



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1979 Volume III: Remarkable City: Industrial New Haven and the Nation, 1800-1900

Fair Haven: An Historical and Ecological Field Study

Curriculum Unit 79.03.05
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The purpose of this unit is to add an experience based component to standard high school and middle school courses. For many students, learning is essentially a passive process that offers them little opportunity to take responsible action or to test out abstract ideas in the real world. The basic premise of this unit is that students learn the most about their community outside the classroom, in the community itself.

This unit is an extension of an approach developed by Project Adventure, a nationally disseminated program within the U.S. Office of Education. Project Adventure consists of a combination of Outward Bound techniques and philosophy, plus a humanistic group process approach to learning and teaching. Small groups of students learn by actually working on specific reality based tasks in the community and natural environment. The teacher's role is that of stating the problems and limits, while giving students the responsibility for finding solutions. The program's aim is to educate the whole student through sound academics, physical activity, and learning that enhances self concept.¹

The Project Adventure principles of curriculum writing have great potential for use with all subject matters in an interdisciplinary approach. This Fair Haven Unit shows one way that an adventure curriculum can be implemented within the New Haven schools.

The unit is divided into two parts. The first part is a walking tour of Fair Haven and the second part is a canoe trip down the Quinnipiac River. Student worksheets are interwoven throughout the narrative. Allow 4 to 5 hours for the walking tour. Parts of the tour can be added or omitted to meet the needs of individual teachers.

Objectives

1. Increase students' historical and ecological information about the Fair Haven Community.
2. Develop students' appreciation and understanding of how a community, its people and institutions evolved over a 400 year period.
3. Increase students' knowledge and understanding of life in a seacoast village.
4. Increase students' appreciation and concern for the natural resources of a river and harbor.
5. Increase students' understanding of urban redevelopment and historic preservation.
6. Increase students' ability to read a map and locate their position on it.
7. Develop self-confidence and initiative through activities in which students meet and work with community members in order to gain information.

8. Increase students' ability and willingness to work together with others.
9. Increase students' confidence in his or her own mental and physical abilities.
10. Encourage and facilitate students' personal growth through group interaction in handling responsibility.
11. Prepare students for decision-making by asking students to fill out questionnaires, get information on selected issues and formulate their own opinions on issues independent of each other, the teacher, and authoritative books.

I. Fair Haven Walking Tour

The sight of ye harbor did so please ye captain of ye ship and all ye passengers that he called it Fayre Haven.
Davenport, 1638.

1) Use your imagination to picture what Fair Haven village was like in the past. Keep in mind that you are about to take a trip. It will be *A Journey Through Time*, the title of Doris Townsend's book concerning the history of Fair Haven. During this journey, you will hear mention of the many different stages of Fair Haven's development. Use the Fair Haven maps to find your position as you go through this walking tour. The numbers on this sheet correspond to your location on the map.

A Brief History

The first record of this area was 1640 when the English took possession of it. They called the area "Farmes" or "East Farmes." The farmers, though few in number, desired partial independence and in 1679, they formed a separate village, consisting of scattered farms. The settlement by the river came later.

It was two miles from the downtown green to the Quinnipiac River, so Fair Haven developed independently of the original nine squares. In 1784, Fair Haven became a part of the New Haven city, only to withdraw in 1837. It was not until the streetcar and rapid, large-scale industrialization that the borders physically touched New Haven in 1870, when Fair Haven again became part of New Haven.

From the beginning, the white settlers of Fair Haven began to imitate the Indians in the catching and eating of oysters. Mounds of oyster shells left by the Indians were a common sight around the harbor. During this time oysters were available for the picking and anyone could walk into the harbor flats at low tide and pick all the oysters he could eat. The oyster became Fair Haven's most precious resource.

One hundred years later Fair Haven was little more than a cluster of fishing huts gathered on the banks of the Quinnipiac. The area was known as “Dragon,” as locals spotted seals in the Quinnipiac waters and thought they resembled sea monsters. The name could have also come from an old Indian legend.

Doris Townsend credits the establishment of Fair Haven with the building of the first bridge (wooden) across the Quinnipiac. There’s a dispute about the actual date, but it was sometime in the closing years of the 1700s that the first span crossed the river at what is now the Grand Ave. Bridge. Actually, the present Grand Ave. Bridge is the third bridge built at this site in 1896.

