

Gerritsen's Creek: 1997 Archaeological Field Excavations

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Introduction:

In August of 1997 the Brooklyn College summer field program, under the direction of Dr. H. Arthur Bankoff (SOPA certified), was asked by the New York City Department of Parks and Recreation to conduct archaeological excavations at the Marine Park Creek. Located in southern Brooklyn, bounded by Flatbush and Burnett Avenue's to the east and west and Avenue U to the north, this tidal inlet and creek opens into the Atlantic Ocean at the south. The site area under investigation is slated for development of an Environmental Center. The building will stand along the southern side of Avenue U with rear extensions extending along the shoreline.



Figure 1: Marine Park - looking East towards Flatbush Avenue

During the three-week excavation six trenches in the area of the proposed building were opened. The research goal of the field program was to confirm historical documentation regarding the nature of the land composition in the area of the proposed building. Excavations also sought to determine the original shoreline of the creek area and to recover any cultural materials from the Prehistoric through Historic periods. The field crew included graduate assistants and fifteen students from various institutions throughout New York City, New York State, and Hong Kong.

Background:¹

Prehistory of the Area:

Geographically, Brooklyn rests on the western edge of Long Island. To the north are the East River and Long Island Sound, west is New York Bay and south is the Atlantic Ocean. Present day Eastern Parkway was the farthest point to which the last glacier of the Wisconsin period (approximately 10,000 years BP) extended. Glacial movement and erosion created a rough and hilly terrain in the northern areas. South and west from this area, toward the Atlantic Ocean and the Bay, flat, marshy, alluvial plains were created. Towards the east hundreds of small rivers were created along with Jamaica Bay. This bay would eventually play a major role in the fishing and wampum industries (Bolton 1920, Smith 1950).

The defined site area, the shore area of Marine Park Creek, is but a small part of a larger geographic region with a history that begins before European settlement. The European version of history tends to focus on particular events and times within the creek area. However understanding the history of the Marine Park area in its entirety requires consideration of the larger history that shaped this region prior to and beyond European contact.

Permanent occupation of the Lower Hudson Valley began circa 5000bc (Newcomb 1956:56). Prior to this, there is little evidence of occupation (Kraft 1974:4). The existing evidence is limited to a few Clovis type projectile points in Westchester County and Eastern Long Island (Ritchie 1969).

¹ The history section is extrapolated from work by Alyssa Loorya 1996 (“Gerritsen’s Creek and Mill”) and Christopher Ricciardi 1996 (“From Legend To Reality: The History And Archaeology Of The Canarsee Indians of Brooklyn, New York”). Copies of these reports are on file at the Brooklyn College Archaeological Research Center.

Until the beginning of the Middle Woodland Period (ca. 500ad) Native Americans of the area were full time hunters and gatherers (Kraft 1974:23 and Newcomb 1956:60). The area was well suited to a hunting and gathering lifestyle. Mammoths, mastodons, caribou, musk ox, fish, moose, elks, deer, bears, wolves and rabbits populated the region. Additionally, the deciduous forest of the region supported a wide variety of wild flora (Ritchie and Funk 1973: 6-8). There is little evidence for a move toward a more sedentary lifestyle. Unlike other areas, such as the American Southwest where the cultural groups were united in densely populated groups (Fiedel 1992:166-171), within the Lower Hudson Valley region groups remained small and both culturally and materially distinctive (Ritchie and Funk 1973). A majority of the groups were members of the Lenape tribe, an Algonkin speaking nation. The Lenape controlled the coastal area from Southern Rhode Island down through Virginia (Goddard 1974:1).

By the middle of the Late Woodland period (ca. 1250ad) semi-permanent settlements began to appear. These sites were located adjacent to areas of cultivation (Ritchie and Funk 1973:135).

