

THE BACK RIVER AREA- A PRICELESS ARCHEOLOGICAL RESOURCE

The archeological potential of the Weymouth Back River is probably one of the greatest remaining in the Boston Basin. So much of the coastal areas have been destroyed that little can be learned concerning the various pre-historic cultures which occupied the area for thousands of years.

The Back River is unique, as it is one of the only estuaries which still has a number of the aboriginal sites still preserved in its soils. It should be noted that archeological sites represent an unrenewable resource which can never be replaced.

Estuaries were very attractive to groups of pre-historic peoples. They were a means of transportation in dugouts, and natural food were in plentiful supply. Seasonal anadromous fish could be taken easily. Abundant mudflats were always a source of shellfish. The estuarine environment was generally attractive to many game animals and birds, as it is today.

Members of the Eastern Massachusetts Archeological Research group have been studying the aboriginal occupations of the Back River for thirteen years and are in the process of writing a book entitled The Archeology of the Weymouth Back River. The book will consist of a description of eight different stone age sites the earliest dating back to the late Paleo stage, some 9,000 years old.

A number of late Archaic Cremation and Secondary Burials were recovered with elaborate and exotic grave goods which seem to indicate that the eskers were sometimes used as natural burial mounds.

From the evidence found to date, the Bake River Eskers and Sand Plains were the home of at least eight Eskers and Sand Plains were the home of at least eight pre-historic cultures.

By William F. Bowman

Eastern Massachusetts Archeological
and Geological research, INC.

Great Esker Park

Great Esker Park consists of 138 acres of tidal marsh, gravel beaches, and forested eskers. It stretches for approximately a mile and a half along the Weymouth side of Weymouth Back River, which flows between the towns of Weymouth and Hingham.

A wide salt marsh separates the water from the surrounding eskers - high ridges of soil deposited by the glaciers which passed over the area thousands of years ago. These Weymouth eskers, one of which is over 90 ft. tall, are said to be among the few remaining eskers in the country.

One area of the park, referred to as the Hobo Flat section, is valuable archeologically. It has yielded relics of cultures including the Early Archaic, Paleo-People, and Paleo-American periods. The oldest of these periods dates back about 9,000 years. Various Indian relics have been found on the site.

Back River is an estuary – a blend of salt and fresh water. Its tidal flow brings the food produced on the marshes back out to the harbor to feed the larger fish. Salt marshes are the nurseries for fish found in our off shore waters. Remarkably productive without any assistance from men, they are ten times more productive than a good corn field. It took nature thousands of years to produce a nature salt marsh. To indicate the value of their crops, one fully-grown flounder caught in Hingham Bay would have consumed in its lifetime many tons of marsh food.

Back River, according to Dr. Mary Sears of the Woods Hole Oceanographic Institute, is one of the most valuable estuaries on the East Coast. It is home for 31 species of fin fish and a variety of shell fish. Its flounder fishing is considered the best on the East Coast, as attested to by the many out-of-state chartered buses bringing flounder fishermen here. It has a smelt fishery, and a herring run, which attracts bass and bluefish into the area.

During the '80's Back River will become a prime supplier of protein food for the people in our area. Just as in the early days, inhabitants depended on the river for their sustenance, so too will present inhabitants. The river will become increasingly important. It must, therefore be protected from all types of pollution and exploitation. Oil pollution, in particular, could effectively destroy the food-producing potential of the river.

In addition to being a breeding ground for millions of marine animals, the Great Esker region contains a variety of plant life. Samples of every type native to Eastern Massachusetts are present in abundance.

Birdlife is also abundant. A variety of shorebirds use the area as a resting place during migration. 42 Great Blue Heron have a roosting place in the area. Also members of the Brookline Bird Club taking a recent trip through Great Esker Park observed an incredible number of species during their two hour walk.

Another interesting feature in this remarkable area is Reversing Falls, the probable site of Weymouth's first grist mill. Here one may watch the tide reverse itself.

Truly Great Esker Park is a piece of land valuable to every American citizen for its history, its beauty, and its completely unspoiled nature. It is a huge outdoor classroom where students of all ages can learn first-hand botany, geology, archeology, marine biology, oceanography, fish migration, preservation of wildlife, and appreciation of Nature in general.

