



1730 Tide Mill Site

Ocean Tides As Energy Source Nothing New

By DR. GEORGE R. HORNER

To use the ocean tides as a continuous source of energy is not a new idea.

Settlers, beginning as early as 1630, from Nova Scotia to the Carolinas, built tide-mills to grind wheat, corn, spices and even to cut timber into boards. At least 210 have been located along this long seacoast [Meigs, 1970].

Settlers on sea-coastal Massachusetts were no exception. From their English heritage and life-style they readily appreciated the advantages of the local tides and built mills making use of this continuous, never-failing source of energy.

At Black's creek at least two such mills were built and operating by early in the eighteenth century. East of where the Southern Artery bridge crosses Black's creek, one can see the foundation stones of one mill as they lay scattered along the bank and in the water of the creek.

The second is of more interest to us. It was found on a

hummock across the inlet from the mouth of Black's creek and adjacent to Pine Island. According to a map made in that century, the mill was in operation in 1730. Before describing it, a word should be said about the building and operation of a tide-mill.

Tides ebb and flow in a predictable manner every twenty-four hours. It is necessary to control this flow and convert it to useable power. A miller would have a dam built across a narrow neck of water. In the center of the dam was a flood gate which would be lowered at high-tide holding the flood of water behind it, and which could be released at the miller's discretion. Another, and more important gate, the sluice-gate was built above the mill. When this was opened a flood of water was channeled into the mill-race, unto the wheel which, in turn, moved the grind stone and the grinding began, ending six hours later. The "used" water continued down the remainder of mill-race

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FIRST CORPORATE MEMBERSHIP certificate of the Quincy Historical Society is presented to Charles Pearce [center], president of the Quincy Savings Bank by William O'Connell, society president. With them are William Farrar, society treasurer; Lawrence Yerdon, executive director and Henry Bosworth, publisher of The Quincy Sun and board director. Pearce headed up the corporate membership drive for the Quincy Historical Society, assisted by Bosworth.

[Quincy Sun Photo by Jack Tolson]

Wollaston Of Mount Wollaston

This edition of the newsletter cannot go to press without mention of Mr. H. Hobart Holly's report on "Wollaston of Mount Wollaston" which appears in The American Neptune, January 1977. 974.47 H72
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This paper represents an extensive effort to study the Mount Wollaston expedition which was thought to occur in 1625 and to result in a small settlement in what is now part of the City of Quincy, Massachusetts. The principals in the venture being two men, Capt. Wollaston and Mr. Rastall who stayed but a short time and went to Virginia.

From this meager information, names of places named Wollaston were investigated, genealogical

records were researched, and early Virginia records were examined.

After an exhaustive study, which has been ongoing since 1971 in both this country and in England, certain conclusions have been made about the mysterious Captain Wollaston.

The following represent some of these conclusions. That a voyage did take place on the ship "Unity", which arrived at Cape Ann trading station in June, 1624. The primary purpose of this voyage would have been a short term business venture. Captain Wollaston was in command of a group of indentured servants and was responsible for them during the voyage as well as for their activities on land. The settlement

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Have You Ever Wondered About Your Roots?

Have you ever wondered about your roots?

Harold Crowley is chairing a program to acquaint youngsters with their past. With the help of many Society members, Mr. Crowley has set up a workshop to be held on Sunday, March 20 at 2 p.m. Their efforts will help

children answer questions about the past. They will explore the origin of names, the life and times of great grandparents, the age of old things in their homes, and the people who may have lived in their houses before them. Parents are invited to participate if they wish.

A REVIEW:

A History Of Shipbuilding At Fore River

Sarcone, Anthony F., and Rines, Lawrence S. *A HISTORY OF SHIPBUILDING AT FORE RIVER*. [Quincy, Massachusetts: Quincy Public Schools, 1976.]

By DR. JAMES R. CAMERON

Quincy Heritage proposed a series of publications as part of Quincy's celebration of both its 350th anniversary and the bicentennial of the American Revolution. A grant from the Commonwealth of Massachusetts Bicentennial Grant Program to the History Department of Quincy Junior College funded a series of monographs on local history of which this publication is a part.

