

ARCHAEOLOGICAL EVALUATION AND SENSITIVITY
ASSESSMENT OF THE PREHISTORIC AND CONTACT PERIOD
ABORIGINAL HISTORY OF THE BRONX, NEW YORK

by

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I. INTRODUCTION

This study presents the results of research conducted on the environment and prehistory of the Bronx, New York. The research was conducted in order to prepare a planning document that will assist the New York City Landmarks Preservation Commission in understanding and evaluating the prehistoric archaeological potential of portions of the Bronx.

The document contains: 1) an overview of selected aspects of the Bronx environment; 2) a synopsis of the prehistory and aboriginal Contact Period history of the Bronx; 3) recommendations for the identification, evaluation, and treatment of the prehistoric archaeological record in the Bronx.

Also included as part of this document are: 1) an annotated bibliography of works relating to the prehistory of the Bronx (Appendix A); 2) maps showing the locations or former locations of known Native American sites and artifact finds in the Bronx (Figures 1a-1d) including a key (Appendix C) identifying and providing other pertinent information on those sites. Full bibliographic information for the citations provided in the key can be found in Appendices A or B; 3) an annotated bibliography of cultural resource investigations conducted in the Bronx as of this date (Appendix B). Maps showing the locations of those studies are included as Figures 2a-2d; 4) maps showing the ca. 1900 locations of former marsh areas and water courses (Figures 3a-3d); and 5) maps indicating the general prehistoric archaeological sensitivity of portions of the Bronx (Figures 4a-4d).

The base maps used in the production of the Figures noted above (numbers 2-5) are the four United States Geological Survey 7.5 minute quadrangle maps (1979a-1979d) that include portions of the Bronx (Flushing, New York; Central Park, New York-New Jersey; Yonkers, New York-New Jersey; Mount Vernon, New York).

A. Methodology

This study involved documentary research on the prehistory and environment of the Bronx and a "windshield" survey of selected portions. Research for the project was conducted at the New York Public Library, Local History, Map, and General Research Divisions; New York Public Library, Westchester Square Branch; Elmer Holmes Bobst Library, New York University; the New York City Municipal Archives; the United States Army Corps of Engineers, New York District; the New York City Landmarks Preservation Commission; Wave Hill Park; the Bronx County Historical Society; the Huntington Free Library; and the Westchester County Historical Society.

The windshield survey was conducted on May 27th and 29th, 1995.

Requests for technical assistance (search of site files; opinions of sensitivity of project area; etc.) were made to the staffs of the New York State Museum and the New York State Office of Historic Preservation (SHPO). The staff of the Office of Historic Preservation replied that due to the size of the project area (the Bronx) they could not provide a sensitivity assessment or conduct a site file search. They invited the archaeologist conducting this investigation to review their up-to-date site files to obtain the information requested. This review was not conducted for this report due to time and budget constraints. Copies of prior versions of the SHPO archaeological site location maps are in the research collections of the New York City Landmarks Preservation Commission and have been previously reviewed.

The New York State Museum has not responded to the request for technical assistance as of the date of this report.

During the course of research, I spoke by telephone with Mr. John Vetter, Regional Archaeologist for the United States Environmental Protection Agency; Dr. Allan Gilbert, Department of Anthropology and Sociology, Fordham University; Dr. Nan Rothschild, Department of Anthropology, Barnard College; Ms. Valerie DeCarlo, United States Department of the Interior, Archaeology Advisory Counsel and former Director of the Wave Hill Archaeology Project; Ms. Laurie Burrows, Former Assistant Director of the Wave Hill Archaeology Project; Ms. Nancy Brighton, United States Army Corps of Engineers, New York District; Ms. Julie Mirsberger, Van Cortlandt Manor House Museum; Mr. Arnold Pickman, Private Archaeology Consultant; Ms. Andrea Gaines, Heye Foundation Research Library; Ms. Mary Davis, Huntington Free Library; and staff members of the New York Botanical Garden Research Library.

Based on the documentary research and windshield survey the prehistoric period archaeological sensitivity of the study area was assessed (Figures 4a-4d). Assessment of sensitivity was based on the location of known archaeological sites reported in the literature as well as a consideration of the topographic and physiographic characteristics of the study area.

II. THE ENVIRONMENT OF THE BRONX - AN OVERVIEW OF SELECTED ASPECTS

This section provides an overview of certain aspects of the environment of the Bronx. It will provide background information on the area and insight into some of the principal subsistence resources that were available for use by aboriginal groups.

A. Geology

The Bronx is part of the coastal or seaboard lowland section of the Manhattan Prong subprovince of the New England Uplands physiographic province (Van Diver 1985; Rogers, Isachsen, and Nyahay 1990; Isachsen, Landing, Lauber, Rickard, and Rogers 1991). The Manhattan Prong encompasses Manhattan, the Bronx, most of Westchester County, and part of Putnam County (Van Diver 1985:79). The coastal lowland is the sloping margin of the New England Uplands. In New York State, the lowland is a narrow strip, approximately six to ten miles wide, adjacent to the East River and Long Island Sound (Fenneman 1938; Van Diver 1985). Its elevation is generally between 20 and 250 feet above mean sea level (Fenneman 1938).

