina bay, as to prevent the passage of vessels. From the bay, north as far as the eye can reach, there is one solid field of ice which will require several warm days to remove. This is the first time within our knowledge, that Lake Erie has been open to Buffalo before Lake Huron became navigable. Vessels generally leave for Mackinac and Green Bay some two or three weeks before an entrance can be made into Buffalo Harbor. We are informed that most of the vessels that departed for the Upper Lakes are now at anchor off Fort Gratiot. — *Journal.*

Text No. 8
April 18, 1839
The Spectator
 (New York City)
 p.2

Navigation of Lake Erie Opened

We congratulate our Buffalo friends on the opening of the navigation to the Great West. The following we copy from the *Buffalo Commercial Advertiser* of Friday evening.

NAVIGATION OPEN ! — Never was any city taken more by surprise than ours last evening, when it was announced that a boat had arrived from Detroit. The *Chesapeake*, Capt. Howe, glided gently into our harbor last evening [=APRIL 17], to the utter astonishment of every one. She was followed soon after by the *Erie*, Capt. Titus – both of these boats having made direct trips from Detroit. We understand that they encountered floating ice for some thirty miles above this city – but it was so soft and yielding as to offer no serious impediment to their progress. These boats took us more by surprise, from the fact that for the last few days the lake had been hid from us by a dense fog, and we were unable to judge of the state of the ice.

Navigation is open ! and every body in Buffalo “breathes deeper and freer.” When the word was passing last evening throughout the city, like electricity, that the *Chesapeake* had arrived, every eye beamed with new luster, and every countenance was lit up by a smile of renewed hope. This morning all is life and animation. The spell is broken – our business men are moving about with a quicker step, and every thing seems to have received a new impulse from this arrival.

To-morrow the *Erie* leaves for Detroit, and the boats that have been refitting in our harbor, will follow as speedily as they are ready to take their places in the line.

The following memoranda, which we copy from the *Cleveland Herald*, will show the periods at which the ports of Buffalo and Cleveland were free from ice : —

Lake Erie open at Buffalo.

1830.....6 th April	1835.....8 th May
1831.....8 th May	1836.....26 th April
1832.....27 th April	1837.....22 nd May
1833.....28 th April	1838.....4 th April
1834.....6 th April	1839.....[17 th April]

Navigation commenced at Cleveland.

1830.....	3 rd April	1835.....	26 th March
1831.....	29 th March	1836.....	14 th April
1832.....	28 th March	1837.....	20 th March
1833.....	2 nd April	1838.....	25 th March
1834.....	1 st February	1839.....	21 st March

Text No. 9

Thursday morning, June 20, 1839

The North American & Daily Advertiser
(Philadelphia, Pennsylvania)

Vol. 1, No. 75
p. 2, c. 5

The *Buffalo Commercial Advertiser and Journal* of Wednesday says, “the water in the harbor to-day is thirty inches lower than it has been for three years. In many places, vessels having heavy cargoes cannot come up to the wharf. N. E. wind.”

Text No. 10

Tuesday morning, March 31, 1840

The North American & Daily Advertiser
(Philadelphia, Pennsylvania)

Vol. 80, Whole No. 19,768
[Vol. 2, No. 317]
p. 2, c. 4

NAVIGATION ON THE LAKES. — Steamboats commenced running on the Canada side of Lake Ontario, on the 11th of March. On Lake Erie, steamboats have been running for some time, between Cleveland and Detroit, and a boat left Cleveland for Buffalo, last week. The ice, however, in Buffalo harbor, driven in by the West winds, has probably prevented her from reaching that city. A steamboat is advertised to leave Chicago for Buffalo on the 1st of April.— *Troy Whig*.

Text No. 11

Friday morning, September 11, 1840

The North American & Daily Advertiser
(Philadelphia, Pennsylvania)

Vol. 81, Whole No. 19,908
[Vol. 4, No. 457]
p. 1, c. 6-7

From *Hunt's [Merchants' Monthly] Magazine*.

THE LAKES.