Great Esker Park

Great Esker Park represents the land taken by the U.S. government in 1910 to act as a buffer zone for the Hingham Naval Ammunition Depot, now Bare Cove Park. In 1965, the government offered Weymouth the opportunity to buy the land for one-half the price of 224,000,000 provided that the land be used for a park. The only requirement was the submission of a biennial report showing that the town had a positive program for the park. No particular amount of yearly funding was required. Against the advice of all the town boards, the town meeting members voted to purchase the land. This was a great victory for citizens who had lobbied town meeting members for the purchase.

A survey of the area was made by botanists, geologists, biologists, foresters, archeologists, and other experts. The following facts were ascertained. The land runs for approximately a mile and a half along Weymouth Backer River, through which the herring make their annual pilgrimage. A wide salt marsh separates the water from the surrounding eskers, high ridges of soil deposited by the glacier which passed over the area thousands of years ago. These Weymouth eskers, one of which is over 90 feet tall, are among the last remaining eskers in the country. Another area of land was found to be valuable archeologically. It contained relics of early pre-historic cultures including the Early Archaic, the Paleo-People, and Paleo-American Periods. The oldest of these dated back about 9,000 years.

In addition, the area abounds in wildlife, including so many types of birdlife that one naturalist noted sixteen different species within a half hour! There is also an abundance of plant growth, some of which represents nearly extinct varieties. Many other interesting facts about the plantlife come to mind, but are too numerous to mention here.

Truly, in every way, here is a piece of land valuable to everyone for its history, its beauty, its completely unspoiled nature, and most important for its beauty, its completely unspoiled nature, and most important for its potential as a huge outdoor classroom where children can learn first-hand botany, geology, archeology, marine biology, oceanography, preservation of wildlife, and appreciation of nature in general.

DID YOU KNOW THAT IN ESKER PARK THERE ARE THE FOLLOWING TREASURES?

1. an esker 90 ft. high which was deposited by the glacier
2. an archeological site dating back 9,000 years – a large number of artifacts have been found here
3. an old Indian camping ground
4. the Back River up which the herring come from the open sea
5. Marshlands it took nature 20,000 years to build—these marshlands acts as sponges to absorb flood tides and as a manufacturing grounds for food needed by marine life
6. an excellent site for geological study
7. wonderful bass fishing
8. a variety of plant and animal life
9. natural beach with interesting driftwood and shells
10. reversing Falls where you can see the tide reverse
11. the site of Weymouth's first gristmill
12. Whale Island where the boat club used to be
13. the site of Weymouth's old grease factory
14. wonderful spots such as Aunt Molly's Pond, Hobo Flat, Sugar Plum Ridge, the Bathtub and Hockley itself, all of which provide colorful stories about Weymouth's past history
15. an opportunity for children and adults to study
 - botany
 - forestry
 - marine biology
 - marsh life
 - geology
 - archeology
 - soil conservation
 - water pollution
 - pond life
 - oceanography
 - fish migration
 - ecology
 - insect life
 - wildlife of the area
 - topography
 - nature photography and sketching from nature

1. Has 139 acres, 90 of them being marshland
2. The marshlands act as a regeneration station where basic elements in the food chain are manufactured.
3. In Backer River, there is a confluence of rivers which is called Mockley Gut (Hocklie). Here Fresh River runs into Back River providing a combination of salt and fresh water.

4. The annual herring pilgrimage comes up Weymouth Back River to Whitman Pond in order to spawn. Some of them go beyond into Mill River and Swamp River. In the old days herring went all the way to Great Pond.
5. There is an eel fishery in Weymouth Back River. Eggs of the eel are laid in the Sagasso Sea. Eels are considered a staple good in Europe.
6. Great Esker represents the last of the once-famous system of North-South serpentine ridges along Back River. As the glaciers melted about 9,500 years ago (the time determined by carbon tests), these ridges of gravel, sand, clay, and boulders were left. The esker represents a cast of the great tunnel through and under the glacier that became filled with the gravel from Boston Harbor.
7. Great Esker Park has the longest wooded shoreline in Boston Harbor, being one a half miles along Back River.
8. There is a Reversing Falls, the site of an early grist mill where there changing tides can be watched.
9. There is a smelt breeding spot in one of the streams of Back River.
10. The clams beds surrounding the river are very valuable, and if cleaned of pollution would be a valuable food resource.
11. In addition to herring, smelt, eels, many other different varieties of fish inhabit Back River. These include bass, mackerel, haddock, cod, bluefish, flounder, and Atlantic salmon. Such a rich bounty should provide great fishing for local residents.
12. Great Esker Park is a valuable archeology al site with digs reveling artifacts from three major archeological periods, and dating back 5,000 years.