Sarcone and Rines have produced a chronicle of shipbuilding at the Fore River shipyard. They have made no attempt to describe the building of vessels in this area during the two centuries prior to the establishment of this shipyard nor have they traced construction in the smaller yards - Souther, Josselyn, Thomas, or Quincy Adams. Their story does include the Squantum Victory Yard built during World War I and the Hingham Shipyard which was active during World War II. *Shipbuilding at Fore River* is organized in four sections. The first discusses Thomas A. Watson and the establishment of the Fore River Engine Company in East Braintree. This section is based

primarily on Watson's autobiography, "Exploring Life."

The second chapter begins with the relocation of the Fore River Ship and Engine Company at Quincy Point in 1901 and continues to the purchase of the company by the Bethlehem Steel Corporation in 1913. This account is based primarily on two sources, *Exploring Life* and comments by Frank Leahy, who had been employed in the yard during that period of time. The archives of the Bethlehem Steel Corporation in Bethlehem, Pennsylvania, provide material for the fifty years of its operation of the yard, which is the topic of chapter three. The last chapter relates the operation of the Fore River shipyard by the General Dynamics Corporation from 1964 to 1975.

Although at first glance this work seems to offer a complete record of all ships built or refitted at the Fore River shipyard, some names are missing. For instance, there is a reference to four "Gearing" class destroyers built during World War II, but the individual vessels including the Joseph P. Kennedy, Jr., are not named. The book is well illustrated with photographs of ships as well as photographs and diagrams of the shipyard.

This work supersedes the treatment of William Churchill Edwards in *Historic Quincy*

Massachusetts. The authors discuss both the reorganization of the companies which owned and operated these facilities and the remodeling of the physical plant itself. In their careful documentation, the authors have relied very heavily upon the archives of the Bethlehem Steel Corporation. The authors note that the company files contain undated memos and a newspaper clipping file that does not include page references.

Some effort is made to place shipbuilding at Fore River in historical perspective. The impact of the depression and two world wars is noted. Samuel Eliot Morison's *The Two Ocean War* is used to give some idea of the part that Quincy-built ships played in World War II. The emphasis of this work, however, is on shipbuilding and not the history of the vessels themselves.

Since the Fore River shipyard has relied heavily upon government contracts, relations with the government play an important part in the story. The efforts of Massachusetts representatives and senators to secure work for the yard is noted as are disputes with the government over the cost of work actually performed. The authors do not deal with labor relations as a major theme although

important strikes are mentioned. Nor do the authors make any effort to evaluate the work of this facility in comparison with other major shipyards.

I find it curious that although the authors consulted with William A. Baker in the course of their research, in referring to the Bath Iron Works, they quote a paper given at Mystic Seaport rather than Baker's authoritative two-volume work, *Maritime History of Bath Maine and the Kennebec River Region*. The authors have not attempted to evaluate the impact of the shipyard on the City of Quincy or on the economy of the South Shore.

The authors stated purpose - to chronicle the history of shipbuilding at Fore River shipyard from its beginning in East Braintree in 1883, through the relocation of the yard at its present site at Quincy Point around the turn of the century, down to the present time - has been successfully reached. The design of the book, from the colored photograph on the cover to the copious endnotes, enhances the presentation of its message. The book is a pleasure to read. It is an important contribution to our knowledge of one of Quincy's major industries. Future students of shipbuilding on the Fore River must begin their study with this book.

FROM THE MINUTES

By MRS. HALL CARPENTER

Society then.

In 1932

- at the Annual Meeting of the Quincy Historical Society, one hundred members sat down to a "Dora Ferguson" - catered turkey dinner, which cost \$1.00. The dinner was served in the First Parish lower hall, which was only half the size it is today.

- the price of admission was 10 cents to the John Quincy Adams Birthplace, which was the only house run by the Quincy Historical

"On June 5, 1933, our ladies entertained at tea at the Adams Cottage, on the occasion of the visit to Quincy by President Franklin D. Roosevelt.

The weather was very threatening, and, in the early afternoon, just as President Roosevelt arrived, a violent thunder storm broke over us, and thousands, who had assembled to see him, were drenched. Our house became a refuge for very many, who crowded into our rooms,

until the storm was over. The

President stopped in his automobile in the square, just south of our premises, and delivered a brief address. We could hear him perfectly, for he spoke into a microphone, connected with four amplifiers, and we could catch glimpses of him, as he stood in his car and completed his address, right through the deluge. Tea was served to our members and guests, and, in spite of the very unfortunate weather conditions, those, who attended, were charmingly entertained."



