

The Changing Flora of the Boston Harbor Islands

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After more than three and one-half centuries of vicissitude, the deciduous forest that once covered the Boston Harbor islands may have begun to return

Situated just to the north of the sandy, uplifted coastal plain of Cape Cod and just to the south of the rocky coastline of northern New England, the Boston Harbor islands constitute a unique maritime ecosystem. To the south of the Harbor, pines dominate the sandy, mineral-deficient soil where the land meets the sea; to the north, hemlock, white pine, spruce, and fir. Some twenty thousand years ago, when the Pleistocene ice sheet was at its maximum, the shoreline lay approximately thirty miles east of where it does now; when the glacier first began to recede, what are now the Boston Harbor islands were exposed as high spots on what was then the mainland. Alluvium from the Boston Basin deposited around the Boston Harbor islands by the Mystic, Charles, and Neponset rivers during this time created a mineral-rich substratum that plants would readily colonize after the glacier had melted away.

In particular, the alluvium was colonized by species of the Eastern Deciduous Forest, a narrow, species-rich strip of forest stretching northeastward from the mountains of Kentucky and West Virginia, reaching the ocean along the Massachusetts shoreline between Ipswich and Plymouth. (It corresponds to Zone 5 of the Arnold Arboretum's cold-hardiness map and to Zone 6 of the United States Department of Agriculture's map). Once dominated by chestnuts and oaks, it has been devastated by chestnut blight and by the Europeans who settled in it, who have used it as a source of construction timber and firewood. With its complement of nut-consum-

ing animals, the Eastern Deciduous Forest—which was dominated by broad-leaved, round-topped deciduous trees (as opposed to needle-leaved, spire-topped evergreens)—was a richer source of food for the colonists than the evergreen forests to the north and south. No doubt this was one reason the English settled northward, rather than southward, from Plymouth.

The present-day vegetation of Moswusset Hummock, a small island situated at the northern end of Wollaston Beach in Quincy, is perhaps the closest indication we will ever have of what the Boston Harbor islands' vegetation looked like at the time of English settlement. Remains of dead American chestnut trees (*Castanea americana*) can still be seen on Thompson's Island, and young oak forest is reestablishing itself on Peddock's Island. For the most part, however, the Boston Harbor islands have been cut over, and the rich, climax deciduous forest that clothed them when the English arrived on these shores early in the seventeenth century is now in the early stages of biotic succession from old fields to climax forest.