There are many other interesting features: Reversing Falls, the probably site on one of Weymouth's first grist mills, is a small body of water where one may watch the tide turn. There are huge areas of marshes which took nature 20,000 years to construct. These marshes act as sponges in that they absorb flood tides. Also, they are the manufacturing grounds for food for marine life.

SPECIAL SUBJECTS AND POINTS ABOUT THEM

Marshes – They are regeneration stations. In a study the following could be considered: succession, zones, tides, plankton going out in streams

Insects- Characteristics of groups, specimens, habitats, life cycles, marking, feeding habits, key to identification

Tides – Understanding the origin of sea changes, tides

Plants – Variation in the toleration of plants and animals to salinity, temperature. Some plants can take more salinity than others. There is a wide variety of such plants for this study.

Seaweeds – Classes, differences, life processes, parts (There are 18 different varieties of seaweeds at Back River and 16 types of algae alone)

Glacier- As the glacier moved over Boston Harbor, it picked up mud and sand and shells. Later these shells were either included with the till or washed out of the ice and into the eskers where they can be seen today.

Mudflats- Since most of the river bottom is muddy at low tide, you can observe adaptation in the sea animals. It reveals the life of the flat. The small creatures are food for the larger ones. You can study clams, worms, mussels, snails, horseshoe crabs, plankton, nekton, benthos, mollusks etc. This is the life of the estuary. You can study the salinity, and hydrocollards.

Plants- You can study the group characteristics, toleration of plants to salinity, to temperature, and all the variations. You can collect and identify species and make a key. You can identify the edible plants. You can study the lower classes of plants such as mushrooms, ferns, mosses, sponges, scales, and molds. You can study the various types of seaweed and even the many species of algae.

Eskers- Great Esker Park represents the last of the once-famous system of the North-South serpentine ridged along Back River as the glacier melted about 9,500 years ago. These ridges of sand, clay, gravel, and boulders were left. The eskers represent a cast of the great tunnel through and under the glaciers that became filled with gravel from Boston Harbor.

Salt Marshes – These act as a regeneration station where the basic elements in the marine food chain are manufactured by nature alone without any help from man.

Confluence of Rivers- Where Fresh River, Hingham, and the Herring Run, Weymouth meet the Back River is called a confluence of rivers. At this point in Back River it is called Hockley (the English word is hocklie)

OTHER PIECES OF KNOWLEDGE

Artifacts – From Great Esker the artifacts which have been found represent various periods of history, some are 7-8,000 years old. They pre-date the colonists and go back to the Early Archaic people. Some of the later pieces go back to the Indian tribes who were in the area when the land was first settled by the Europeans. Large heaps of oyster and clam shells showed that the natives harvested their food from the salt water of the country.

Indian Pottery – Samples have been found. The pottery was made from the claybed down on the point near Hockley But. There was, of course, an Indian camping ground in the area.

Periods Represented by the Artifacts

Paleo- American = 9, 500 years ago

Early Archaic = 6,500 years ago

Woodland = up to 250 years ago

Tides There are bad currents in Back River. At low tide, however, most of the river bottom can be seen. The tides flow in quickly.

Fishing Smelt breed inland of Back River in various small stream. They come in to breed in the fresh water and then return to the salt water. They do not go all the way to Whitman's, but do come up part way in the Herring Run as do the eels.

History Grape Island and Lower Neck Point
The second skirmish of the Revolution took place here.
The Hingham Ammunition Depot during World Wars I and II

Reference can also be made to the work which was done at the Hingham Shipyard during the wars.

There was an Indian Trail to Great Pond

Esker An esker is an underground tunnel, Ice melted as the glacier came near the ocean. The layers in the park taper to the southeast and southwest. The height of the water was much higher and ice was limiting the Eskimo-like Indians. There was a layer of ice.

Hobo Flat The area nearest the river down by Rt. 3A was an old Indian camping site. During the depression, hoboes and migrant workers set up camps until they were finally put out by the Weymouth Police. Most got some part-time work at the Bradley Fertilizer Plant.

GEOLOGY

Recent glacial events within the last 30,000 years are responsible for most of our South Shore landforms. As the glaciers melted back, the land rebounded from tremendous weight of the ice. Meltwaters caused sea level to rise. These phenomena are continuing today giving us cliffs and headlands as well as low-lying marshes.