The coastal lowland section of the New England Uplands should not to be confused with the Atlantic Coastal Lowlands physiographic province which is located south of Manhattan Island and includes Long Island (Van Diver 1985).

The Manhattan Prong is characterized by northeast trending ridges carved from Grenville age (1100 million years B.P.) gneisses and Cambrian-Ordovician age (500 million B.P.) schist and quartzite and shallow valleys eroded into Cambrian-Ordovician age limestone and marble (Van Diver 1985:79). Westchester Creek and the Bronx River flow through some of these valleys (Shonnard and Spooner 1900:11; Gratacap 1904).

B. Surface Geology

The New England Uplands, including the coastal lowland section, were greatly affected by the Wisconsin glaciation. Glacial till and outwash sediments cover most of the province. In addition, glaciofluvial events created kames, kame terraces, outwash plains, scoured rock surfaces, and eskers throughout the area (Fenneman 1938). Surface evidence of glaciation was formerly common in the Bronx but has been mostly destroyed by development (Schuberth 1968).

Evidence of glacial action is readily seen in the New York

Botanical Garden and Pelham Bay Park, two of the largest relatively undeveloped tracts in the Bronx. Glacial pot holes and scoured bedrock surfaces are common. Striations are also visible on some of the bedrock exposures in these areas. Glaciofluvial gravels are present in the major river valleys and waterways of the Bronx (the Bronx River, Hutchinson River/ Eastchester Creek, and Westchester Creek) as well as some of the smaller valleys such as Tibbetts Brook (Schuberth 1968). Late Pleistocene or Early Holocene aged peat deposits were also encountered in the vicinity of Spuyten Duyvil Creek and the Harlem River when the Harlem River Ship Canal was constructed in 1885. It is possible that submerged peat still exist along that waterway.

C. Flora and Fauna

The predominant pre-contact period habitats present within the coastal lowland section of the New England Uplands were salt and brackish water beaches, marshes and meadows and upland forest (Shelford 1974). Tidal flats were located in some areas and fresh water marshes would have existed further back from the coast (Robichaud and Buell 1973:115). In many localities salt, brackish, and fresh water marshes grade from the open shore to the oak-chestnut climax forest.

Various forms of sea plants would have been exploitable from the Long Island Sound and East River shoreline in some locations. Such plants include sea lettuce, Irish moss, dulse, laver, tangle, long-stemmed kelp, edible kelp, and sea rocket. Other plants that were probably important in economic/subsistence terms would have been present along the shoreline in primary dune zones. Such plants include beach plum, drawf bilberry, and various species of wild rose.

Saltwater and brackish water marshes were formerly commonly along the entire shoreline of the Bronx, also occurring inland for a short distance along the banks of tidal creeks such as Westchester Creek, the Bronx River, and the Hutchinson River/ Eastchester Creek. Chrysler (1910) provides a list of 38 plants found in coastal lowland provinces in salt and brackish water marshes and meadows in the order of their occurrence in soils with decreasing salt content. All are or were formerly present in the Bronx. The first four are glasswort, found nearest to salt water, sea lavender, salt reed grass, and salt water cord grass. The composites marsh elder and groundsel occur near the center of Chrysler's list followed a little further down by cat-tails. The last four salt tolerating plants are swamp-rose, arrowhead, lizard's tail, and bur-marigold.

Freshwater marshes were present along the edges of lakes, ponds, rives, and wherever depressions of land were kept flooded on a

regular basis by high water tables (Robichaud and Buell 1973:105). In pre-contact freshwater marsh environments, the plant community was typically dominated by reed grass, cat-tail, and/or wild rice (the latter made practically extinct in the area due to the effects of pollution). All of these would have been important economic plants for Native American groups. Other plants that would have been common in pre-contact freshwater marshes were low-growing grass-like sedges, bulrushes, arrow-arum, blue flag, spike rush, bur reed, water dock, marsh fern, orange touch-me-not, and the swamp milkweed (Robichaud and Buell 1973:125-127).

The remaining portions of the pre-Contact Period Bronx are characterized as upland forest because the most abundant or dominant type of vegetation present were mostly tall growing, deciduous, broadleaf trees (Robichaud and Buell 1973:106). The forests are specifically described as Oak-Chestnut Forests composed primarily of mixed oaks (white, red, and black) with some chestnut trees also present on drier slopes (Robichaud and Buell 1973:106). Beech, several varieties of hickory, sugar maple, white ash, and black cherry would also have been numerous (Shelford 1974).

Tidal flats as well as salt and brackish water marshes and meadows still exist in some areas within the Bronx. The oak-chestnut forest has been mostly eliminated from the area although small stands remain in the New York Botanical Garden and, possibly, in Pelham Bay Park. Small fresh water marshes are also found in those locales.

Pre-contact faunal species usually present within along the marshes and meadows included various invertebrates, migratory water fowl and other birds, muskrat and small rodents, rabbit, raccoon, otter, skunk, opossum, and white-tailed deer (Shelford 1974; Gosner 1978; Roberts 1979).