Due to a lack of archaeologically excavated sites much of the early history comes from documentary and ethnohistorical sources. This information is somewhat suspect since Europeans clearly viewed the Native Americans with inherent biases. Early Dutch and English explorers described the Native Americans as “heathens” (Van der Donck 1656) and/or “barbarians” (De Laet 1632) without souls, morals or a fear of God (Wassenaer 1632). If one considers these biases it is possible to extrapolate useful information from early journals concerning the lives and material aspects of the Lenape prior to and following European contact.



Figure 2: Marine Park and Gerritsen's Creek

The Native American settlements of Brooklyn were mainly located around the coastal and adjacent areas (west, south and east). These were the areas of flat plains and grasslands. Bolton's work, at the turn of the century for the Museum of the American Indian, is one of the more reliable sources of information documenting the locations of Native American settlements. According to Bolton, the majority of sites were located along the Atlantic seaboard of Southern Brooklyn and the eastern division between Brooklyn and Queens at Jamaica Bay and vicinity (Bolton 1934:132-147). Only three sites are noted within the interior landscape of Brooklyn. These are believed to have been either ceremonial or meeting house sites (Jaffe 1977). The landscape was cut with numerous paths across Brooklyn and into Queens following the most accessible routes through the terrain. Consequently, once the Dutch and British took control of the area, they used the already existing Native American paths as their own roads (i.e. Kings Highway, Flatbush Avenue and Avenue U) to navigate the area.

Keshaechquern, located in present day Flatlands, was the location of a long house, similar to the Iroquois style. This is said to have been the largest Native American site in Brooklyn (Jaffe 1978) and the center of the Canarsee tribe. It was a place to aggregate for meetings,

ceremonies and war (Jaffe 1979). “Canarsee” was the name of the Lenape Tribe located throughout Brooklyn and parts of Staten Island, Queens and possibly Manhattan. Other large settlement areas were at Merichawik, a fishing village across from lower Manhattan, Massabarkem, a farming village in present day Gravesend, and in Maspath, a large fishing village located on the eastern border between Brooklyn and Queens (Jaffe 1979:46).

The name Canarsee was derived from a translation by the Montauk (Eastern Long Island) tribe, Maereckkaak to the Dutch in the early 1600’s (Jaffe 1979:46). The name has several possible meanings including “fenced in place” (Bolton 1934:149). The reference could refer to the fenced boundary area inhabited by the Canarsee in eastern Brooklyn near Jamaica Bay. This was erected after the Dutch “bought” most of the surrounding lands. Another meaning is “big animal bear band” (Jaffe 1979:46). It is believed that the Canarsee’s spiritual guide was the bear, which occupied parts of Long Island. A third meaning is “the community/common people/ordinary folks” (Kraft 1974:1), a reference to the social aspects of the group. Finally, “land of the cut grass” (Bolton 1934:152), a possible reference to the farming aspects of the group.

It has been widely assumed that the subsistence pattern of the Canarsee incorporated hunting and gathering with limited farming. Based on stone tools recovered from in and around the Lower Hudson Valley region and the eastern end of Long Island, it appears that most of the Native American groups were living exclusively as hunters and gatherers from 10,000b.c. to approximately 1000a.d. (Ritchie 1969). Deer, bear, raccoon, skunk, squirrel, porcupine, opossum, otters, lynxes, minks, wild-cats, wolves, martens, muskrats wild geese, turkeys, and pigeons were hunted for both food and skins to make clothing (Harrington 1909, Jaffe 1979:47, and Newcomb 1974:16). From 1000ad onwards their subsistence changed to include limited

agriculture of cultigens such as corn, squash, beans, pumpkins, sunflowers, and tobacco (Newcomb, 1956:63). Wild plants that were gathered included: groundnut, beans, katmis, fruits (including onions, cabbage, grapes, strawberries, gooseberries, blackberries, raspberries, plums, huckleberries, cranberries, hickory, hazelnut, and chestnuts (Jaffe 1979:48 and Newcomb 1974:18).

