

# East Point History

## Text from UniGuide audiotour

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*This is an official self-guided and streamable audio tour of East Point, Nahant. It highlights the natural, cultural, and military history of the site, as well as current research and education happening at Northeastern University's Marine Science Center.*

*Content was developed by the Northeastern University Marine Science Center with input from the Nahant Historical Society and Nahant SWIM Inc., as well as Nahant residents Gerry Butler and Linda Pivacek.*

### **1. Stop 1**

Welcome to East Point and the Northeastern University Marine Science Center. This site, which also includes property owned and managed by the Town of Nahant, boasts rich cultural and natural histories. We hope you will enjoy the tour

Settlement in the Nahant area began about 10,000 years ago during the Paleo-Indian era. In 1614, the English explorer Captain John Smith reported: the "Mattahunts, two pleasant Iles of grouse, gardens and corn fields a league in the Sea from the Mayne." Poquanum, a Sachem of Nahant, "sold" the island several times, beginning in 1630 with Thomas Dexter, now immortalized on the town seal.

The geography of East Point includes one of the best examples of rocky intertidal habitat in the southern Gulf of Maine, and very likely the most-studied as well. This site is comprised of rocky headlands and lower areas that become exposed between high tide and low tide. This zone is easily identified by the many pools of seawater left behind as the water level drops during low tide. The unique conditions in these tidepools, and the prolific diversity of living organisms found there, are part of what interests scientists, as well as how this ecosystem will respond to warming and rising seas resulting from climate change. In addition to dozens of species of seaweed, the most common animals to inhabit these shorelines are crabs, snails, sea urchins, starfish, mussels, and soft-bodied tunicates. One can also commonly see gulls, terns, and ducks. In winter, seals occasionally bask along the beaches.

The beach you are looking out on is known as Canoe Beach, and is highly utilized for research, education, and recreation. The MSC Outreach Program educates thousands of people each year about coastal ecology in the tidepools of the rocky shore to the right, best visible at low tide.

As you look out to sea, Castle Rock is the large rock formation along the shoreline to the left. From this vantage point, visitors can enjoy a good view of the lowland below. Egg Rock, the

white-tinged island visible offshore, is a bird sanctuary managed by the Massachusetts Division of Fish and Wildlife, and is an important nesting area for gulls, cormorants, and common eider.

Due to its coastal geography, Nahant's military history is particularly notable. During the Spanish-American War, the Massachusetts militia used East Point as a headquarters and signal station for coastal defense. During World War I, the military established an experimental station for electronic devices and systems on East Point. The most important of these was the underwater submarine sound detector, manufactured at the General Electric Plant in Lynn. In 1940, military engineers and strategists chose East Point to house the most powerful coastal defense weaponry then in existence. Two powerful batteries were built here as part of the Boston Harbor defenses. Located on the southwest corner of the point, Battery 104 (now known as the Murphy Bunker) protected the harbor and consisted of two large 16-inch guns that could fire a high explosive, one-ton projectile a distance of 25 miles.

In 1948, the military decommissioned the battery, and in the mid-1960s, ownership of the property transferred to Northeastern University. Today there are many laboratories and an active classroom in the Murphy Bunker, whose formidable main entrance is visible in the hillside. These facilities, as well as others you will encounter later on the tour, enable the university's continuing marine research

## **2. Stop 2**

Constructed in the 1940's, the grey Edwards Building was originally a military barracks. Northeastern University acquired the property in 1967 and opened what was first called the Marine Sciences Institute, directed by Dr. Nathan "Pete" Riser. It later became the Marine Science Center, or "MSC". Significant renovations over the years have included the installation of numerous state-of-the-art research labs and office space. This building is also home to the Ocean Genome Legacy, a genomic "library" utilized by researchers from around the world. At the back of the building is an active dive facility, complete with a SCUBA tank fill station.

Beyond the building and behind the trash and recycling station, is the site of the former Lowlands Mansion. Around 1868, Elizabeth and George James commissioned Watertown architect, Charles Brigham, to design their second home. Constructed of Quincy granite and surrounded by 12 acres of gardens, it was located here and looked southward towards the water on the side facing Boston, known as Bathing Beach. Ownership of the property eventually changed, and in 1928 the new owner, Harmon Elliot, remodeled the home. The mansion later served as the military headquarters during World War II and the Korean War up to 1961.

The mansion burned down in 1965, but the two columns at the entrance to the property remain, as well as the home's Ice House. Before modern refrigeration methods, people purchased large slabs of ice and placed them in thick, insulated rooms such as this one for preserving food. Frederic Tudor of Nahant and Boston pioneered the ice trade in the early 19th century by harvesting New England ice and shipping it to the South, the Caribbean, Europe, and even India.

### **3. Stop 3**

The MSC community specializes in vibrant and diverse research, much of which lends itself to understanding how the projected impacts of climate change will affect marine ecosystems, and how management of coastal habitats can be most sustainable.