Drumline, (streamlined hills composed of glacial rock debris) sculptured by the glacier advancing over frozen gravel, sand, and clay were later tied together by the action of the rising sea into long spits such as Nantasket Beach. Much the material deposited by the glaciers has been worked over and transported by wind and water to build sand dunes and beaches. Eskers, like the ones in Great Esker Park, are long, narrow ridges of coarse gravel deposited by streams flowing in an ice-walled valley or tunnel in a decaying glacial ice sheet.

Weymouth's eskers formed about 12,000 years ago. Great Esker Park also contains a number of kettle holes, the most famous being Kettle Hole Pond. These holes were formed when large blocks of ice were left stranded or burred in the gravel. When the ice blocks melted away, they left these depressions in the land. Just about all of the ponds in New England are kettle holes.

An estuary is a sheltered, bay-like, coastal area that receives fresh water from river, stream or land drainage. The bottom of an estuarine area is normally covered with a thick layer of mud, rich with nutrients washed from land or released from decaying seaweeds and other plants.

SEAWEED, Some seaweeds are adapted for life in the estuary. But because it is sheltered, rich with nutrients, and not too salty, many grasses that are similar to land plants grow there. The grasses have roots to absorb minerals and leaves to capture sunlight. They form thick mats on the bottom. When they die and decompose, they add more nutrients to the mud.

ANIMALS, The estuary is also an ideal habitat for marine animals, provided that they can tolerate the low salinity. Estuaries are called “nurseries of the sea” because so many young fishes and invertebrates grow up there. They find shelter and protection among the dense grasses. Oysters, shrimp, and flounders feed on decayed plant materials on the surface of the mud. Worms and sea cucumber live permanently beneath the mud. They eat their way through it like earthworms. Some crabs burrow into the mud at low tide but come out at high tide to scavenge along the bottom.

THE VALUE OF OUR SALT MARSHES

Salt marshes are valuable for two major reasons: first, they act as sponges to hold excess water, thus preventing flooding as well as drought. Secondly, they are the nurseries for the salt-water fish which provide man with food.

A salt marsh is ten times more productive than the best cornfield. Also it operates without any stimulus by man. Each ten tons of organic matter produced per acre per year eventually provides man with 300 large size fish.

At present, most people do not appear to realize the tremendous value of salt marshes. For example, Massachusetts has lost about 20% of its marshes to dumps, parking lots, roads, and housing developments. In Connecticut 50% of the salt marshes have been destroyed permanently. The short-range thinking represented here is frightening when one considers man's future food supply.

Marshes can also be polluted by sewage, detergents, heavy metals, pesticides, and flyash from incinerators. Burning, Spraying, and draining all have adverse effects on marshes. In East Weymouth, for example, the dump has gradually encroached on the marshes.

A marsh is a living thing. Its plants capture energy from the sun. Forms of algae live on its mud or float on the surface of its water/ Diatoms hide in the sand and come to the surface only during low tide in daylight, when an internal clock unfailing tells them to come out. Decaying grasses and bacteria combine to form detritus, which mixed with water, forms a sort of soup for the tiny marine creatures. Tides constantly bring in fresh nutrients, and at the same time wash marsh production out into the bay to feed the fish.

Inhabitants of the marsh include those who lie to burrow in the sand and mud: clams, quahogs, worms, and shrimp. At high tide or low, visitors include small fish, crabs, squid, turtles, snails, or shorebirds. At the edge of the marsh rabbits, raccoons, insects, and other birds are found.

In the great chain of life, marshes are inestimable value to man. It took nature thousands of years to construct them. They cannot be replaced at will. Weymouth must protect its own.

Chapter 130 Section 105 of the General Laws of Massachusetts provides that a town can request the Commissioner of Natural Resources to place marshlands under his special protection. Recently, the Back River Association, the Conservation Commission, and the Environmental Protection Committee made a formal request to the Commissioner to place Weymouth's remaining marshes under this protection. However, public hearings must be held, and citizens must show support. Please do your part to save our marshes.

Facts taken from Life and Death of the Salt Marsh

OUR HERRING RUN

Splash! A silver-grey body wriggles its way through a maze of stones and rushing water. The scene is as ancient and powerful as life itself. This is the migration of the herring.