Documentary evidence suggests that the Canarsee were conducting this limited farming at the time of the Dutch arrived (Van der Donck 1656 and Jaffe 1979). Semi-permanent villages, that could have been occupied by as little as 20 and upwards of 150 people (Becker 1995), were surrounded by cultivated gardens and cleared fields. Many of the Canarsee lived in small extended families that were connected by a sachem and a matriarch (Becker 1984). Slash and burn techniques were possibly used to clear the area. According to Jaffe, this was similar to other Native American groups who lived in the Woodland areas (Jaffe 1979:47). Field sizes seemed to be rather small, with two to three acre “lots” per family or group (Newcomb 1974:12-13). Once the spring crops were planted, it is theorized that the family/group would then move to another location nearer to the shoreline to harvest and process fish for the coming winter months (Jaffe 1979:47). Finally they would return in the fall to harvest their crops and move to their winter shelters (Smith 1950 and Ritchie and Funk 1973:135).

Ceci proposed that until contact, the Canarsee, as did all Long Island Native Americans, still relied on hunting and gathering for the majority of their subsistence (Ceci 1980). Based on her excavations of a handful of sites on Long Island, the archaeological evidence revealed that domestication of animals and the cultivation of corn did not occur until after the arrival of the Dutch. It is her belief that the fur and wampum trade with its accompanying aspects (i.e. material possession, currency, land ownership, etc.) sparked the Native Americans to change

their subsistence patterns and dedicate more time to trade. (Ceci 1982). However, the archaeological evidence would be a result of poor site formation processes and not an indication of a lack of farming since cultigens have been found at pre-contact sites on Staten Island. Since there has yet to be a major excavation of a Native American site within this area using modern recovery methods (i.e. floatation) the possibility exists that the evidence for farming exists but has remained unrecovered.

Based on studies in Central Long Island, houses were generally round, except for long houses and wigwams, supported by a wood frame with thatched roofs and wattle walls (Brinton 1969:51), houses were organized into small villages (Newcomb 1956:65). A central hearth was located in each dwelling (Orchard 1928). Houses were built in groups and not in communities (Brinton 1969:51). Jasper Dankers described the long house, located in present day Fort Hamilton, in 1679 as being 60 feet long and 15 feet wide with reed and bark used as the siding. The opening to the house was small so that one had to duck his head to enter and there were three hearths burning inside. It appeared to Dankers that between 20 to 22 people could have lived within (Dankers 1679 as reported by Kraft 1984: 126).

Unlike many other Native American groups of the area, the dead were not buried within the confines of the house. Instead they were buried in other areas separate from the dwelling areas, in burial mounds (Lopez 1973, Becker 1984:19 and Brinton 1969:55). The bodies were then surrounded by wood creating the effect of being in a long house (Anonymous 1815). Burials were reported to have been near Marine Park (at the Ryders Pond Site), however, no definitive information is known (Lopez and Wisniewski 1971). Grave goods that have been recovered in Manhattan, the Bronx, Staten Island and parts of Long Island include clothing, pots,

kettles, platters, spoons, wampum, food, personal possession such as jewelry (Anonymous 1815) and in some limited cases, guns (Denton 1670).

The Contact and Historic Period:

The earliest European explorers in this area all marveled at the natural beauty they saw. Verrazano called it a region more beautiful than the Garden of Eden would have been (as quoted in Wroth 1970:138). Hudson believed the area to be one of the natural wonders of the world (Heckenwelder 1819:72). Finally, Van der Donck described it as a land full of fresh water, good farm land, an abundance of fruit and grapes and more trees than needed to build an entire fleet of sailing ships (Van der Donck 1656).

First contact between the Dutch and the local Southern Manhattan population, the Canarsee, (according to Bolton 1934:132) was the beginning of the end of Native American culture and life in the Lower Hudson Valley region. In less than one hundred years the Canarsee's population was reduced by several wars with the Dutch, the English and other Native American groups (Trelease 1960:79). Diseases such as small pox also contributed to the decline in population (Kroeber 1939:66). In 1692 Charles Lodwick noted that most of the Canarsee were dead due to war, disease and an addiction to alcohol (especially rum) (Lodwick 1692). Over the next one hundred years the remaining members of the Canarsee tribe either assimilated into the outlying regions of the area or fled the area moving westward (Brasser 1971:66-84). They traveled from Manhattan into Brooklyn, Staten Island, then New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Missouri, Arkansas, Kansas finally settling in Oklahoma on a reservation set aside for them by the Federal Government (Kraft 1986:234).