Within the pre-contact upland forests, game birds, small mammals, white-tailed deer, bear, and during at least a portion of the prehistoric period, elk were present (Shelford 1974). In the forest's freshwater stream and marsh habitats were found mussels, fish, certain amphibians, reptiles, migratory fowl, and semi-aquatic mammals (Shelford 1974). Anadromous fish would have been present seasonally within the Bronx via the Hudson River, East River and Long Island Sound with some species migrating up the Bronx River, Westchester Creek, and the Hutchinson River/Eastchester Creek, as well as smaller tributaries, to spawn.

Shellfish were one of the most important prehistoric subsistence resources found along the shoreline of the Bronx. The species commonly utilized by Native Americans were oysters, soft shell clam, hard shell clam, scallops, and various marine snails.

Oysters are bivalve molluscan pelecypod filter feeders. Only one species is native to the east coast of the United States. The Virginia oyster (Crassostrea virginica) is found in bays, inlets, and estuaries. It cannot survive long in fresh water needing at least ten parts per thousand (1%) of salinity. It requires a surf-free bottom and needs to be attached for support to some object (rock, root, another oyster, shell, etc.) or it may sink into bottom sediments and suffocate or starve (see Jacobson and Emerson 1961; Gosner 1978; Roberts 1979). The soft portions of oysters are completely edible, raw or cooked.

Mya arenaria (soft shelled clam) is found along the east coast of the United States from the Arctic to North Carolina (Jacobson and Emerson 1961). Known as the soft-shelled clam, long-necked clam, long clam, and the sand clam this species inhabits the tidal shoreline of salt water bays, inlets, and estuaries. It is usually buried in a deep burrow in mud, sand, or gravel bottoms with only its long siphon sticking out and it is frequently exposed at low tide (Gosner 1978; Roberts 1979). Fully edible cooked or raw, although tougher and sandier than oysters or hard shelled clams, modern culinary taste usually requires that the clam be steamed or otherwise cooked before being eaten.

The common hard shelled clam (Mercenaria mercenaria [formerly Venus mercenaria] - see Jacobson and Emerson 1961) is also referred to as the quahog, little neck, or cherrystone clam (Gosner 1978; Roberts 1979). It lives in muddy bottoms in shallow salt water bays, inlets, and estuaries from Virginia to Maine. Mercenaria mercenaria is also the clam from which wampum was manufactured during the Contact Period. This use of the clam is the reason Carl Linneaus assigned it the species name mercenaria which is from the Latin mercenarius, meaning wages. All soft parts are edible either cooked or raw.

The common bay scallop (Pecten irradians) inhabits primarily eel grass environments in estuaries, shallow bays, and inlets from Cape Hatteras to Cape Cod (see Jacobson and Emerson 1961; Gosner 1978; Roberts 1979). All soft parts are edible raw or cooked, but contemporary culinary taste focuses on the single, large and powerful abductor muscle (called the "eye").

Marine snails are gastropod mollusks. About twenty species inhabit tidemarch and shore areas of estuaries along the East Coast but their abundance is apparently staggering (Gosner 1978). Snails obtain their food by the action of a rasp-like organ called a radula (see Jacobson and Emerson 1961; Roberts 1979). Some species use the radula to scrape algae from rocks and others use it to drill through shells of other mollusks in order to eat them. The soft parts are edible, raw or cooked (see Jacobson and Emerson 1961; Roberts 1979), but it requires a bit of effort to extract the meat from the shell. Snails

probably did not serve as a primary food source for Native Americans.

Species of Busycon are the largest of the salt water snails found in shallow waters, including estuaries, along the east coast of the United States. Their range extends from Florida to Cape Cod. The principal species found in the New York area are Busycon canaliculatum (channeled whelk) and Busycon carica (knobbed whelk). Whelks feed primarily on bivalves which they attack by inserting their anterior canals between the prey's valves and using their shells as a hammer to chip away an opening (Jacobson and Emerson 1961; Gosner 1978). Although species of Busycon are edible, they have a rubbery consistency and were probably not a primary food resource to Native Americans. Whelk columns, however, were used during the prehistoric period for bead manufacture.

In addition to species of fish significant to subsistence (e.g. flounder, sea bass, rock bass, etc.), other economically important forms that would have been present or occasionally present in the salt and brackish waters off of the Bronx shoreline, at least seasonally, were waterfowl, harbor seals, and various species of whales and dolphins. The latter two most likely would have been exploited opportunistically (when the animals beached or were listless offshore due to injury or illness) by Native Americans.

III. PREHISTORY AND CONTACT PERIOD ABORIGINAL HISTORY OF THE BRONX - AN OVERVIEW

A. Background Culture History

The prehistory of the Bronx region includes the PaleoIndian, Archaic, Transitional, and Woodland periods. The PaleoIndian period (12,000-9,000 B.P.) represents the earliest occupation of this area. The Archaic (9,000-3,700 B.P.) refers to a time prior to the introduction of horticulture and pottery manufacture and is divided into Early, Middle, and Late periods. The Transitional period (3,700-3,000 B.P.) witnessed a gradual change in Archaic lifestyles with the development of "Woodland" period traits. The Woodland period (3,000-350 B.P.), which is characterized by the use of pottery and reliance on horticulture, is also divided into Early, Middle, and Late periods.