The herring, or more properly the alewives, live in coastal waters. In the spring, when the temperature of inland water climbs higher than that of the surrounding ocean, they move up rivers and streams to spawn. The females lay from 60,000 to 100,000 eggs which sink to the bottom and attach themselves to the stones and pebbles amidst the mud there. The adult fish then return to the sea. The young hatch and spend their infancy in fresh water until fall, when, two to four inches long, they move down the stream to the sea. When spring arrives once again, the young have grown to ten to twelve inches long and are fully matured. Navigating by means still unknown to man, they then return to their own original ponds or rivers and spawn, starting the cycle over again.

The Herring Run has played an important part in Weymouth's history. Its earliest mention is a reference made to a "herring's brogue" in 1648. Little is said of the run for the next seventy-five years. Then on March 8, 1724, a committee was chosen at the Town Meeting "to treat with the mill owners on the river, by Bates; to make a convenient passage for fish into Whitman's Pond, to pay out over five pounds." From then on, the Run occupies considerable space in town records. Officers were selected regularly to protect the fish and to supervise the small alewife fishery, the proceeds from which went to the town.

The concrete run which we now have was built in the 1940's by the State Department of Marine Fisheries under the supervision of a Mr. Burns. In recent years, other changes have been made to alleviate flooding conditions. At present the Run begins at Whitman's Pond and flows through and under the Iron Hill area, passing under Commercial Square. It flows past the town incinerator, into Back River and out to sea.

As Henry Beston says in his famous book *The Outermost House*, "Somewhere in the depths of the ocean each Weymouth-born fish remembers Whitman's Pond, and comes to it through the directionless leagues of the sea. What stirs in each cold brain? What call quivers, as the new sun strikes down into the river of ocean? How do the creatures find their way? Whatever the reason, the herring are "in" at Weymouth, breasting the brook's overflow to the ancestral pond."

BACK RIVER BOUNTY

HISTORY

The land on the Weymouth side of the river is the result of a glacial deposit over 20,000 years ago which left eskers (gravel hills) and kettle holes.

Indian tribes occupied the land at one time—the eskers served as lookouts and the river provided food and transportation. Kitchen middens (buried clam and oyster shells) can be seen on the river banks and a thousand artifacts, relics of early Prehistoric cultures some of which are 5,000 years old, have been discovered and await display in a museum.

Pilgrims wrote of traveling to the area and a partially preserved “gondola” barge, from an early period, lies on a bank of the river.

Weymouth and Hingham militias took part in the second skirmish of the Revolutionary War that occurred between Webb State Park and Grape Island.

In 1912 the Navy acquired both sides of the river for military purposes, thus saving the area from development.

During World Wars I and II ammunition was stored in bunkers on the Hingham side. Marines patrolled the entire area, and the federal government initiated shipbuilding at the old Hingham Shipyard. The Navy began to release parcels of land to Weymouth and Hingham in 1966.

Today the Back River is an estuary of great value as a nursery to the offshore fisheries. There are 31 species of finfish native to the river and a variety of shellfish. Oysters were plentiful in the past. Extensive areas of salt marsh surrounding the river supply nutrients for marine life. In addition, there are herring, smelt, and eel runs. Dr. Mary Sears, of the Woods Hole Oceanographic Institution, stated that the opportunities for research were limitless. She advanced preserving all the empty land around the river, cleaning up all pollution, and bringing in private and public agencies to conduct research and increase the present fisheries.

INTERESTING FACTS

- The Weymouth Herring Run is one of the largest in the state- 4.8 miles, 5 fishways, 108 steps
- Extensive clam beds contain small sweet clams of the Cape variety. These beds are in great need of care and protection.
- Reversing Falls—the nearest one to ours is in Nova Scotia.
- Eskers—the result of glacial deposits, one of Gt. Esker Park's is 90' tall one of the tallest in the country.

- Wildlife is abundant with 150 species of birds including migrating shore birds (egrets and great blue herons, etc.), ducks and songs birds. Fox, coyotes, deer, fishers, and raccoons can be seen. The 40-acre Tucker's Swamp/Hockley Run (Brook) complex, one of three freshwater perennial tributaries to the river, contains painted and snapping turtles, and possibly rare plants and birds. (It needs an up-to-date study of flora/fauna.)
- Wildflowers are plentiful, and many trees are the result of sea captains' plantings.
- Passive recreation (walking, jogging, bicycling, cross-country skiing, fishing, birding, and wildlife watching) is compatible with conserving this valuable area.