It was soon after the “transfer” of Manhattan, that the Canarsee realized they had a very different notion about land and ownership than the Dutch. With both groups maintaining and agricultural subsistence base, land and its usage was vital to the survival of each group (Trelease 1962:138). However, according to Canarsee ideology the land was never owned and there was no concept of private property. The land was there for all to use, and use fairly (Heckewelder 1801). The Dutch, although respectful of the Native Americans rights of prior ownership, did not understand why the Canarsee were constantly bickering over land they had sold, “lawfully and willingly”, to the Dutch. White settlers were angry at the Canarsee who continued to farm and remain on land that had been sold. The local residents went as far as to petition Peter Minuet, then governor, (in 1628) to allow them to go to war with the Canarsee over land rights; Minuet refused (Rhonda 1984:13-14). By 1630 the Canarsee insisted that all bills of sale for land include a clause that allowed the Canarsee to remain in a specified area to continue farming and living according to their lifeways (Trelease 1960:62).

Contact had brought rapid changes in Canarsee lifeways. Their goals no longer focused on hunting, gathering and raising limited crops. The Dutch instituted the fur trade between themselves and the various Native American tribes. Fort Orange was set up as a large trading center to conduct “business” with the Iroquois and Mohawk tribes. This was in direct competition with the tribes of the Lower Hudson Valley who did not have as many pelt resources as the Northern and Central New York tribes did (Bolton, 1934). Using wampum beads as currency, the Canarsee traded with and purchased items from the Dutch. As the males of the tribe increasingly spent their time hunting for pelts or creating wampum beads, the women began to bear the burden of providing subsistence for the family (Jaffe 1979:53-55).

Also during this period the Dutch began to sell arms to the Mohawk and other Iroquois groups. By the mid 1630's the Mohawk had invaded the lands of the Canarsee (Trelease 1960:48) and easily defeated them (Kroeber 1939:70). Instead of taking over, the Mohawk demanded tribute in the form of wampum. This was to be their bargaining tool with the Dutch who eagerly sought the beads (Jaffe 1979:55 and Engelbrecht 1985:163-168). Peace was finally arranged when the Dutch promised to protect the Canarsee (Kroeber 1939:69). At the same time of these Indian conflicts, the Dutch began to further their interest in Brooklyn and Queens. A new phase of Dutch occupation began as more settlers moved into the area to capitalize on the ever expanding fur trade (Trelease 1962:139).

During the late 1630s, into the early 1640s, most of Brooklyn and Queens was "sold" off (Bolton 1922:144). Chief Cacapetyeno sold present day Flatlands and Flatbush to Van Corlaer and Van Twiller in 1636. Makeopaca, the area that would become Gravesend, the first English settlement of New Amsterdam, was sold in 1645 (Bolton 1934:271-272).

The appointment of Willem Kieft as Governor in 1640 was further and ultimately detrimental to the Canarsee. Kieft decided to exact tribute from the Canarsee since the Dutch now protected them from the Northern Mohawk and other Iroquois groups. The tribute was to be paid with wampum and furs. This essentially bankrupted the Canarsee and led to the first of three armed "rebellions" against the Dutch. Kieft's war (1643-1645) was the most deadly with the extermination of over 200 Canarsee men in a one-night massacre (Trelease 1960:79). Officials in Holland were shocked to learn of Kieft's policy and he was recalled in 1645. Following this was a ten-year period of peace (Trelease, 1962: 140). Two additional wars were the Peach War of 1655, when several Native Americans took up arms against several Dutch buildings and the Esopus conflicts of 1659-1664, a series of several small arms incursions

between the Dutch and the remaining Canarsee over what the Canarsee deemed unfair land purchases (Trelease 1962:139).