By 1808, there were 50 houses, including John Rowe’s tavern, and about 150 inhabitants (fifteen families) supported mostly by oystering.

Fair Haven in 1838 was described by Edward R. Lambert as “a flourishing village two miles eastward of the state house, on both sides of the Quinnipiac River and containing 1,000 inhabitants.”² The principal business of the place was the “oyster business.”³

Almost everyone had something to do with the oyster industry, bedding down the oysters, taking them up, culling, opening, packing and shipping oysters, making lime from shells, building sharpies, hauling oyster cargos from the south, manufacturing oysters, kegs and tins, buying and selling the produce, and finally, best of all eating the oysters.⁴

In 1870, when it joined the city of New Haven, the village had 5600 inhabitants and extended back from the Quinnipiac River to Blatchley Ave. (A major road—check your map.) During the next ten years the area between Blatchley Ave. and the Mill River was well filled with houses.

Shipbuilding kept pace with the oyster industry and became Fair Haven’s second industry. Shipyards were located on both sides of the Quinnipiac. The boat most used by the locals was the sharpie, developed in Fair Haven. The boat originally was designed for reaching the oysters in their shallow river beds. It also became a favorite of the yachting class. The sharpie drew little water and provided enough room for two oystermen to haul up their oysters and dump them on deck. These workboats had grace, balance, and ease in handling that were hard to beat.

While the progress of the oyster boat was steady, the oyster industry was showing decline. By 1830, the natural oyster beds of New Haven harbor were showing signs of over fishing, and by 1858, the native New England oyster was nearly extinct. That year Fair Haven oystermen shipped in two million bushels of oysters on 250 schooners for use as seed oysters to replenish the beds. Oyster seeding and breeding then changed from a gathering process to a scientific farming or cultivating process. The new boom caused by importation of seed oysters improved business so much that branch houses from Fair Haven oyster firms were scattered as far as Chicago.

Fair Haven reached its peak in oyster production in the 1890s. At this time, from 70 to 200 oyster boats and larger vessels were regularly tied up along the river, just below the Grand Ave. Bridge. The larger vessels engaged in distant trade, especially oyster dealing in the Chesapeake Bay or in trading in the West Indies.

The oyster industry continued its slow decline, caused by “overfishing, pollution, starfish, poor farming methods, and a disregard for spawning oysters to perpetuate the breed.”⁵ By 1930 the oyster industry was at its all time low and nearly wiped out except for one company, which still operates today, the Long Island Oyster Company.

When the oyster business declined, industry was there to move onto the valuable land by the water. Within thirty years, the shores of Fair Haven were lined with factories, except for the fishing interest near the Grand Ave. Bridge. In effect, the Fair Haven community, exposed to the waters of the Quinnipiac, Mill River, and the harbor, was surrounded by factories on three sides, with the railroad tracks making up the fourth side. In the middle of all this was the Fair Haven residents' housing. The era of industrialization was then the next stage in Fair Haven's development.

The spot where you are standing was once lined with the homes of oystermen, with their barns set on the waterfront. These buildings were torn down by the Michael Schiavone and Sons Company to make room for their scrap iron business. The Redevelopment Agency recently converted this into a park. This park represents another attempt to preserve the history of Fair Haven. It is important that new structures blend in with the existing charm of the area.

2) East Pearl Street, overlooking the Quinnipiac was one of the first streets settled by the oystermen of the early 1800s. It was originally called Pearl Street, perhaps because of the custom of using crushed oyster shells as a road surface. The three blocks of this street are included in the historic district. It still retains the quiet, beautiful atmosphere of long ago.

There are four different architectural styles to notice on this street.

#42—circa 1840—Villa style

#43—circa 1870—Victorian

#60—circa 1840—Greek revival

#100-circa 1880—Queen Anne

Consult the enclosed xerox paper on East Pearl St. from Elizabeth Brown's book, *A Guide to Architecture and Urban Design* for more detailed architectural information.

3) In 1852, Fair Haveners built the Grand Ave. Church which, with its 234 foot steeple, claimed the title of the first skyscraper in New England. Mariners and oystermen used the steeple to guide them into New Haven harbor and home at night. When in 1877 the steeple was damaged by a storm, Fair Haveners, who feared the structure would fall on them, demolished it. There is a story of a sea captain who was unaware of the steeple's demolition. On a slightly foggy day he entered New Haven harbor and searched frantically for his familiar landmark rising above the mist. Not seeing it, he concluded he had entered the wrong port and headed back to sea.