The PaleoIndian period corresponds with the terminal phase of the Wisconsin glaciation (80,000-11,000 B.P.). The advance of the ice sheet associated with this stage reached its maximum approximately 18,000 years B.P., covering all of the Bronx with glacial ice. After that date, world wide temperatures started to rise and melting and northward retreat of the ice sheet began. A continuous terminal morainal feature consisting of mixed sands, silts, clays, and boulders, marks the southernmost advance of the ice sheet. The moraine extends across Long Island down the east shore of Staten Island and into New Jersey at Perth Amboy (Wolfe 1977).

Sea levels were lower during this period and the subsequent Early Archaic due to sea water being trapped in glacial ice. The Bronx during most of this period was located well inland from the Atlantic coast and was surrounded by glacial lakes and meltwater rivers.

A tundra environment characterized the landscape of the Bronx during the late glacial and immediate post-glacial periods. As the glaciers retreated northward, water drained from the melting ice sheet creating large inland lakes, bogs, and marshes. Two of the larger of these lakes, Glacial Hudson and Glacial Lake Hackensack (present day Hackensack Meadows), were located west, northwest, and southwest of the Bronx.

The tundra and lacustrine landscape was rapidly succeeded by forest. Local forests consisted primarily of spruce and fir with small amounts of oak and other deciduous species (Snow 1980). Many faunal species now extinct or no longer native to the area were present. These included mammoth, mastodont, horse, caribou, giant beaver, sloth, elk, moose, and peccary

(Wolfe 1977; Snow 1980; Kraft 1986). Mastodont remains were recovered from peat deposits located beneath the Harlem River, south of the Kingsbridge section of the Bronx, when the Harlem River Ship Canal was excavated in 1885 (Calver 1948). Portions of another mastodont were also recovered south of Kingsbridge from a peat deposit formerly located below what is now the corner of Seaman Avenue and Dyckman Street in the Inwood section of northern Manhattan (Calver 1948). The remains of another mastodont have been found approximately 22.5 miles north of the Bronx in Westchester County along the shoreline of Lake Kitchawan (Weigand 1990:2).

Mammoth remains have been found in nearby areas of New Jersey. Two were discovered at Middletown and the third at North Plainfield (Wolfe 1977:168).

Little is known about cultural activities during the PaleoIndian period although it is generally accepted that the region was first inhabited by humans approximately 12,000 B.P. (Funk 1976; Ritchie 1980). Small nomadic bands of hunters and gatherers subsisted probably on the animal species mentioned previously as well as small game, certain riverine resources, and a variety of plants. Population density, however, was very sparse. A variety of functionally diverse site types, however, have been identified based upon intersite variability of artifact assemblages and environmental settings. These include base camps, quarry workshops, rockshelter habitations, open air hunting camps, kill and butchering sites, and other temporary camps (Funk 1972; Moeller 1980; Gramley 1982).

Information from known PaleoIndian sites in the New York-New Jersey-Pennsylvania-Connecticut region suggests that high, well-drained areas near streams or wetlands were the areas preferred for occupation. Rock shelters, areas near lithic sources, and lower river terraces also were subject to PaleoIndian occupation and use (Funk 1976; Moeller 1980; Ritchie 1980; Marshall 1982).

A small number of PaleoIndian sites have been recorded in the New York metropolitan area although no evidence for PaleoIndian activity has been reported so far from the Bronx. The closest to the Bronx is the multicomponent Piping Rock site located adjacent to the Hudson River shoreline in the Village of Ossining approximately 17.5 miles to the northeast (Funk 1976: 206; Brennan 1977). Other PaleoIndian sites have been found in the region on Staten Island (Port Socony north and south sites, Cutting site, Kreischerville, Charleston Beach (see Boesch 1994) and in Orange County (Dutchess Quarry Cave - see Funk 1976: 206). Most evidence of PaleoIndian activity, however, comes from scattered surface finds of Clovis Fluted points, a diagnostic PaleoIndian artifact (Funk 1976:205). The nearest known indication of PaleoIndian activity to the Bronx is a

Clovis Fluted Point recovered approximately 11 miles to the north in the City of White Plains during work around the foundation of the Historic Period Purdy House (Jay McMann, Member of the Material Archives and Laboratory for Archaeology [MALFA]: Personal Communication). Fluted points and other PaleoIndian associated artifacts have also been recovered from disturbed contexts on the Rippowam River in Westchester County in the Town of Pound Ridge (Weigand 1989:XII.F4).

During the Archaic period, the environment changed from a pine dominated forest to an increasingly deciduous forest which achieved an essentially modern character by 4,000 B.P. (Salwen 1975). While Archaic cultures have been traditionally thought of as reflecting a forest-based adaptation, more recent research has produced a picture of a more varied subsistence pattern based on the seasonal exploitation of various faunal and floral resources (Ritchie and Funk 1973; Funk 1976; Kraft 1986). In the lower Hudson Valley and Long Island Sound area, oyster became a major component of subsistence, at least seasonally, during this period (Brennan 1977).