In the period following Kieft's War the Canarsee began to sell off what remained of their land. The area known as Nyack (consisting of all of the southwestern half of Brooklyn) was sold in 1652. Within the agreement, the Canarsee swore never to return to the area. Guttaquoh sold present day Coney Island in 1654, followed by Wawmatt-Tappa and Kackawashe who sold Barren Island in 1664. Maganwetinnenim sold what would become the towns of New Utrecht and Old Brooklyn in 1670. In that agreement the Dutch allowed the remaining Canarsee to live and farm in the area known today as Canarsee (on the Brooklyn/Queens boarder) and Marine Park (also known as Gerritsen's Bay located in southern Brooklyn). Finally by 1680 Mashauscomacocke sold the remaining lands of the Canarsee and Gerritsen's Bay to the English thereby ending the rights of the Canarsee to own any property (Bolton 1922:155) in New York.

Marine Park History:

Since Dutch colonization the area of Marine Park, specifically the creek area, has been known by a variety of names. Originally called Strom(e) Kill, by the early or mid-1800s the area was known as Gerritsen's Creek and Mill Pond. The area was named for Hugh Garretson, one of two major landowners in the area, who owned a farm, and mill, and his descendants (later spelled Gerritsen). It was also referenced on some maps as either Gerritsen's Bay or Ryder's Pond (Bolton 1922:Map IX). Finally with the completion of the park by the City of New York in 1934, the area came to be known as Marine Park and the Marine Park Creek.

Prior to the construction of the public park in the early 1930s the Creek extended past Avenue U. It cut across the present day park, past Fillmore Avenue flowing north to Quentin

Road (Bolton 1922:Map IX). By 1992 the creek, which flowed through the property of several people, was filled at its narrowest and shallowest points from Quentin Road to Fillmore Avenue. The creek was filled between Fillmore Avenue and Avenue U by 1934 (Black 1981:76-80). Today, Marine Park is bounded by Fillmore Avenue on the north, Avenue U on the south, East 33rd Street to the west and Stuart Street to the west. It has long been said that the material used as landfill came from various bridge and tunnel construction projects around the City.

Two archaeological studies have occurred at Native American sites within the Marine Park area.

In the early 1970s Julius Lopez was given a collection of artifacts from a site reportedly excavated in southern Brooklyn. In the late 1890s a shell midden site was uncovered in the Marine Park section of Brooklyn. D.B. AUSTIN and members of his family excavated the site. Although mostly a prehistoric site, some historic artifacts were recovered (Lopez and Wisniewski 1971). Gun flints, iron pots, glass trade beads, metal spoons, clay pipes (dating to the mid nineteenth century), and, two coins (dated to 1758 and 1787). No ceramic artifacts were recovered (Lopez and Wisniewski 1972). These items could have belonged to the Canarsee, or they could have been deposited at the *site* after the Canarsee left. However, this site is suspect since there are so few historical items compared to the several thousand prehistoric stone artifacts recovered. There should be some kind of record of material remains from the Post Contact Period since Europeans were living in the area from the 1620s onwards. Perhaps the investigator discarded the “recent” materials and only kept and reported on the Native Americans artifacts, but it is impossible to know this. The fact that the site was not excavated using modern techniques (i.e. stratigraphic excavation) and limited documentary research, allows for the

possibility that the collection is not from the specific site area, but rather a collection of Native American artifacts that was littered around the area of Canarsee settlements.

The only dedicated academic excavation to occur in the Ryder Pond/Marine Park area was during the summer of 1979. H. Arthur Bankoff and Frederick Winter of Brooklyn College, CUNY, directed the excavation. The excavations were undertaken prior to a proposed land filling of the remaining creek area. This landfilling never took place. While a portion of the excavated materials were found in a mixed context, three undisturbed Native American areas were uncovered. Two of the areas were shell middens and the third consisted of shells, Native American pottery and beads. All of the material remains dated to the late Woodland Period (circa 1400 ad) (Bankoff and Winter 1979.)