The church had forty three sea captains within its membership of two hundred and forty-eight in 1856. Many of them lie buried in the cemetery behind the church. Often they followed the sea from childhood. Being a sea captain was a dangerous profession. This is shown by the inscriptions on the monuments, such as "lost at sea," "in the sea his body sleeps," and "the sea shall give up its dead." Ice, fire, collision, rock, and hurricane all took their toll of the fleet.

Go behind the church to the Fair Haven Union Cemetery. Students should complete their worksheet on the cemetery here.

Fair Haven Union Cemetery Worksheet—BE RESPECTFUL

1. List below the 10 most common names that your group can find in this cemetery.
2. Which family(name)seems to have a large number of its members buried here?
- 3.a) How do the older gravestones differ from the newer ones? b) Are there any gravestones on which the inscriptions were impossible to read?

Questions 4,5,6, and 7 refer to gravestones located near the soldier's memorial monument in the center of the cemetery.

4. Find the gravestone of "the founder of Fair Haven," Herman Hotchkiss. When was he born and when did he die? (Hint: his gravestone is shaped like the Washington monument)
5. What person does this inscription refer to?

Captain _____

Died Jan. 4, 1845

Age 51

"He commenced going to sea at age 12 and during his whole life was almost continually upon the ocean."

6. Lieut. Evelyn Pierpont was a revolutionary soldier. Born March, 1755. Died April, 1809. When did he serve in the Order of the Revolution? The dates are on the gravestone.

7. What person does this inscription refer to?

September 4, 1867

January 1, 1937

"Hail and farewell I go, where sunset gleams to cast my anchor in the port of dreams."

8. What is the earliest recorded date you can find in this cemetery? Who was that person?

9. Read the following:

George J. Ball

Died on board the Italian Brig *Rostrand* on her passage from San Juan to San Francisco, June 9, 1852 Age 25

When was he born?

10. From your observations of the dates on the gravestones that can be read, would you say that the early settlers of Fair Haven died earlier in life or that some lived as long as people do today?

11. Let's see if your observation for #10 holds true taking a random selection of dates.

a. List under each inscription how old the person was when he died.

b. Finally, add up the four ages of the people and divide by four to find the average age of death for these four people:

James Cook his wife, Leonis Whitney

Born 1833 Born 1840

Died 1907 Died 1919

John Coleman his wife, Louise Strong

Born 1837 Born 1837

Died 1903 Died 1923

Average Age _____

12. Now try four people of your own choice. What is their average age?

13. Find some evidence (inscription or drawing) that this church was the “sea captain church.”
Draw or write it below.

14. Neighborhood Housing, Inc.

Neither a government agency nor profit motivated, Neighborhood Housing, Inc. is a nonprofit tax exempt organization which believes that decent, reasonably priced housing is a right that should be accessible to all people. Neighborhood conservation is a comprehensive process which involves many parts, including residential and commercial revitalization and overall community awareness. Our goal is to preserve and upgrade existing

neighborhoods in New Haven.

Appointment with Rosemarie Lenley, housing counselor. She will answer questions and guide the group through the North Front Street Historic Restoration.

Appointment with Pat Kelson, Assistant Director. He will take the group to a house that is being rehabilitated and explain the program.

Questions to guide your discussion

1. What is a historic district?
2. What does neighborhood preservation mean?
3. What is the purpose of the housing rehabilitation program?
4. What kind of counseling services do you provide for housing?
5. How do you try to educate the community about your goals?
6. How is the North Front Street Historic Restoration Project progressing?

5) North Front Street; Tour led by Rosemarie Lenley

On shore the method of preparing oysters for market necessitated a kind of house that is unique only to Fair Haven. The men unloaded the unshucked oysters from the docked boats into barrows to transport them into the cellars of the houses lining the riverbanks. Inside the women and children shelled the oysters and packed them in barrels for market. These walk in cellars had wide doors to accommodate the barrows, and windows to light the working area. The front of the cellar stood entirely above ground along with the main house, while the rear of the cellar was buried in the hillside. See how many you can identify. Consult the enclosed Xerox paper on North Front Street from Elizabeth Brown's book, *A Guide to Architecture and Urban Design* for more detailed information about the houses.