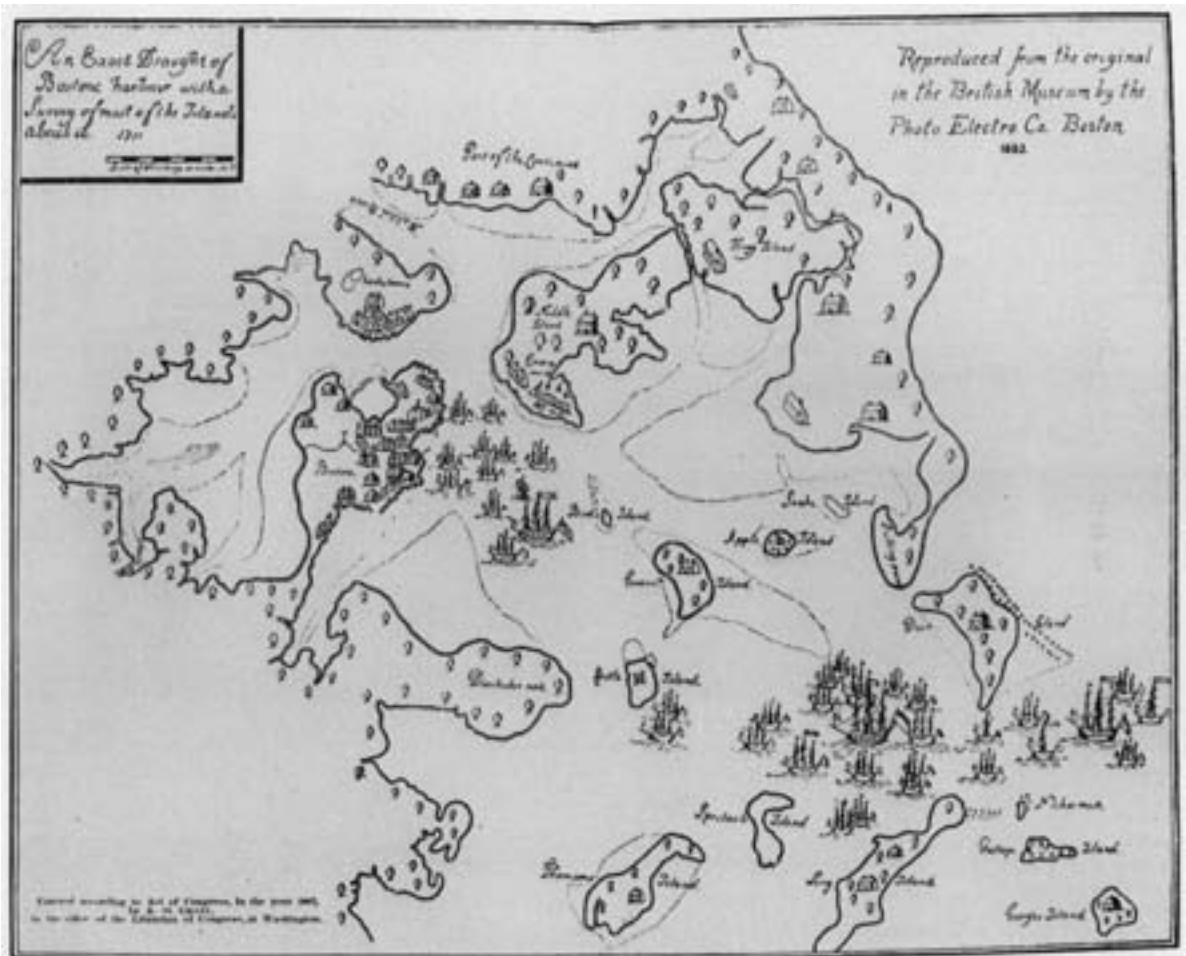
The Islands' Early History

In 1585—thirty-five years before Plymouth was settled—David Thompson established a trading post on the Boston Harbor island that now bears his name. During summer of 1621 Captain John Smith, who had landed at Plymouth in 1620, sailed into Boston Harbor. In the ship's log he wrote of "the groves of trees, the fields of corn, and the well proportioned

Indians" standing on the shore. Captain Smith and the crew set foot on the mainland at what is now Squaw Rock in the Squantum section of Quincy. Although there has been speculation that the corn fields he mentions were in reality marsh grasses, fragmentary remains of corn have been found in archaeo-

livestock pasture.

By 1634 the English settlers had recognized the value of the Boston Harbor islands as strategic lookout points for protecting the development of Boston and had begun to construct fortifications on Castle Island. Between 1850 and 1865, George's Island was extensively



Map of the Boston Harbor Islands in 1711.

logical digs on Calf Island. Evidence of cleared areas suggesting gardens has also been documented. Once the settlers had cleared them of trees, the islands became valuable pasture land free of predators. Some of them—Sheep, Calf, and Hog islands—reflect their use as

altered by the construction of Fort Warren. The world was also significantly altered the island ecosystem. Massive fortifications were built on Peddock's, Gallop's, Lovell's, Great Brewster, Middle Brewster, and Outer Brewster islands. Until recent times, perhaps

as much as any use, the construction of fortifications has led to the destruction of the islands' native plants and animals.

As Boston grew into a prominent port and as urbanization spread, the islands' value became increasingly evident. (Sweetser's his-

Emerald Necklace, planned to extend his landscape through World's End in Hingham, into the Boston Harbor islands. Unfortunately, Olmsted's death brought to an end early realization of the special ecology of the Boston Harbor islands.



Aerial view of the Boston Harbor islands, looking southeast toward Hull. Thompson Island is in the foreground, Spectacle Island at the left center margin. The bridge connects Moon Island (right center) with Long Island. The peninsula at the right rear is the northern part of the town of Hull. Copyright © 1988 by Alex S. MacLean/Landslides.

tory of the Boston Harbor islands gives an early insight into their unique nature.) Frederick Law Olmsted, while creating the

The Boston Harbor Islands State Park
Because they were being used by the military, the Boston Harbors islands were largely off

limits to the general public for nearly two-thirds of the twentieth century. With the advent of nuclear weapons, however, islands lying only a few miles off a coast lost much of their strategic significance, and the Commonwealth of Massachusetts began acquiring the islands in Boston Harbor; in 1974, the Boston Harbor Islands State Park was established. Public visitation has been encouraged since then, and public campgrounds have been established on Lovell's, Grape, Bumpkin, and Peddock's islands. Ferry service from Long Wharf, Boston, to George's Island makes it possible for people to take advantage of the free-of-charge water-taxi service provided by the Commonwealth from May until October to several of the Boston Harbor islands. Interpreta-



Map of the Boston Harbor islands. Copyright © 1987 by The Christian Science Publishing Society.

tion of the islands' natural history and ecology is now provided by island managers, who are coordinated through the Massachusetts Department of Environmental Management (DEM). Volunteer service in appreciation and interpretation of this unique state park has been provided by the Friends of the Boston Harbor Islands.

The Islands' Plants

The flora of the Boston Harbor islands reflects man's impact upon the landscape, and few undisturbed patches of native plants remain. The American Indians used to retreat to the

Boston Harbor Islands State Park

We want to create the best harbor park system in the world because it has the potential to be just that.