Figure 3: Native American sherd c. 1400 ad

Van Wyck believed that this area held the most undisturbed traces of Native American occupation in New York City (Van Wyck 1924:11). He further stated that a village, with a long house, existed on the shores of Strom(e) Kill (Van Wyck 1924:139). In the early 1920s Van Wyck reported that shell banks could still be seen at low tide all around the Creek. He quotes John B. Lott (a landowner at the turn of the century on the eastern side of the Creek) that numerous projectile points and discarded shells from the wampum industry could be found along

the shoreline areas of the Creek (Van Wyck 1924: 649). However, long before Schiffer proposed his theory on site formation processes (Schiffer 1983), Van Wyck noted that the constant action of the water was eroding away these traces of the Native Americans (Van Wyck 1924:10).

It appears that from the time of the first settlements by Europeans, this area held great interest. “The wampum industry on Bergen Island and in the present Gerritsen’s mill pond, may have determined the site of the first white settlement on Long Island, and it may have determined the place of spending the two winters, 1614-15 and 1615-16” (Van Wyck 1924:655). According to Ditmas the Indian deed of Barren Island, which incorporates the majority of present day Marine Park, states the lands and waters belonged to Hugh Garretson. Transfer of ownership of this area occurred prior to 1645. It is H. Garretson’s descendants, “the Gd. [Gravesend] family of Garretsens, who owned a farm and tide mill in said town located on the Strome Kil, the boundary between Gd. and Flds. [Flatlands] known as Gerretson’s mill” (Ditmas 1909:95.) The property in question remained in the immediate Garretson family until 1876. This information is based upon the line of inheritance as stated in family wills (J. Gerritsen 1765; S. Garritsen 1822; J.S. Gerretson 1864; S.J. Gerretsen, 1876.) It was Samuel J. Gerretsen, who in 1864 deeded a portion of his property to his son-in-law, Abraham D. Polhemus, who in turn sold a portion to Helen Herriman, Gerretsen’s daughter. At Gerretsen’s death the entire property came into the ownership of his 2 daughters Mary C. Polhemus and Helen Herriman. It is under these two names that the property appears on maps dating from c.1880 onward (Ditmas 1909). Various descendants of Johannes Lott (including Hendrick I Lott in the early nineteenth century and John B. Lott in the early twentieth century) owned the eastern half of the property, between the late eighteenth through the early twentieth centuries. Within the tidal inlet of Gerritsen’s Bay is the

island sometimes known as Barren Island. It is also commonly known by two other names, White Island and Mau-Mau Island (Cornell 1997). This island has been reported as being a center of the wampum industry and remained uninhabited by Europeans until the late eighteenth century (Seitz and Miller 1996: 228-230). Members of the Schenck family who built a mill on the island and a bridge to the mainland (Stayton 1990:77) owned the island. By the mid-nineteenth century various businesses were set up on the island. Most of these involved fertilizers, fish oil, glue and garbage disposal industries (Seitz and Miller 1996:229). The City of New York purchased all of the property in tidal creek area by the early 1930s. Their plan was to turn the area into a public recreation facility (Black 1981).



Figure 4: Gerritsen's Mill - looking south c. 1900

It was the homestead and mill of the Gerritsen family that the area is best known for. According to Van Wyck, the Gerritsen Homestead and mill, which were still standing as of his 1924 history, were on the “westerly side of Strom Kill and south of Avenue U” (Van Wyck

1924:xxxviii). He describes the mill as one of the last tide mills in Kings County and the largest the author had seen on Long Island. Further away from the present day Avenue U boundary of the inlet, the remains of a dam can be seen. This dam was most likely constructed around the time of Gerritsen's Mill as a means of controlling the water flow and created the Mill Pond. Additionally, the remains of a foot bridge and boardwalk type structure, which were constructed to connect the mill to Avenue U, can be seen. The possibility exists that the footbridge was part