Having an abundant supply of fresh, naturally oxygenated, and nutrient-rich seawater allows scientists to conduct research and outreach with local marine organisms without having to treat or supplement the seawater. Here on East Point, the MSC has had a flow-through seawater system since the late 1960s. A combination of pumps and gravity continually circulate seawater between the facility and the sea. The gray pump house on the sea wall pumps seawater up to the green storage facility behind the greenhouse. Here, sediments settle out of the seawater before it is pumped out to various buildings around the MSC campus.

Several outdoor areas allow MSC personnel to conduct experimental research within tanks called mesocosms, which aim to mimic certain parameters of life experienced by living organisms in their natural habitat. For example, the water level can be manipulated in the tank farm containing the smaller black tanks to mimic tidal level. In the greenhouse, tanks and tables support salt-tolerant plants such as seagrass and marsh grasses. Larger fish may be studied in the larger tank farm behind the greenhouse. These facilities were installed in 2014, around the time that the seawater system was upgraded to accommodate the additional demand for seawater. The old swimming pool has been used to observe underwater robots before they are deployed to the sea.

The Plotting Room for Battery 104 (aka Murphy Bunker) is located behind the Edwards Building. It provided military personnel with the ability to track, compute, and issue firing data to the gun crews. This bunker, which is the grass and tree-covered hill to the right of the seawater storage facility, is closed off for safety reasons.

### **4. Stop 4**

Watch your step and walk single-file across the top of this old seawall, which takes a beating every year during winter nor'easters. When you first stepped onto the wall, you may have observed seawater from the MSC system running down the beach and back into the sea. At low tide, you may see the intake pipes as well. The brick remains of an old saltwater swimming pool can be seen below.

Found along the wall are several native plants such as beach pea, seaside goldenrod, and Virginia rose. Common eider ducks are often present along the shore. Other seabirds frequently seen in this area are double-crested cormorants and gulls. Great cormorants, which are larger, spend their winters in this area. Purple sandpipers favor the rocky shoals. Cardinals, song sparrows, tree swallows, and mourning doves are also very common around East Point.

The walk up to and around Lodge Park is bordered by vegetation. Fruit-bearing plants, such as Virginia creeper, crab apple, black cherry, dewberry, staghorn sumac, and bayberry attract many species of birds. American robins and American goldfinches are common. Cedar waxwings often perch at the top of high bushes and trees. Yellow warblers also forage high in the foliage. Carolina wrens, gray catbirds, and northern mockingbirds are also visible and vocal.

Throughout the various seasons there are opportunities to see swallows, ducks, seabirds, snow buntings, and snowy owls. Colorful warblers, thrushes, and flycatchers are present during their annual migration.

East Point is also a great place to see Monarch butterflies as they migrate south during the months of September and October. In the evening, the butterflies often clump together for warmth in a tree, choosing a strategic location to catch the first rays of the morning sun. They soon leave again to continue their long journey to Mexico.

## **5. Stop 5**

This location is known as Cunner Ledge. A cunner is a small fish that can be found in and around rocky shores. The Boston skyline is viewable across Broad Sound, with Revere Beach in the foreground.

The Helmuth Lab operates the small weather station here at Cunner Ledge, which collects long-term data such as temperature, humidity, wind direction and speed, and solar radiation. The lab has also deployed remote sensing equipment to measure wave height, seawater temperature, salinity, and other metrics. Establishing these long-term data points is important for researchers studying the effects of a changing climate.

Fascinating geologic history is evidenced at East Point. The oldest rocks are approximately 500 million years old, dating back to the Cambrian Period, when the volume and diversity of life on earth exploded. These oldest rocks are sedimentary limestone and mudstone layers deposited onto what was a shallow sea floor, and they contain unique fossils that are among the world's oldest shelled animals. Most recently in geologic history, coastal erosion following the last ice age wore away at much of the weaker rocks that connected Nahant to the mainland, leaving behind the "island" of Nahant that is connected to the mainland by a narrow, sandy bridge known as a tombolo, which is now called Nahant (or Long) Beach. The iron-rich rock at East Point is known as gabbro, and its existence here contributed to the siting of the Saugus Iron Works in colonial times.

During World War II, two rapid firing 155mm guns were installed, one here, and one at the tip of East Point. Electronic surveillance systems are now owned and maintained by private individuals. Mobile gun installations on the site were constantly manned in the event enemy submarines attempted to gain access to the Port of Boston. A massive water collection and retention system contained two 25,000-gallon concrete water tanks. Powerful pumps provided water around the base where needed.

In 2008, director Martin Scorsese filmed portions of the movie *Shutter Island* here. Crews built the base of the 17-foot lighthouse on the most southeastern end of East Point, near Great Ledge. The bottom of the lighthouse was made of wood, plastic, and plastered veneer while the upper two-thirds of the lighthouse was digitally constructed. After filming, the set crew dismantled the lighthouse. Views of East Point cliffs also appear sporadically throughout the movie.

## **6. Stop 6**

This point offers great views over the sea, where ocean sunfish, harbor seals, and minke whales are occasionally spotted. From October to May, rafts of waterfowl typically include white-winged, surf and black scoters, common eiders, greater scaup and common goldeneye. Visitors can often spot common and red-throated loons, and horned and red-necked grebes. Stellwagen Bank is located in Massachusetts Bay, about 27 miles east of Nahant.