—Governor Michael S. Dukakis,
George's Island, 1986

The Boston Harbor islands are a remarkable resource, permitting recreational and educational opportunities rarely found in an urban setting. Though the Boston skyline is rarely out of view, the islands have a wild character, providing a resting spot for migrating birds and city residents alike. People can camp on the islands or visit for the day, experiencing the forces of the sea and the wilds. Easily accessible via inexpensive ferry boats from Long Wharf, connected to each other by a free water taxi, the islands are destinations for residents of every Boston neighborhood and the region, as well as tourists who venture out for picnics, school outings, and discovery.

Thirty-one islands are presently owned by public agencies; seven are staffed during the summer months as Boston Harbor State Park. The park is jointly managed by the Metropolitan District Commission (MDC), which owns George's, Lovell's, and Peddock's islands; and by the Department of Environmental Management, which owns Grape, Bumpkin, Gallop's, Great Brewster islands and many of the smaller islands. The City of Boston owns three islands which have yet to be included in the park: Long, Spectacle, and Rainsford islands. Each island in the park has its own history and its own present and potential uses—in sum, the islands are a unique

resource of national-park quality.

The islands are drumlins (glacial hills) and rock outcroppings ranging in size from less than one acre to over two hundred acres. Seasonally occupied by Native Americans, who harvested an abundance of shellfish, the islands were used by Puritan colonists as wood lots and pasture lands. Over the years, the islands were used for quarantine and chronic disease hospitals, farmlands and dumping sites, though it is military uses which have left the most visible traces on the islands. Starting before the Revolution and increasing before the Civil War and during the Spanish-American War, the islands became the site of a series of massive fortifications, leaving us such notable artifacts as forts Warren, Andrews, Strong, and Standish.

After World War II the islands were essentially abandoned by the military, but visionary citizens and legislators saw the possibilities for recreational, educational, and historic preservation activities. In 1958, the MDC acquired George's and Lovell's islands and began developing them as parks. In 1970 with the creation of the Boston Harbor Islands State Park, the Department of Natural Resources, now the Department of Environmental Management (DEM), also began acquiring and developing islands. Both agencies cleaned up their islands, repairing seawalls, building piers, cutting trails, and creating campsites; and both began providing staff during the summer months. Today the islands are visited by upwards of 200,000 people annually, and the season is expanding.

George's Island—ferry and

water-taxi hub and site of Fort Warren, a national Historic landmark—is by far the most heavily visited island, with its picnic grounds, concession stand, and running water. In recent years an intensive educational program has been developed on George's Island, providing programs to some 15,000 school children, including 2,000 Boston school children, and to over 15,000 summer visitors. In spite of the much-lauded improvements, the island has pressing needs for safety and visitor service improvements and there is a growing desire to restore crumbling Fort Warren.

Lovell's, Gallop's, Bumpkin, and Grape Islands are all quieter than George's Island and are primarily used by campers and others seeking tranquility. Accessible by free water taxi, they have a primitive quality with no electricity or running water. Staff provide tours during the summer, focusing on the natural history of the islands and the surrounding harbor. Great Brewster Island, which is far out in the harbor and primarily accessible by private boats, is the wildest and quietest of the staffed islands, home to nesting birds and seasonal resort for lovers of solitude.

Peddock's Island, the largest of the islands now in the park, has forty-five private cottages on it and twenty-eight buildings of Fort Andrews, in various stages of disrepair. Though open to the public, much of the park is not accessible because of safety problems and the presence of the private cottagers. Yet even in its current state, Peddock's is a fascinating place to explore.

Long Island, the largest in the Harbor and the only one acces-

sible by automobile, is the site of the Long Island Hospital and the remnants of Fort Strong. Summer work crews have begun to clean up the island and it figures prominently in the dreams of many Boston environmentalists and Harbor-lovers, though it is not in the park or open to the public yet. Spectacle Island, a former dump site, also remains outside the park and is closed to the public. Thompson Island, privately owned by the Thompson Island Educational Center, is undergoing a change in management, though its focus will continue to be on youth development.

Working with groups like the Friends of the Boston Harbor Islands, MDC and DEM continue to expand these unique resources. But many problems remain: balancing the preservation of natural and cultural resources with the need to provide for increasing numbers of visitors; the huge costs of developing and maintaining island sites; bringing in fresh water and disposing of sewage and solid waste; and the need for interagency cooperation as well as cooperation with the City of Boston. Yet everyone agrees: the islands are beautiful and deserve continued development as natural, cultural, and recreational resources for the benefit of Bostonians, residents of the Commonwealth, and visitors. They hold vast educational and recreational potential for the young people of Boston and for us all.

—Excerpted from *The Greening of Boston: An Action Agenda*, pages 60, 62.