Figure 5: Footbridge leading to Gerritsen's Mill

of the original path of Avenue U prior to the grading, filling and subsequent construction of the roadbed. By 1934 the mill at Gerritsen's Creek was no longer standing based upon a plan of development for Marine Park which cites 'improvements undergone and completed since 1934.' The mill does not appear on this plan, in place there is a parking area that was never developed. Tony Cucchiara, Special Collections Manager of Brooklyn College's local history library, has stated that the mill was destroyed by fire in the late 1920s or early 1930s (Cucchiara 1996). A

survey undertaken in 1996 by Loorya and Ricciardi identified the remains of the mill and the dam (Loorya 1996 and Ricciardi 1996). At extreme low tide the remains of the various wooden structures are visible.

With this brief background in mind, and in conjunction with the requirements of the Environmental Center, the Parks Department along with BC-ARC determined that a sufficient history of the area existed to warrant archaeological testing to insure that culturally sensitive areas would not be destroyed. One cannot rely fully on the documentary record alone. Under the guidelines of The New York City Environmental Quality Review Act (CEQRA) 1977, as amended, an archaeological investigation of the area was not required since the area of the proposed Environmental Center rest upon at least fifteen feet of landfill. However, Park officials realized that the possibility of uncovering an undisturbed archaeological site in and around the area always remains.

SITE MAP PAGE - FIGURE 6

The Archaeological Project:

As previously stated, the six trenches were positioned in and around the area that was to be directly disturbed by the construction of the Environmental Center. The trenches were 2 x 2 meters square and all the dirt removed were sifted through ¼ inch wire mesh. Teams of four to five persons excavated each trench.

Since no fixed point was located within our project area to be used as a datum point, nor is there a reference point that the Parks Department uses in Marine Park, the site datum was set up on the telephone poll directly in front of the site. Two subsidiary datum points were positioned within the site area. All trenches were designated with the acronym of MP (Marine Park). For trench and site locations please refer to the site map (Figure 6).

Maps provided by the Parks Department revealed that the area where the Environmental Center was to be constructed consisted of large amounts of fill. It was determined from the topographical maps that at least sixteen feet of fill was used to raise the level of the water line to the present day street in some areas of the excavation site.

Aside from the goals stated in the introduction, the project hoped to confirm the amount of filling, the material used and, if possible based upon the materials recovered within the matrix of the fill, the date(s) of deposition.

The Trenches:



Figure 7: MP I - stratigraphy revealed

MP I

Located where the main wing of the Environmental Center will go, this trench was positioned to confirm the documentary and historically acknowledged record that this area is covered by at least sixteen feet of landfill. It was fairly certain that this trench would not reveal any significant archaeological remains. Just below the topsoil layer (approximately ten centimeters) began the large fill deposits. This matrix consisted of red clay and soil. Mixed throughout were large amounts of modern twentieth century artifacts (metal, iron, glass, coal, clinker and bricks remains).

At forty centimeters in depth the trench was sectioned into a 1 x 1 meter rectangle to determine the depth and levels of the fill. Overall the trench was excavated to a depth just over one meter below surface. The distinctive red clay and soil matrix was interspersed throughout the trench.

MP II



Figure 8: MP II - Unit 10

This trench was located in an area that according to historic maps should have been part of the original shoreline. Although the matrix of this trench was very different from MP I, it was determined that this area also consisted of landfill. Instead of the red clay and soil, this area contained light gray sand. Mixed throughout were large amounts of coal, clinker, brick, plaster, concrete and asphalt road pieces.

It appears that some form of roadbed or pathway is present in this trench. A dark, hard packed macadam layer was uncovered approximately 50 centimeters below the surface. It is an uneven layer that follows the general uneven contour of the area.

Throughout the trench late nineteenth to mid twentieth century ceramics and glass remains were recovered. It was believed that the increasing presence of clam and oyster shells within the sandy layer indicated that we had uncovered a deposit below the landfill. However, this proved to be false as the following layer contained large asphalt pieces of road. The trench was excavated to almost two meters below the ground.