6) Mr. Eugene Fargeorge's House (1870), 32 Perkins Street.

President of the Fair Haven Preservation and Historical Society

Mr. Fargeorge will show you models of old Fair Haven boats; dugout, sharpie, dredge, and brig. He will also answer your questions on the history of Fair Haven. Make sure he covers the following points:

- a. What was it like to grow up in Fair Haven?
- b. How do you feel about historic preservation?
- c. What do you think of the New Haven Redevelopment Agency?

- d. What is the purpose of Fair Haven Day?
- e. How do you feel about the future of Fair Haven?

7) Quinnipiac River Restaurant

Stop in for a drink and look at the old time pictures of Fair Haven on the walls. You are now in Fair Haven Heights. As oystermen got wealthier, they tended to move further up the hills, away from the river.

8) Long Island Oyster Company—Dick Nelson, former president for 25 years, will give a tour. Make sure he answers the following questions:

- a. What is the life cycle of an oyster and how many times are they replanted? What is seed oyster?
- b. What are all these oyster shells used for?
- c. Where do you pack your oysters?
- d. How long do the people work on the oyster boats each day?
- e. Is most of the oyster business mechanized? How is this different than the early years?
- f. What made up your job as manager of the Long Island Oyster Company for 25 years?
- g. What was this place like in the 1880s?
- h. What was it like Nov. 1st, the opening of oyster season?
- i. What is a sharpie? Did you work out of one?
- j. Is the Quinnipiac River getting cleaner?

9) Clifton Street—right hand side

This is the oldest existing house in Fair Haven. It is a full Cape Cod in style, built in 1750. Notice the low pitched roof, large central chimney, and one and one-half story height of the Cape.

10) New Haven Fish and Lobster Company Worksheet.

- a. Where do you get your soft shell clams and how much do they cost?
- b. What part of Long Island Sound do your lobsters come from?
- c. Do you catch your own seafood?
- d. Find out the price of the following (present or last price):
Crabmeat _____
Bluefish _____
Shrimp _____
Lobster _____
Scallops _____
- e. How big is the largest lobster here?
- f. Which fish are caught fresh each day?
- g. What kind of fish can you catch in the Quinnipiac River?
- h. In your opinion is the Quinnipiac River getting cleaner?
- i. Do you know where the pollution barrier(point where you can get shellfish) is in the harbor?

Boatyard Worksheet— Fair Haven Marina

1. List 5 boats that have the best-sounding names.
2. Find out the name of one of the lobster boats. Who is the captain? How do they catch lobsters?
3. List the 5 most common fish caught.
4. What boat do you prefer? a. Why did you select it? b. How much does it cost? c. What does it cost to maintain each year?
5. Compare the cost of a sailboat to a power boat. a. Which costs more new? b. Which costs more

to maintain?

6. Do you rent boats? If not, where is the nearest place to do this?
7. How much does it cost to keep your boat at the marina?
8. Do you know how many marinas there were a 100 years ago?
9. Write 10 words to describe the action in this marina.

On Board a Fair Haven Fishing Boat Worksheet

1. Who owns the boat?
2. Find out the following facts about the _____ (name of boat)
 - a. age
 - b. weight
 - c. length
 - d. cost new _____ cost today? _____
 - e. three fishing grounds
 - f. length of fishing trips
 - g. why the name of the boat
3. If you were fishing with this boat on a 5 day trip, would you:
 - a. sleep
 - b. eat
 - c. watch T.V.
 - d. other
4. What goes on at night when the boat is at sea for several days? (who stays up? Sleeps?)
5. What kinds of seafood do the crew like best?
6. How are fish kept cool on a long trip?
7. What kind of fish are caught by this boat? Why?
8. Are wooden or steel boats better? Why?
9. Do you go out in bad weather?
10. What do fishermen like best about deep sea fishing?

Field Investigation Worksheet: The People Who Live Here

Interview *at least* three people who live in Fair Haven and ask them the following questions. You will be asked to report back to the class, so make as many observations as possible. Get as complete a picture as you can about the life and people of Fair Haven.