Archaic hunters and gatherers were still nomadic and organized into small bands which occupied localities along the Atlantic coast and estuaries, including Long Island Sound, the East River, and the Hudson River, and their tributaries, during the warmer months and interior regions during the colder months (Ritchie 1980; Kraft 1986). Population growth throughout the period resulted in an increase in both site density and the number of functional site types represented in the archaeological record. Site types recognized for this period include spring fishing camps along major streams, fall open air hunting camps, rockshelter habitations, shellfish collecting and processing stations, mortuary sites, quarry and workshop sites, and semi-permanent villages (Brennan 1974, 1977; Dincause 1975, 1976; Barber 1980; Ritchie 1980; Snow 1980; Weigand 1980, 1983; Kraft 1986). Ritchie states that most Archaic sites were small and multicomponent, lacking traces of substantial dwellings, fortifications, storage pits, and graves (Ritchie 1980:32 and 35). Evidence of house patterns attributable to the Late Archaic Period, however, has been reported from the Howard site in Old Lyme, Connecticut near Long Island Sound (Pfieffer 1983).

Most information concerning the Archaic period comes from Late Archaic sites since evidence for Early and Middle Archaic sites in the Bronx region is almost as scarce as for PaleoIndian sites. The rarity of Early Archaic (10,000-7,000 B.P.) sites is probably due to the dominance of a pine dominated forest in the region during that period (Ritchie 1980). Such environments are inhospitable to human exploitation, offering few plants and animals for consumption.

Early Archaic life styles and adaptations are generally

considered to be similar to PaleoIndian lifestyles and adaptations (Gardner 1974).

During the Middle Archaic (7,000 - 4,500 B.P.) the region's pine forests receded and were replaced by deciduous forests which provided humans with more exploitable resources. Sites dating to this period tend to be located on floodplains and low terraces of major rivers and streams and in association with marsh, swamp, and estuarine environments (Ritchie and Funk 1973; Funk 1972, 1976; Ritchie 1958, 1980; Starbuck and Bolian 1980).

Although rare (or rarely recognized) in the Bronx, Middle Archaic components may be present at the Mount Saint Vincent site and in the shell middens in Riverdale Park. It is probable that Native American sites in the Bronx containing Middle Archaic components, and possibly Early Archaic and PaleoIndian components, are more likely to be found along the Hudson River shoreline than along the modern East River or Long Island Sound shorelines. During the PaleoIndian and Early to Middle Archaic periods, lower sea levels would have resulted in the Bronx's East River and Long Island Sound shorelines being located further to the east and south than they are currently. These former shoreline locations, and any Native American sites that developed there, were inundated with the rise of sea levels. Lower Hudson Valley river terraces, however, were apparently dry land during the PaleoIndian and Early Archaic periods and have remained so to the present. Any Native American sites that formed in such locations, such as the Early and Middle Archaic components in the shell midden deposits found approximately 20 to 25 miles north of Riverdale Park at Croton Point and Dogan Points in Westchester County (Funk 1972, 1976), and which have not been subsequently disturbed, would still be present.

Human population, site density, and site size increased in the the Bronx region during the Late Archaic period (4,500 - 3,700 B.P.). Some sites appear to have been occupied on a semi-permanent basis (see Dincauze 1975). Late Archaic sites have been found in low-lying areas in close proximity to area estuaries (Hunts Point, Riverdale Park - see Figure 1a and 1c) and along major interior streams (New York Botanical Garden, Fordham University, Westchester Creek II, Bronx River Avenue - see Figure 1a and 1d).

Late Archaic temporary hunting camps and kill/butchering sites, as well as those associated with subsequent cultural periods, were probably widespread in the Bronx prior to development as suggested by the projectile points and other artifacts collected by Dr. Theodore Kazimiroff in the New York Botanical Garden. Since the Botanical Garden has not been subjected to the intensive development that occurred in other portions of the Bronx, the frequency of Native American sites and isolated artifact finds there is probably indicative of the prior density

of aboriginal sites and finds in other portions of the Borough with similar environments prior to development.

Sites dating to the Transitional period (or Terminal Archaic; 3,700-3,000 B.P.) are most frequently found along the coast and major waterways (Funk 1976; Ritchie 1980; Vargo and Vargo 1983) although smaller sites are known from the interior (Funk 1976; Vargo and Vargo 1983). New and radically different broadbladed projectile point types appeared during this period as did the use, during the latter half, of steatite (soapstone) vessels. In the Bronx, Transitional period components have been found at the Schley Avenue, Schurz Avenue, Hunt's Point sites, and possibly at Riverdale Park and the Morris Estate Club site (Figure 1a).

During the Early Woodland period (3,000-2,000 B.P.), the use of fired clay ceramic vessels gradually replaced the reliance on steatite vessels. Subsistence practices included a continuation of the hunting, gathering, and fishing of the Archaic but were supplemented by an increase in shellfish collecting. It has been suggested that this indicates a trend towards more sedentary lifestyles (see Funk 1976; Snow 1980).