MP III



Figure 9: MP III - Unit 6

This trench was positioned to attempt to uncover the pre-fill shoreline. The trench yielded only light to dark gray sand with minimal artifacts. It appears that this area was part of a tidal flat at some point. A couple of pieces of water-worn glass as well as some coal and clinker was recovered. The stratigraphy of the trench indicates the movement of water depositing sand throughout time. The trench was excavated to seventy-five centimeters. Core testing was conducted in the trench and it was determined that the sand layer extended down at least another meter before reaching the water level.

MP IV



Figure 10: MP IV - Unit 5

Positioned near the present day shoreline, this trench is in the area of one of the proposed wings of the Environmental Center. Large amounts of modern day trash were located throughout the first ten centimeters of the trench. Below this modern garbage were the remains of late nineteenth to early twentieth centuries materials. The faunal remains of small rodents and some possibly fowl, were recovered. This trench was excavated to sixty-five meters

MP V

This trench was positioned eighteen meters to the northeast of MP II in an attempt to further reveal the original shoreline. It was believed that this area contained a minimal amount of fill.



Figure 11: MP V - Unit 5

However, surface fill appeared just below the topsoil level. Approximately twenty centimeters below surface a large piece of metal walkway divider was uncovered. This small fence most likely acted as a pathway divider between the grass and a path. Due to some destructive action at some point prior to the filling and grading early in the century, part of this fencing was destroyed. It abruptly ended approximately half way through the trench. A wooden beam that also may have served as a pathway divider was uncovered. This ran the length of the trench and was badly decayed.

Little in terms of material remains that date prior to the early twentieth century were recovered. As with the other trenches the majority of the remains were coal, clinker, and bricks. Some pieces of porcelain (Chinese) and transfer-printed (English) were recovered. The pattern on the Chinese was Canton while the transfer-prints depicted the Willow design.

This trench was excavated to sixty-five centimeters below surface.

MP VI



Figure 12: MP VI - Unit 6

Located five meters north of MP IV, the placement of this trench was situated to determine the shoreline in relation to the tidal flats that comprised MP III and IV.

This trench consisted of organically rich soil. Crab grass was removed from the surface and the trench was positioned between three large trees. The matrix consisted more of topsoil than to sand.

The artifacts from this trench date between the mid-nineteenth to the mid-twentieth centuries. Transfer-printed pearlwares (in the Willow pattern), hand painted pearlwares, shoe polish bottles, blob top bottles and a glass syringe were recovered. The trench was excavated to fifty centimeters below the ground surface.

It should be noted that four of the six trenches were not excavated to a point of completion as determined by the archaeologists on site. Two days prior to the end of the field season, the site was vandalized and destroyed. Throughout the three-week program the site was

constantly disturbed. Although the Parks Department provided wooden snow fences (with metal support bars) and caution tape, the trenches were constantly victims of abuse.



Figure 13: MP II – Vandalized

Usually this manifested in garbage being thrown in to the trenches and/or the fencing being knocked in, however, the final act was a complete destruction of the fences and the metal support poles and significant damage to the rocks and stratigraphy of the walls of each trench. Park Rangers and the New York City Police Department were notified of the vandalism and a report was filed.

Conclusions:

Even with the destruction of the trenches prior to completion, it was obvious that three of the six trenches (MP I, II, V) revealed evidence of major land filling and grading. MP III, IV and VI did not reveal much landfill, but instead were areas that have been significantly modified due to action of the tides.

Based on the excavation, it has been determined that no impact on the archaeological record will occur with the construction of the Environmental Center. The majority of the artifacts date to the early twentieth century and were recovered throughout the modern fill. No pre-nineteenth century materials were recovered.

Although this specific section of Marine Park is free of culturally sensitive materials, this should not set the precedence of never having to work within the confines of Marine Park again. Across from the excavation site are the remains of Gerritsen's Mill, which is clearly visible at low tide. Additionally, the approximate location of the Ryders Pond site remains undisturbed on the western side of the park. This is an area of rich potential for archaeological study and in the future, if necessary, should be investigated.

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