1. How do Fair Haveners feel about:
 - a. The historic district
 - b. The preservation and rehabilitation of old houses
 - c. Living in Fair Haven
 - d. The recent tax assessment
 - e. The water pollution of the Mill and Quinnipiac Rivers
 - f. The air pollution given off by United Illuminating
 - g. The power lines that will hang across the harbor from the U.I. plant to their East Shore Power plant
 - h. The energy crisis
 - i. Nuclear power
 - j. Young people in Fair Haven
 - k. Old people in Fair Haven
2. What does he/she do on weekends?
3. What does he/she do for work? Is it in Fair Haven?
4. If he/she was in charge of Fair Haven, what are the three most important changes that should be made?
5. Are you happy?

Compare the Three Fair Haven Maps (located at back of unit)

1. How many oyster dealers, shipyards, and marinas can you find on each of the three maps? (figure available in print form)
 - b. What can you conclude from these figures?
 - c. On what street was the largest shipyard?
2. Are there increases or decreases from 1868 to 1970 in each of the following land uses? (Circle one)
 - a. Commercial (stores) increase or decrease
 - b. Residential (housing) increase or decrease
 - c. Industrial increase or decrease
 - d. Parks or playgrounds increase or decrease
3. What happened to the railroad bridge in Fair Haven?
4. During what period of time did industry grow the most?
5. Why did industry want to locate to the waterfront?
6. When the interstate highway, Rt. 91, was built, what was destroyed to make room for it?
7. What was the public transport in 1868, 1910?
8. Was the Ferry St. bridge built in 1868?
9. Did the size of the marshes increase or decrease? Why?
10. What do you think is located on the island in the Mill River? Why do you think it is located there?
11. In the 1970 map, what do the circles represent that are located by the river and the harbor?

II. Canoe Trip Down the Quinnipiac River

A study of the Fair Haven community would not be complete without an investigation of the Quinnipiac River. The history, development, and changes of the Quinnipiac River are interwoven with the history of Fair Haven.

Naturally, the best way to see the river is by canoe. The changes in the river over time are fascinating. These changes help to explain the origins of the communities that lie upstream and had a great effect on Fair Haven. In addition, a canoe trip helps to understand the ecology of the river and why the Quinnipiac marshes are so essential to the growth of oysters that enabled Fair Haven to develop as an oyster community.

Directions— A canoe can be rented at Trek Outdoors, 412 Washington Ave., Hamden, CT. (239-3040), for \$17.00 a day. Take Exit 12 off I-91 North, right turn, 1 mile on right.

Put In —Exit 11 off 91 North, left turn, first right on State, right on Banton St., second right off Banton, which is past the gate going into Quinnipiac River State Park.

Pull Out —right hand bank into park, just past the Grand Ave. Bridge.

Plan on beginning the trip around high tide. Consult the second page of the *New Haven Register* for this information. The canoe trip should take about four hours. Try to include a stop at the North Haven Historical Society. They have nice artifacts from the Quinnipiac Indians, and will line up a speaker for a class on the history of the Quinnipiac River. (See map at end of unit.)

The Indians of Fair Haven

When canoeing down the Quinnipiac River, try to use your imagination and keep in mind the following poem written by Anna M. (Rosetti) Bishop for the Fair Haven Day Festival on June 16, 1979:

Many years ago in Fair Haven
There lived so peacefully
A tribe of Indians who
Hunted and fished
And paddled their canoes
From East Rock and back
To the River Quinnipiac
Montowese their chief was over all
He ruled peacefully and gently
And lived there with his family
No bridge had he to cross the water
But he paddled his canoe
And always came back on the River Quinnipiac
Many moons have past

And the Indian is no more
But still on a warm summer's night
If we listen with all our might
Once more we might hear
The splash of a paddle
And see a canoe gliding back
On the River Quinnipiac

The Indian and the River

An Indian legend of the Quinnipiac River says that “a huge dragon meandering up through the salt meadows, twisted and turned until unable to either go on or retreat, it finally died amid the clay banks and the cattails. At length the dragon died and his body sank; where upon the waters rushed in from the bay and made the Dragon’s River a path of silver above his bones.”

Another legend about the formation of Sleeping Giant tells us that a giant Indian ate so many oysters from the Quinnipiac that he was overcome with drowsiness and fell down beside the river, never recovering.

According to some sources, the word “Quinnipiac” might mean “trail changing its course.” This trail, from Boston to New York, came together in New Haven and joined other Connecticut and New England trails, similar to railroad tracks in our later history. Other experts translate “Quinnipiac” to mean “longwater land.” The word in this case would mean where the tribe actually lived.