Notwithstanding the secluded situation which the lakes hold in the centre of North America, far removed from the ocean and from intercourse with the world at large, their waters are no longer the undisturbed haunt of the eagle, nor their coasts the dwelling of the Indian. Civilization has extended its influence even to that remote region, and their shores can now boast of numerous settlements, inhabited by a busy population, actively engaged in commercial pursuits. The white sails of fleets of vessels, and the smoking chimneys of numerous steamers, now thickly stud their wide expanse, and beacon-lights, illuminating their rocky shores with their cheering rays, guide the benighted navigator on his course. Every idea connected with a *fresh-water lake*, must be laid aside in considering the different subjects connected with these vast inland sheets of water, which, in fact, in their general appearance, and in the phenomena which influence their navigation, bear a much closer resemblance to the occasion than the sheltered bays and sounds in which the harbors of the eastern coast of North America are situated, although these estuaries have a direct and short communication with the Atlantic Ocean.

The whole line of coast formed by the margins of the several lakes, extends to upwards of 4,000 statute miles. There are several islands in Lake Superior, and also at the northern end of Lake Michigan, but the others are, generally speaking, free from obstructions. **They have all, however, deep water throughout their whole extent, and present every facility for the purpose of navigation.**

It was not until the year 1818, that the navigation of the lakes had become so extensive, and assumed so important a character, as to render the erection of lighthouses necessary and expedient, for insuring the safety of the numerous shipping employed on them. since that period, the lighthouses have been gradually increasing, and, on the American side of the lakes, they now amount to about twenty-five in number, besides about thirty beacons and buoys, which have been found of the greatest service.

About the same period at which the introduction of lighthouses was considered necessary, some attention was bestowed on the subject of lake harbors. Many which formerly existed, were then improved and enlarged, and others were projected, and the works connected with them are now either finished, or are drawing to a close. Several of the ports on Lake Erie and Ontario have good sheltered anchorages, with a sufficient depth of water at their entrances for the class of vessels frequenting them. But good harbor accommodation is by no means so easily obtained on the shores of the lakes, as, generally speaking, on the seacoast of the United States. Most of the lake harbors are formed in exposed situations, and as regards the expense and durability of the several works executed in their formation, are much better calculated to resist the fury of the winds and waves, than the wooden wharfs of the seaports on the eastern coast of the country, of which a description has been given in the "Harbors of North America."* [*See April number of this Magazine.]

The town of Buffalo stands at the eastern corner of Lake Erie in the state of New York, and contains a population of about 16,000. As regards the number of its inhabitants, and the extent of its commercial transactions, it is the most important place on the lakes, being in fact the New York of the western regions.— **From the month of June till the month of December inclusive, during which period the navigation of the lakes is generally open and unimpeded by ice, between forty and fifty steamboats, varying from 200 to 700 tons register, are constantly plying between Buffalo and the several ports on the shores of the lakes.** Some of these steamers make regular voyages once a month to Chicago in Lake Michigan, a distance of no

less than 965 miles; and one leaves the harbor of Buffalo twice every day, during summer, for Detroit, a distance of 325 miles. The New York and Erie Canal, the earliest, and perhaps the most important public work executed in the United States, which enters the lakes at Buffalo, has a great effect in increasing its trade and importance.

Buffalo is built at the mouth of a creek communicating with the lake, in which the harbor is formed. The wharfs in the interior of the harbor are made of wood, but the covering pier and other works exposed to the wash of the lakes, are built of stone, and cost about £40,000. The depth of the water in the harbor is nine feet when the lake is at its lowest or summer water state. A covering pier has been erected for the purpose of protecting the shipping and tranquillizing the water within the harbor during heavy gales. It measures 1452 feet in length, and its form and construction are so very substantial, that one may fancy himself in some seaport, forgetting altogether that he is on the margin of a fresh-water lake, at an elevation of more than 300 feet above the level of the ocean. The top of the pier on which the roadway is formed, measures eighteen feet in breadth, and is elevated about five feet above the level of the water in the harbor. On the side of the roadway which is exposed to the lake, a parapet-wall five feet in height extends along the whole length of the pier, from the top of which, a talus wall, battering at the rate of one perpendicular to three horizontal, slopes towards the lake. This sloping wall is formed of a description of masonry, which is technically termed coursed pitching. Its foundations are secured by a double row of strong sheeting piles driven into the bed of the lake, and a mass of rubble *pierres perdues*, resting on the toe of the slope. The inner side of the pier presents a perpendicular face towards the harbor, and is sheathed with a row of sheeting piles, driven at intervals of about five feet apart from center to center, to prevent the quay wall from being damaged by vessels coming alongside of it.