Published quarterly by the Quincy Historical Society, Adams Academy, 8 Adams Street, Quincy, Massachusetts 02169. Telephone 773-1144.

Kathleen T. Mitchell
Editor

William A. O'Connell
Advertising



GORDON CARR interviewed at his office during immersion week Feb. 1977. He took students studying granite through his shop, and showed slides at Academy explaining granite quarrying and finishing.

[Doris Oberg Photo]

Wollaston Of Mount Wollaston

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at Mt. Wollaston could have been established as a fishing station or just as winter quarters. The name Mt. Wollaston could have been seriously applied for identification purposes or it could have been a whim of the servants....

This brief account of Mr. Holly's report is designed to promote interest in their "unique piece of sleuthing" and to encourage readers to peruse the details of this report. Copies are available in reprint form at the Adams Academy. Members - no charge. Non-members - \$1.50.

Immersion Week 1977

The Immersion Week program, now in its second year, is a cooperative effort by the Quincy Historical Society and the Quincy Public Schools. Forty-four selected fifth graders from around the city make up this class from the Elementary Lab Center. The large class was divided into a number of smaller groups that researched a particular area of Quincy's history and designed an exhibit incorporating the information gathered from the Society's library and museum collection.

The children's teachers, Lorraine Sholler, Jerry Butler and Lee Boser along with Quincy Historical Society members and Volunteer parents cooperated to make the necessary information available.

Mrs. Rudolf Oberg showed "Quincy Firsts", a slide presentation while Gordon Carr provided a tour of his granite cutting shop. Mrs. Hall Carpenter

enlightened the children with her knowledge of the Quincy Family and brought the children through the Col. Josiah Quincy Homestead. Mr. H. Hobart Holly shared his knowledge on shipbuilding and Mrs. Frank Wiot and Miss Helene Johnson advised the children on period clothing.

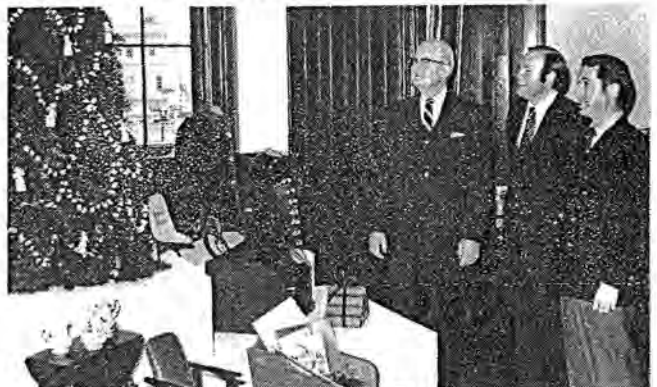
The students engaged in field trips to the Quincy Iron Works, Yacht Building Yard, Saugus Iron Works, Col. Josiah Quincy Homestead and the Adams Birthplaces. They also observed a chair caning demonstration.

After a week of intensive study, the students developed exhibits on Quincy Shipbuilding, 1644 Iron Works, Quincy of the Future, Quincy in 1877, Architecture in Quincy, Furniture through the Ages, Early Aviation in Quincy, and Education in Quincy's history.

A second session with another group of students will commence on Monday, March 14.



Preparing for the Christmas exhibit are Lois Walker, Mildred Harrison and Margaret O'Connell.



ENJOYING The Christmas exhibit are William Farrar, David Day and Dr. James Cameron.

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Quincy Cooperative Bank Presents Quincy Sq. Photo To Historical Society

A copy of a large photograph of Quincy Square by night has been presented to the Quincy Historical Society by The Quincy Cooperative Bank.

The picture was commissioned originally by the bank for use as a double page spread in the bank's annual report and since then considerable interest has been shown in the picture.

Mayor Joseph LaRaia, for instance, was asked some months ago by the Mayor of Quincy, Illinois for a picture of downtown Quincy - the night scene was sent along.