John Ellerton Lodge purchased the fire-ruined Nahant Hotel property for the mortgage cost in 1861. After he died, his widow continued to stay on at the family's brick house known as "The Villa". In 1867, Lodge's daughter, Elizabeth, and her husband, George Abbott James, commissioned architect Charles Brigham to design a mansion which came to be known as "The Lowlands." Her brother, Henry Cabot Lodge, a Harvard-trained attorney who would go on to serve as a Massachusetts senator and ambassador, brought his bride, Anne Davis, to live at East Point in 1871 in a home that had also been recently built by James. The freestanding billiard room from the original Nahant Hotel, which did not burn down, was used by Henry Cabot Lodge as a library. Part of the estate is now owned by the Town of Nahant, who designated it as Lodge Park in 1988.

During the Korean War, four 90-mm anti-aircraft guns were located in the field between Battery 104 and the tip of East Point. When the Nike-Ajax missile program came into operation at Nahant in 1955, these guns were removed and three missile storage magazines were installed with below-ground storage and above-ground launcher units. The missile battery was operational through 1961 when the base was decommissioned.

After fundraising to landscape and fill in the Nike missile silos, Nahant rededicated the park as Lodge Park in 1994. The fill that was used to cover the Nike base was material dredged during construction of the Deer Island wastewater tunnel.

## **7. Stop 7**

The compass rose in granite indicates the orientation of the impressive scenic views, and was placed in honor of John Anthony Volpe. Over the period of 1961-1977, Volpe served various appointments, including as Governor of Massachusetts, U.S. Secretary of Transportation, and Ambassador to Italy. The meadow just beyond Lodge Memorial's formal lawn captures the biodiversity of this habitat. Among the assortment of flowering plants are clover, tansy, Queen Anne's lace, aster, and milkweed. Meadow voles inhabit this meadow while tree swallows and barn swallows hunt here for insects. Fall brings white-throated and Savannah sparrows. In winter, snow buntings, horned larks, and Lapland longspurs make their home in this windswept environment.

In 1995, a local astrophysicist installed a small solar observatory at East Point, and this is visible atop the hillside that is the vegetation-covered Murphy Bunker. It is used regularly to view sunspots and other solar magnetic structures. The telescope is housed in a 3m diameter motorized Observa-Dome provided by MIT's Lincoln Laboratory. The observatory is open to the public via appointment.

Nahant's mysterious allure has drawn scientists and artist to the area for three centuries. Its geological formations, Castle Rock, the Natural Bridge, and islands of Egg Rock, Pea, and Shags along with the sea, remain popular subjects today. Painters have captured the area's rugged beauty, and an art colony still flourishes here. The Nahant Historical Society has created a catalog of over 400 artists who have captured Nahant's essence, and range from the renowned Robert Salmon to Alfred Bricher to locally-known talents. Bricher's painting of Castle Rock, visible from Canoe Beach, currently hangs in the Red Room at the White House.

One of the most notable local summer residents was Louis Agassiz. His interests focused on the subjects of geology and zoology. He is recognized as being the first person to suggest, through scientific observation, that the Earth had experienced an ice age. Agassiz established a laboratory nearby, and befriended another Nahant resident, poet Henry Wadsworth Longfellow. Agassiz was a creationist who argued against many evolutionary ideas, but his theories eventually received much criticism and gradually lost the favor of public and scientific opinion.

## **8. Stop 8**

Be extremely careful as you walk along the gravel road towards the tip of the point as there is a dangerous drop into a rocky chasm below. As you stand there and look down, you may see one or two concrete structures decaying below. In 1942, the U.S. Navy installed a magnetic indicator loop station, aimed at detecting underwater enemy craft attempting penetration of Boston Harbor. Connected to these buildings, magnetic loops ran along the seabed from the station many miles out to sea half way across Boston Harbor. These loops completed a detection network that coordinated with a similar naval station at Strawberry Point in Scituate, and which extended north across the other half of Boston Harbor. Thus, any large metal objects entering the harbor would be detected.

In late spring and early summer, tree swallows are often seen nesting in the boxes around the park. This is a great vantage point to search for the snowy owl in winter.

## **9. Stop 9**

The thick vegetation surrounding the meadow below Lodge Park supports numerous land birds and the occasional white-tailed deer or red fox, and rarely, eastern coyote.

Lynn farmers and fishermen owned Nahant from 1630 until 1819, but only three families lived here: the Breeds, Hoods, and Johnsons. These residents hosted Bostonians seeking a cool, summer retreat. In 1823, Boston merchant prince Thomas Handasyd Perkins and 126 other investors built the Nahant Hotel, considered the first seaside resort in America, on the "Ram Pasture." By the mid-1850s, popularity encouraged expansion. Unfortunately, the first five months of the Civil War spelled financial ruin and the hotel burned on September 14, 1861.

Built in the neoclassical style, the most impressive outbuilding of the Nahant Hotel was Billiard Hall. Constructed mainly of stone with a portico featuring four Doric pillars, the building was located northeast of the hotel and survived its fiery destruction. The U.S. Government purchased the Lodge estate in 1941 and tore down the hall and the Lodge mansion.