Most Early Woodland sites in southeastern New York are located along the Hudson River or its major tributaries, or the East River/Long Island Sound shore (Funk 1976). Inland campsites, however, are also known. Evidence of Early Woodland occupation was recovered at the Schley Avenue, Schurz Avenue, and Morris Estate Club sites.

Human populations during the Middle Woodland period (2,000-1,050 B.P.) gradually adopted a more sedentary lifestyle. Although it is generally felt that subsistence was essentially based on hunting and gathering supplemented by fishing and shellfish collecting (Ritchie 1980), there has been speculation that domestication of various plants occurred during this period (Ritchie and Funk 1973; Snow 1980). Most Middle Woodland sites are located near estuaries although smaller inland sites are also known (Funk 1976; Ritchie 1980). Middle Woodland components in the Bronx have been found at the Schley Avenue, Schurz Avenue, and Morris Estate Club sites (Figure 1a). Middle Woodland components apparently have also been identified within shell midden deposits located along the East River shoreline of Throgs Neck (Appendix C: Site Number 21- see Figure 1a).

By Late Woodland times (1,050-350 B.P.), horticulture was the primary subsistence base and permanent villages existed (Ritchie 1980; Snow 1980). Use was still made, however, of temporary and special purpose campsites oriented towards hunting, gathering, and in some locations, shellfish collecting (Parker 1922; Ritchie 1980; Snow 1980). Most Late Woodland sites are located along the Hudson River, its major tributaries, and the Long

Island Sound/East River shore although smaller inland sites have also been recognized (Skinner 1919a, 1919b; Bolton 1922; Parker 1922; Funk 1976; Levine 1978; Ritchie 1980; Truex 1982).

The Late Woodland period in the lower reaches of the Hudson River and coastal New York includes the Windsor and East River Traditions. These cultures are defined on the basis of ceramic typologies developed by Smith (1950). The Windsor Tradition is restricted to areas around coastal New York. East River culture is divided into an earlier Bowman's Brook Phase and a later Clason's Point Phase. These complexes have been reported at least as far up the Hudson River Valley as the Bear Mountain Bridge area and along the Long Island Sound shore as far as southwestern Connecticut (Funk 1976:173-183; Ritchie 1980:270).

Late Woodland sites are relatively numerous in the Bronx. Large base camps/villages are usually located adjacent to major rivers. These were probably occupied on a permanent basis. Smaller inland sites, usually located near a water source, that were probably occupied on a seasonal or temporary basis have also been recognized (Funk 1976; Ritchie 1980; Snow 1980).

Late Woodland sites are widespread in the Bronx particularly along the coastal areas (see Appendix C and Figures 1a-1d).

B. Native American-European Contact

The documentary history of the Bronx begins with the information recorded by early settlers concerning the Native American groups who occupied the area when Europeans first arrived in the early seventeenth century.

The Contact Period (A.D. 1600 - ca. 1750) is the time of the first large scale contacts between Native Americans and European colonists. By the latter part of the Late Woodland period Native American cultures began to resemble those of groups that were encountered by seventeenth century Europeans. At this time Native Americans in the Bronx were part of the widespread Algonquian cultural and linguistic stock. Specifically they were a group of Munsee (Minsi) speakers who migrated into southeastern New York and southwestern Connecticut during Late Woodland times (Goddard 1978a; 1978b; Conkey, Boissevain, Goddard 1979; Salwen 1978). Their descendants were known collectively as the Wappinger (also Waranoans or Warban). This group included the Bronx County Native Americans encountered by European settlers (Cook 1976:73-74). The Bronx and Westchester County area was reportedly known to the Wappinger as "Laaphawachking" (Bolton 1848). The name reportedly translates as the "place of stringing" (Lederer 1978:79) which apparently refers to Native American wampum manufacturing that occurred in the area (Lederer 1978:79; see also Ceci 1980). The Wappinger

also occupied much of present day Putnam, Dutchess, and New York Counties, and southwestern Connecticut.

The origin of the Wappinger is unclear. Pelletreau (1886) states that the name translates roughly as "east of the river" although Salomon (1982:85) feels that it may be derived from the Algonquian word "wapinkw" or "woapink" meaning opossum.

In political terms the Wappinger were divided into seven (Bolton 1975:4) or nine (Ruttenber 1872) main groups or chieftaincies and numerous sub-groups and bands. To the Dutch and English, the majority of the groups were known collectively as the River Indians. Regionally, the Wappinger Confederacy was loosely allied with the Mahikan Confederacy found to the north (Bolton 1975:4).

The total population of the Wappinger Confederacy has been estimated at about 13,200 individuals at the beginning of European contact (Cook 1976:74). Their settlements included camps along the major rivers with larger villages located at the river mouths (MacCracken 1956:266). Despite references to villages and other site types by early European explorers and settlers, few single component Contact period sites have been identified and systematically excavated in southeastern New York (Funk 1976).

Robert Juet, an officer on the "Half Moon", provides an account in his journal of some of the lower Hudson Valley Native Americans (see Cunningham 1959). In his entries for September 4th and 5th, 1609, he states:

This day the people of the country came aboard of us, seeming very glad of our coming, and brought greene tobacco, and gave us of it for knives and beads. They goe in deere skins loose, well dressed. They have yellow copper. They desire cloathes, and are very civill. They have great store of maize or Indian wheate whereof they make good bread. The country is full of great and tall oakes.