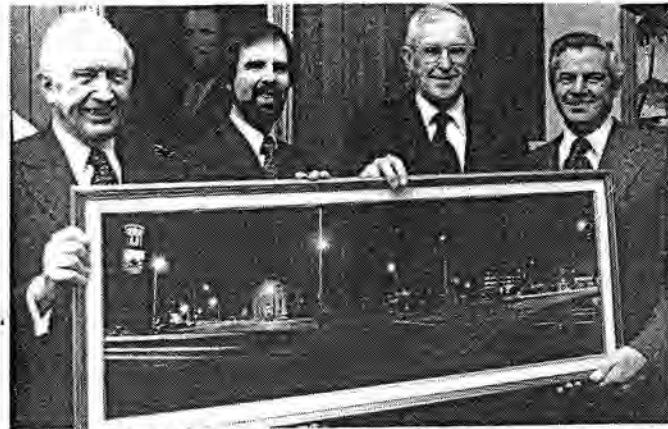
The picture was taken by Charles Flagg, a veteran newspaper photographer now associated with the Miller Studio, which prepared the color print and did the framing.

The presentation by the bank was made by President and Board Chairman John R. Herbert to Historical Society President William A. O'Connell. Also

present at the ceremonies were Administrative Vice President Frank Mitchell, for the bank, and Lawrence Yerdon, for the Historical Society. In making the presentation, Herbert said:

"Too often historic pictures of a community are lost over the years. This Quincy Square scene is a contemporary classic, but in the years to come, it will become a valuable historic statement of our community in 1976. There is no better depository of this picture than the Quincy Historical Society, and I might add that I hope other businesses or individuals will think about the Historical Society if they have interesting local pictures needing a permanent home."

The picture was taken in three segments by Flagg at 10 p.m. For camera buffs, he used an EM Hasselblad equipped with a 50mm lens. The three photos were taken on 120 vericolor type "L" film. Exposures were 45



QUINCY SQUARE BY NIGHT, a handsome photograph commissioned by the Quincy Cooperative Bank for its annual report, is presented to the Quincy Historical Society. From the left are Bank President John R. Herbert, Historical Society Executive Director Lawrence Yerdon, Historical Society President William O'Connell and Bank Administrative Vice President Frank Mitchell. The photograph was taken by Charles Flagg of Miller Studio.

seconds at f 22 each.

Flagg, after a 13 year association with The Patriot

Ledger, assumed the duties of Regional Manager of Wide World Photos, the commercial division of the Associated Press.

Ocean Tide As Energy Source Nothing New

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and thence outward into the bay or ocean, to be returned at the next high-tide!

The mill across from Pine Island differed a little from the one described above. Its builder constructed a solid earth dam from Pine Island across the narrow inlet into a hummock. He then dug east to west across a hummock forming a water channel which was to become the mill-race.

On the western end of this small spit of land he built the mill with its eastern foundation corner set slightly over the water and supported by at least seven granite foundation stones. The sluice gate was built west of the mill. It was also the tidal gate as well.

No evidence of this gate however was found. It also differed from other mills in that the wheel lay horizontally [rather than vertically] to the water. This position would require less current to move it. [Meigs, 1972]. When in operation, water would enter the mill-race and flow westerly into the tide-pool and marshes. The gate would be closed at high tide and released when ebb tide



MAP SHOWING LOCATION OF TIDE MILLS

began or stored in the tide-pool until used.

With the kind permission of Mr. Richard Koch, Chairman of the Park and Recreation Board of the city of Quincy, and under the auspices of the Quincy Historical Society, its archeologist with a digging crew enlisted from Bridgewater State College, began explorations and digging, July 1972. The island hummock formed when digging the cut for the mill-race is

plainly visible. So are parts of the earthen dam stretching to Pine Island. A number of test pits were dug to find evidence for the mill but these had to be concluded because water seeped into them at less than a three inch depth! By careful probing the muck with long sticks, one afternoon at low tide, a solid object was struck. This turned out to be one of the seven granite stones used in the foundation of the mill house. We

now know where the mill stood: on the mill-race, about ten feet east of its western end and below where the sluice-tidal gate was located. The mill-stone was never retrieved. As in the case of other mill-stones, when the mill closed the mill stone was floated and carted to a new mill. Such stones were used over many times until, many years later, they would come to rest decorating city squares or public parks.

Today we are closer to those early settlers than we realize for we are turning to the sun, the wind and to the tides again for energy.

Credit must be given to Mr. Peveril Meigs, of Wayland, Ma., an authority on tide-mills, who helped me immeasurably, as did Mr. Hobart Holly, President of the Quincy Historical Society.

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3. Quincy Historical Society. *Map, circa, 1730.*