The entrance to the harbor is marked by a double light, exhibited from two towers of good masonry built on the pier.

The workmanship and materials employed in erecting many of the other lake harbors, are of much less substantial description than that adopted at Buffalo. The breakwater for the protection of Dunkirk Harbor on Lake Erie, for example, was formed in a most ingenious manner, by sinking a strong wooden frame-work filled with stones. **The frame or crib was erected during the winter on the ice over the site which it was intended to occupy. The ice was then broken, and the crib being filled with small stones, sunk to its resting place in the bottom of the lake.**

Presque-Isle Bay, in which the town of Erie stands, is formed by the peninsula of Presque-Isle, on the shore of Lake Erie. This bay measures about one mile in breadth, and three miles in length, and affords a [sic] splendid anchorages for vessels of the largest size. It opens towards the northwest, and is sheltered from the waves of the lakes by two covering breakwaters, measuring respectively 3000 and 4000 feet in length, projecting from the shore, and leaving a space between their outer extremities of 300 feet in breadth, for the ingress and egress of vessels., **JANUARY 31, 1829. [PRICE 2d.]**

Oswego, situate at the mouth of the Seneca river, on the southern side of Lake Ontario, is a town of 6,500 inhabitants, having a good harbor. It stands at the commencement of the branch canal, which connects the great New York and Erie canal with Lake Ontario, and is the seat of several manufactures and mills driven by the Seneca river, on which there are some very valuable falls. The pier, which has been built at this place for the protection of the harbor, is a very good specimen of masonry [sic], finished somewhat in the same style as that at Buffalo, and cost about £20,000. **The depth of water in the harbor is twenty feet**, and it

has a good harbor-light placed in a substantial tower of masonry [sic] at the extremity of the pier.

The works required in the construction of Buffalo, Erie, and Oswego harbors were done [c. 7] at the expense, and under the direction of the government of the United States, who have also executed harbor-works of great extent, varying according to the nature of their situations, at the towns of Chicago, Michigan, Milwaukie, and Green Bay, in Lake Michigan; Detroit, Sandusky, Ashtabula, Portland, and Dunkirk, on Lake Erie; and at Genesee and Sackett's Harbor, on Lake Ontario.

Text No. 12
Wednesday evening, April 7, 1841
New-Hampshire Sentinel
(Keene, New Hampshire)

Vol. XLIII, no. ?14
p.2, c. 4

GOOD NEWS FOR MERCHANTS. — The Buffalo Commercial Advertiser of Saturday says that the ice in the harbor began to move out on that morning, and but a small patch near the light-house remained. A brief period and the whole harbor will be entirely free. The harbor at Erie, 90 miles from Buffalo, is free from all obstruction.

Transcript.

Text No. 13
Tuesday morning, January 31, 1843
The North American and Daily Advertiser
(Philadelphia, Pennsylvania)

Vol. 72, Whole no. 21,027
[Vol. 4 – No. 1198]
p.2, c.2

NO ICE IN THE HARBOR. — The ice in the Buffalo creek broke up Saturday night, and passed out into the river yesterday, leaving our harbor as clear as in June. If almost immemorial coincidence has not failed, the navigation of the Hudson must be unobstructed to-day. — *Buffalo Com. Adv.* Jan. 23.

Text No. 14
Wednesday, May 17, 1843
The Weekly Ohio State Journal
(Columbus, Ohio)

Vol. XXXIII, No. 38
p. 1, c. 2

From the *Cleveland Herald* of Monday.

First Boat from Buffalo

The Steamboat *Columbus* arrived yesterday, May 7th, from Buffalo, and was followed by the *Julia Palmer*. We learn that considerable ice was encountered on the passage up, but “clear spaces” were found between the floating fields sufficient to admit going ahead. We think the navigation may now be considered open to Buffalo, although the ice may interrupt occasionally for a few days.