Many people do not realize that the Quinnipiacs, a part of the Algonkian nation, were relative latecomers who settled in the area before the colonists by a few hundred years. Actually, the earliest New Haven Indians, the Paleo-Indians, were probably here about 10,000 years before the Algonkians migrated to Connecticut. They were followed by several other tribes. The Indians were the first people to live on the Quinnipiac River in the marsh area. They usually camped near fresh water and springs by the river. The Quinnipiac provided easy transportation, connecting them to other villages and the ocean. The Indians found in the richness of the river and marsh a plentiful supply of fish, shellfish, shorebirds, and a natural feeding ground for wild animals. The Indians took from this area only what they needed to survive.

They fished, hunted, and cleared the land to plant corn, squash and beans. They also devised a trapping system to catch alewife (a type of herring) that swam through the marsh on its way to spawning grounds. The herring was abundant, and the Indians not only ate these fish, but used them to fertilize vegetables to encourage a decent crop from the sandy tidal marsh soil. Due to rotation of this trapping system and fertilization, it was possible to harvest the same fields for many years. ⁸

The Indians had a great respect for the land, shore, and animals which made up the land where they lived. They did not abuse or destroy the land they valued so highly. Their existence was more in harmony with nature.

From the rich clay deposits in the river, the Indians made their pottery cooking utensils and originated the clambake. They passed on their techniques to the first settlers.

We can picture their expedition in their dugout canoes, perhaps passing Pemmican Island on their way to the sound to gather clams and oysters and seaweed, which was piled into woven baskets. Returning to the campsite, the same procedure we know today was followed...a hot fire-pit lined with stones, layers of seaweed, then the clams and other foods perhaps, such as corn, more seaweed and a covering. The clambake was done not to produce a delicious meal...it was probably the only way the earliest men had of opening the shellfish. Huge shell heaps testify to their use of this favorite food. Alewives or herring, eels, sturgeon and shad were other bounties of the river.

The Indian population had sharply declined from a high of 6000 to about 200 with the signing of a treaty for Indian land with the early settlers in 1638. At this time, the white man had no understanding of the significance the Indians placed on the land. To the Indians, the land belonged to all to fish and hunt, and was not, as the white man thought, completely privately owned. When the early settlers lived at peace with the Indians, the Quinnipiac Reservation extended from the mouth of the Quinnipiac River along the east shore of New Haven Harbor to Fort Hale (see maps for other settlements along the river). Fort Wooster was the burial ground of the Indians.

Early Settlements

The Quinnipiac River, as were most rivers, was the main reason for colonial settlements upstream and, particularly, the cause of the early development of North Haven. It started "with small plots, then farms and villages until we find towns clustered along the river." ¹⁰

Around 1700, the river was cleared and made deeper and wider for easy navigation to the center of North Haven at Broadway. Beyond this point, the Quinnipiac was narrow and winding. This fact enabled North Haven to become an important center for fishing and shipbuilding. The Quinnipiac served as a major avenue of commerce, "carrying goods and people up and down with the tide." ¹¹

The Brick Industry

With the discovery of clay deposits under the Quinnipiac River in 1800, brickyards became a major industry in North Haven. It employed hundreds of men in the town, and still is an industry in North Haven today. Notice the ponds along the side of the river. As the brick industry developed, pits dug for clay became ponds.

The Quinnipiac Marshes

Marshland forms where the river meets the ocean, and twice a day the flow of water is restricted by the tides. As a giant sponge, the marsh absorbs water slowly and then releases it slowly. It is estimated that a marsh can hold eighteen times its weight in water.

In the 1640s, when the early settlers were here, most of the land was covered with forest, except for the tidal marshes and some swamps. The great marsh of the Quinnipiac left a huge imprint on the land. During that time, the marsh was about eight miles long and served as common area for all to use the grass.

At first the salt marsh was harvested by the farmers. Later companies were formed to harvest the hay. When the railroad bridges were built in the 1800s and the marshes downstream were filled, tidal action was

changed. This caused a reduction in the amount of salt water entering the upstream marshes, and gradually the marsh changed from salt hay to cattail.

Plants, animals, and fish are plentiful in the marsh. The marsh feeds over 60 species of shellfish and fish, in addition to providing food and shelter for wildlife and birds. See how many different varieties can be located.