This day [September 5, 1609] many of the people came aboard, some in mantles of feathers, and and some in skinnes of divers sorts of good fures. Some women also came to us with hempe. They had red copper tabacco pipes and other things of copper they did wear about their neckes. At night they went on land againe, so wee rode very quite, but durst not trust them (Juet 1959:28).

David Pieterz De Vries (Murphy 1853:154-155) recorded another

description of the Native Americans who resided around Fort Amsterdam:

The Indians about here are tolerably stout, have black hair with a long, lock which they let hang on one side of the head. Their hair is shorn on the top of the head like a cock's-comb. Their clothing is a coat of beaver skins over the body, with the fur inside in winter and outside in summer; they have, also, sometimes a bear's hide, or a coat of the skins of wild cats, or hefspanen [probably raccoon], which is an animal most as hairy as a wild cat, and is also very good to eat. They also wear coats of turkey feathers, which they know how to put together.

Their pride is to paint their faces strangely with red or black lead, so that they look like fiends. Some of the women are very well featured, having long countenances. Their hair hangs loose from their head; they are very foul and dirty; they sometimes paint their faces, and draw a black ring around their eyes.

Scholars have associated the Reckgawawancs and Siwanoy groups of the Wappinger Confederacy with the Borough of the Bronx. Although the boundaries of the territories scholars traditionally associate with these groups is presented below, it must be stated that attempts to determine "ownership" rights to areas for any of the Contact Period lower Hudson Valley Native American groups is extremely difficult and the results usually unclear. Delineating precise borders is impossible and probably inappropriate for such boundaries were probably shifting and/or undefined and ambiguous.

1. Reckgawawancs

The Reckgawawancs are traditionally associated with most of the island of Manhattan and, in the Bronx, the area adjoining the east bank of the Hudson River as far north as Yonkers and the area north of the East River (and east of the Harlem River) as far east as the Bronx River (Ruttenber 1872:77; Cook 1976:73-74; Bolton 1975:18-22). They were closely related to the Weckquaesgeek, the Wappinger group located to the north, and probably under their political control to some extent (Bolton 1975:19).

Robert Juet and the crew of the "Half Moon" encountered Native Americans who were probably Reckgawawanc along the Hudson River shore of what is now the Manhattanville section of the Bronx. The location of the anchorage was apparently north of the

confluence of Spuyten Duyvil Creek and the Hudson River. Writing in his journal on September 13, 1609, Juet (1959:30) states that:

Then there came foure Canoes aboard; but we suffered none of them to come into our ship. They brought great store of very good Oysters aboard, which we bought for trifles.

The name Reckgawawanc is reportedly derived from the name of their sachem during the early years of contact, Reckgawac, who was involved in a series of land transactions with the Dutch and English (Bolton 1975:18). Their main village was named Nappachamak and was located in present day Yonkers (Cook 1976:73) near the mouth of the Nepperhan or Saw Mill River. Another large village, possibly seasonally occupied, was located in the vicinity of Cypress Avenue between 130th and 133rd Streets (see Appendix C: Site Number 31; Bolton 1922:106).

A semi-permanent site was located on the former island (Appendix C: Site Number 65) which became the Village of Kingsbrige (now the Marble Hill section of the Bronx) and contiguous areas along Spuyten Duyvil Creek (now the area of West 230th to West 231st Streets between Broadway and Riverdale Avenue; see Appendix C: Site Numbers 61, 76-80; Bolton 1922:225; Parker 1922). The Reckgawawanc's called this area Paparinemin and probably used it as a base from which to engaged in shellfishing, hunting, and gathering. In addition, a fort or castle named Nipinichsen was located on the summit of Berrian's Neck on Spuyten Duyvil Hill (now the vicinity of Palisade Ave.) overlooking the Hudson River and Spuyten Duyvil Creek (see Appendix C: Site Number 62; Bolton 1922:225; Cook 1976:73). The name reportedly denotes "a muddy pond" (Bolton 1922:225). Not much is known about the site in terms of its role in the Reckgawawanc settlement pattern. The site was termed a fort because it was reportedly palisaded and protected on two sides by steep drops to the Hudson River and Spuyten Duyvil Creek. It may have served the Reckgawawanc principally as a place of temporary retreat during times of hostilities against enemies, principally the Mohawks who frequently raided the lower Hudson River groups.

It was from the latter location that a group of Native Americans attacked the Half Moon on October 2nd, 1609, upon its return voyage down the Hudson River. Writing in his Journal, Juet states that:

The second, faire weather. At breake of day wee weighed, the wind being at North-west, and got downe seven leagues; then the floud was come strong, so we anchored. Then came one of the Savages that swamme away from us at our going up the River with many other, thinking

to betray us. But we perceived their intent, and suffered none of them to enter our ship. Whereupon two canoes full of men with their bowes and arrows shot at us after our sterne; in recompense whereof we discharged six muskets, and killed two or three of them. Then above a hundred of them came to a point of land to shoot at us. There I shot a falcon at them, and killed two of them; whereupon the rest fled into the woods. Yet they manned off another canoe with nine or ten men, which came to meet us. So I shot a falcon, and shot it through, and killed one of them. Then our men with their muskets, killed three or four more of them. So they went their way.