NINE PRESERVATION AREAS OPEN TO THE PUBLIC	FOUR DESIGNATIONS FOR THE BACK RIVER ESTUARY
Webb State Park	Area of Critical Environmental Concern
Bouve Conversation Land	One of 15 Massachusetts Special Places
Stodder's Neck Park	Local Scenic River
Back River Wildlife Sanctuary	Wildlife Refuge
Abigail Adams Park	
Bare Cove Park	
More-Brewer Reservation	
Great Esker Park	
Herring Run Park	

General Value of the River and its Watershed Area

1. Food Value

Comparable to its regional importance as open space is the river's potential as a food-producing source. Because it is an estuary, combining both fresh and salt water, the Back River and its environs support a wide variety of fin and shellfish. The shallow bays, tidal flats, and salt marshes are extremely productive nurseries and, despite inadequate management, supply in large measure the fish found in Hingham Harbor and the outer waters.

Historically, the Back River provided a great deal of the food needed by the earliest inhabitants of Weymouth, Hingham, and surrounding towns. With increasing technology, succeeding generations depended less on the river, but today as food supplies dwindle and increase in cost, it becomes clear that this rich source of high protein food must be protected and nurtured. It is of crucial importance to protect that inseparable combination of fragile fresh and salt water resources which, working in unison, provide that vital first link in the marine food chain that sustains the marine fisheries of the Greater Quincy Hingham Bay region. These several distinct resources include Hingham's Tucker's Swamp Brook and its watershed; Hingham's Fresh River- Bear Swamp complex and its watershed; Weymouth's Herring Run-Swamp and Mill River-Whitman's Pond complex and its entire watershed; as well as all the tidal flats, salt marshes and salt ponds that are part of the estuary and its floodplain.

Two-thirds of all fish caught commercially in coastal waters begin their lives in estuaries. Native to the Back River estuary are 31 species of finfish, including flounder, mackerel, striped bass, smelt, tom cod, bluefish, eel, herring, and also lobster, crab, and clams. The Back River is one of the few estuaries emptying into Massachusetts Bay which has been left in relatively good condition to support the fisheries. If the river or its watershed were badly polluted, its capacity to support the fisheries would be seriously damaged.

2. Economic Value

The economic importance of the estuary to the offshore marine fisheries, the unique functions of the estuary in the development of the marine food chain should be fully understood and appreciated by the residents of Hingham and Weymouth. Efforts must be made to preserve and increase these abundant resources through long-range planning and good management, protective regulations, and the gradual elimination of sources of pollution. A salt water river can cleanse itself of small amounts of pollutants within a short period of time and become even more productive, but once polluted by oil, it may take over ten years to recover. Damage to the food chain could run into millions of dollars.

In 1970, statistics compiled by the Division of Marine Fisheries showed that the annual income from utilization of the marine resources of Hingham Bay amounted to nearly one million dollars. Today its value would be far higher. Since Hingham Bay is supplied in large measure by the

Weymouth Back River, keeping the estuary productive is vital to the offshore marine fisheries. The river's importance in this relationship cannot be overstated.

The large potential economic benefits of the Back River's clam flats are not being fully realized because of pollution and lack of proper management. With inadequate harvesting, the clams suffocate and both food resource and its economic value are lost.

3. Have for Wildlife

The area around the Back River upriver is a quiet haven for many forms of wildlife, increasing the river's potential for enjoyment as recreation and conservation area. Shorebirds find food in the clams, mussels and other products of the estuary. Close to 150 species of bird life are common to the area, including the Green, Great Blue and Black-Crowned Night Heron; the Red Tailed Hawk; the Cormorant; the Snowy Egret. Such birds need the kind of solitary resting are provided by the river. At least a 32 Great Blue Heron rest and find sustenance in what is perhaps the only Great Blue Heron roosting area in this entire metropolitan urban area. The colony is considered a rare treasure by both the Audubon Society and the Manomet Bird Observatory.

There is a wide variety of other wildlife present in and along the river, and abundant plant growth, including 18 species of vascular plants and 16 species of algae. The New England Association for the Preservation of Wildflowers has conducted one exploratory walk and plans to conduct more in the future. The undisturbed area, preserved largely in its original state by 60 years of federal as well as recent municipal protection; is one of the few unspoiled estuarine environments left, and deserves continued protection to keep it so.

4. Recreational Opportunities

For both active and passive recreation, the Back River offers abundant possibilities: boating, fishing, hiking, picnicking, bicycling, in addition to the opportunities for nature observing previously mentioned. Lack of adequate moorings and related on-shore facilities are considered the major drawbacks to additional use of the river by the boating community.