Text No. 15
July 13, 1844
The Living Age
(New York City)

Vol. 1, issue 9
p. 523

From the *Brooklyn Star*.
THE RISE AND FALL OF THE GREAT LAKES

In 1841 the waters of Lake Erie receded to such an extent that the Erie Canal, for several miles, was left without water, and great fears were entertained in that vicinity that this ebbing of the lake would continue so long and to such an extent that this portion of the canal would for a time be rendered useless.

During the prevalence of strong easterly winds, this end of the lake was greatly affected during this general subsidence of its waters.

....

E. M.

Text No. 16
Wednesday Morning, March 12, 1845
The Daily Picayune
(New Orleans)

Vol. IX, No. 40
p. 2

☞ The **mildness of the present winter** is shown by the fact, that the steamboat *United States* was advertised to leave Buffalo for Detroit on the 10th inst.

Text No. 17
Thursday Morning, April 10, 1845
The Boston Daily Atlas
(Boston, Massachusetts)

Vol. XIII, No. 242
p. 2, c. 3

FLOOD ON THE NIAGARA RIVER.— The recent breaking up of the winter on Lake Erie has been attended with disastrous results in the Niagara River, running into Lake Ontario. At Youngstown, it cleared off every house near the wharves, and the steam flour mill has gone with it, with some 800 bbl. flour and a large pot of potash in store there. The damage, all round, is not far from \$100,000. The height of ice and water was estimated at from 30 to 50 feet above low water mark. One letter states that “the wharves and warehouses at Lewiston are gone from the docks, and wagons taken from the top of the bank. Youngstown is sharing the same fate, water still rising, April 4.” The *Buffalo Commercial Advertiser* says that the storehouses of Shepherd, Cornell and Tryon, at Lewistown, are carried away.

Text No. 18
Saturday, April 12, 1845
Milwaukie Weekly Sentinel
(Milwaukie, Wisconsin)

Vol. VIII, No. 30
p. 1, c. 4

FIRST BOAT OF THE SEASON FROM THE EAST.— Propeller HERCULES, Capt. WHEELER, arrived here on Saturday, from Cleveland, on her way to Chicago. She was eleven days from Cleveland—six from Detroit; the weather being such that she could run only in the day time. She will be here on her return trip, Wednesday next, and leave for the East at 8 o'clock, A.M. weather permitting.

Text No. 19
ibid.
Vol. VIII, No. 30
p. 2, c. 6

☞ The *Buffalo Commercial Advertiser* of the 4th, says, that **Buffalo harbor is nearly free from ice**, and that the *Madison* left port that morning for Chicago, with a fair load of passengers. The *Rochester* was expected to leave for the upper lakes the next day.

Text No. 20

William Hodge and Albert Bigelow, *A Memoir of the Late William Hodge, Sen., and Illustrative Miscellanies*. (Buffalo, N.Y.: Bigelow Brothers, Printers, **1885**), pp. 71 – 72.

[p. 71] But as the years passed and Buffalo grew, and the Great West loomed up more and more attractively, commerce and passenger transit by the lakes rapidly increased. Then came the strife between Buffalo and Black Rock as to which should be the “port” at this most important point in the great route westward. From **1818**, steam navigation was established;

and at the same time the vast project of the canal to connect the ocean and the lakes in one great water thoroughfare began to take shape.

To all this, the opening of Buffalo creek was believed necessary, and it was accomplished. On account of that sand-bar at its mouth, vessels and steamboats could not come into the otherwise commodious harbor, but must lie off in the [p. 72] lake or bay, or at anchor under Bird Island during the transfer of cargoes and passengers by means of small boats. But it was determined that Black Rock must yield to Buffalo in the fierce commercial strife, and that bar must be removed and a harbor formed. So, “in April 1818, at the instance of citizens of Buffalo, an act of Legislature was passed, authorizing a survey of the creek, at the expense of the County of Niagara, which then included it, with reference to determining the feasibility of constructing a harbor; and WILLIAM PEACOCK made the survey in the following summer, gratuitously. It [construction of the harbor] was prosecuted and finished under the superintendence of Samuel Wilkeson, in 1821, in two hundred and twenty-one working days, and extended into the lake for about 80 rods, into twelve-foot water.”*
[*Publications Buffalo Historical Society, vol. I, p. 379]