Oysters

The oyster is a creature of the shoreline. In estuaries like the New Haven harbor where fresh water meets salt, conditions are best for the spawning and development of young oysters. In these regions, oysters thrive on the food which is produced in the salt marshes.

In New Haven harbor, as on the rest of the east coast, the waters have been severely polluted, and the marshes are being rapidly destroyed. As a result, the total production of oysters has gone down drastically since the turn of the century. "Oyster harvesting may slowly be revived as pollution is being controlled and destruction of the vital marsh halted. Pollution has changed the food supply as well as the critical (at least to the oyster) temperature and water make-up." ¹² In New Haven harbor, the pollution is so bad the oysters dredged here must be put back into the waters of Long Island Sound so they can clean themselves out.

If pollution doesn't destroy the oysters, there is a danger of them starving to death from the dredging, filling and building on the marsh. In New Haven county, 888 acres of marshland were destroyed between 1954 and 1964. According to a 1965 survey by the Fish and Wildlife Service, 50% of Connecticut's salt marshes have been destroyed since 1914. If nothing is done, at the present rate of destruction, only 10% of these marshy areas will remain by the year 2000. This means that the bulk of the oysters' food supply, the plant and animal fragments produced in the marsh, are rapidly being destroyed. It is a little known fact that a salt marsh is many times more productive of food than a plot of land of the same size.

During the last 100 years, the wetlands have been the most vanishing part of the ecosystem. It has only been in recent years that people have realized that the marshes are invaluable, providing a most important resource. (See accompanying article "Reversing 'Progress.'")

The Future of the Quinnipiac River

There is hope for the Quinnipiac River, though there are several major industries still polluting its waters, and the marsh needs restoring.

According to John Baker, head of the Aquaculture Division of the State Agriculture Department:

Water quality is far better than it was in the late 60s and early 70s when the oyster industry nearly died out from lack of interest and apathy created by exaggerated claims of water pollution. Baker and Edward Fordham, members of the now defunct state shellfish commission, in 1971 fought a proposed ban on oyster harvesting in New Haven harbor and produced convincing evidence that the waters in the harbor, where oysters have been cultivated for more than a century, were, cleaner and safer than had been suspected.¹³

The Redevelopment Agency on June 21, 1979 submitted a grant application for further study of the Quinnipiac as an urban recreational river capable of being revitalized.

The Quinnipiac River should be conserved as a valuable natural and recreational resource serving the city and region, and more intensive use of this area should be encouraged through improvements in access and

recreational facilities. As an historically and ecologically important area, the river provides both a link with the past and a beautiful environment for living and enjoying the present. Though water quality in the Quinnipiac (within New Haven's boundaries) presently excludes swimming, recreational activities on the river include boating, fishing, and a range of passive activities such as contemplating passing commercial fishing boats. Beyond current recreational use of the area, the Quinnipiac is the focus of ambitious efforts to expand recreational access to the City's harbor and waterways, and to preserve and upgrade adjacent neighborhoods.¹⁴

If the State Water Resource Commission has its way, the Quinnipiac River will be turned into a Class B or "swimmable river."

Local residents testify to the improving water quality. "The bluefish are returning to the Quinnipiac and even swans are seen swimming on the surface. It's beautiful after so many years without them."

FOOTNOTES

1Project Adventure, *Teaching Through Adventure , A Practical Approach* . Hamilton, Massachusetts, 1976.

2Townsend, Doris B., *Fair Haven, A Journey Through Time*. New Haven Historical Society, p.45.

3Ibid.

4Ibid.

5Kochiss, John. *Oystering New York to Boston* . Middletown: Wesleyan University Press, 1974. p. 8.

6Neighborhood Housing, Inc. pamphlet, 1978.

7Fair Haven Day Booklet. *Fair Haven; An Old Tree With Deep Roots*. June, 1979.

8Detels, Pamela and Janet Harris. *Canoeing: Trips in Connecticut* . Chester: Pequot Press, 1977. p. 108.

9Kotchian, Winifred. *The Quinnipiac : The Story of a River* . North Haven Bicentennial Commission, 1976. pp. 9-10.

10Ibid., p. 14.

11Ibid ., p. 19 .

12Ibid., p. 31.

13Bastian, Richard. "Ferry Trudges into Harbor as Oyster

'Planting' Begins," *New Haven Register* , July 15, 1979.

14New Haven Redevelopment Agency Grant Proposal. June 21, 1979

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(figure available in print form)

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