A number of other camp sites and shellfish processing stations were located along the Hudson River and Spuyten Duyvil Creek shorelines. Those at Paparinemin, as well as the refuge at Nipinichsen, were reportedly used at least until the late 1670's while the sites around Inwood in Manhattan were occupied until the early eighteenth century (Bolton 1975:20-21).

2. Siwanoy

The Wappinger group traditionally associated with the portion of the Bronx east of the Bronx River were the Siwanoy. One of the largest groups of the Wappinger Confederacy, the Siwanoy were known according to Ruttenber (1872:81), as "one of the seven tribes of the sea coast." Their traditional lands extended approximately 24 miles along the west and north shores of Long Island Sound from Hell Gate in the Bronx to Norwalk, Connecticut and as far inland as White Plains (Barrett and Horton 1886:629; Cook 1976:69-70). Ruttenber (1872:81) includes the lands presently occupied by the towns of Pelham, New Rochelle, Eastchester, New Castle, North Castle, Mamaroneck, Scarsdale, White Plains, Harrison, the West Farms and Westchester sections of the Bronx, and Stamford, Connecticut as associated with the Siwanoy (see also Bolton 1881:1:403).

The Siwanoy had villages of varying sizes in present day Rye, North Castle (Ruttenber 1872:81; Shonnard and Spooner 1900; Hodge 1910:279), New Rochelle (known as Shippa; see Bolton 1881:1:403 and 581), Eastchester (Bolton 1881:1:202; Scharf 1886; see Appendix C: Site Number 81; Figure 1b), Pelham Neck (Bolton 1881:1:403; Bolton 1975:31), Castle Hill Neck (Appendix C: Site Number 24; Figure 1a) and Clason's Point (Appendix C: Site Number 26; Figure 1a) in the Westchester section of the Bronx (Ruttenber 1872:81; Skinner 1919:b), and in Norwalk, Greenwich, and possibly Stamford, Connecticut (Swanton 1952:47; Cook 1976:70). Other villages may have existed (see Appendix C:

Site Numbers 40, 42, 43, 83; Figures 1a and 1b; Bolton 1975). Scattered, small habitation sites, camps, and shellfish processing stations also existed along the East River and Sound shores (see Appendix C: Site Numbers 13, 16-22, 33-38, 82, 84-92; Figure 1a and 1b; Skinner 1919a; Lopez 1955; Kaeser 1963; Bolton 1975:31).

The earliest reference to the Siwanoy is from the 1619 account of Captain Thomas Dermer. (Adrian Block reportedly observed Siwanoy "wigwams" five years earlier at Castle Hill Neck but did not see any Native inhabitants; see Appendix C: Site Number 24). In that year (1619), Dermer, sailing in his pinnace, encountered a group of Native Americans along the shore of what was later called Throgs Neck (Jenkins 1912:40). Dermer states that (Jenkins 1912:40):

a great multitude of Indians let fly at us from the bank, but it pleased God to make us victors. Near unto this we found a most dangerous cataract amongst two unequal tides, the one ebbing and flowing two hours before the other [Dermer is probably referring to Hell Gate].

3. Effects of European Contact

Problems and conflicts during the seventeenth century between the Indians of the lower Hudson Valley area and the Dutch resulted in the deaths of large numbers of Native Americans (Washburn 1978). The introduction of European diseases such as smallpox further devastated the local Native American populations.

During the early period of European contact, the Reckgawawancs probably numbered approximately 400 individuals and the Siwanoy approximately 1,800 individuals (Cook 1976:70 and 73).

By the year 1628, the population of the Reckgawawancs has been estimated to have been reduced to 200 to 300 individuals (Cook 1976:73). In 1715 only a few survivors of the group were reported as living in the vicinity of Inwood in northern Manhattan (Bolton 1975:20-21).

By 1650, approximately 700 to 900 hundred Siwanoy remained (Bolton 1975). In a single tragic event occurring in February of 1644, an estimated five to seven hundred individuals of the "tribe of the Siwanoy" were slaughtered by the Dutch under Captain John Underhill at a village, the precise location of which is uncertain although candidate sites are located in Bedford and Pound Ridge in Westchester County and in Fairfield, Connecticut (Mead 1911; Parker 1922:711; Bolton 1975:25; Van der Zee and Van der Zee 1979; Washburn 1978). By the early

eighteenth century only remnants of the group remained, most of which were reported living in the vicinity of Rye Pond in North Castle (Bolton 1975:34). The last recorded Siwanoy settlement was situated near Bear Swamp (see Appendix C: Site Number 43), formerly located in the Morris Park section of the Bronx, and was occupied until 1782 (Bolton 1848:145).

IV. RECOMMENDATIONS FOR IDENTIFYING AND UNDERSTANDING THE PREHISTORIC ARCHAEOLOGICAL RECORD IN THE BRONX

A. Site Location Identification - Some Problems

Most, if not all, of the large Native American habitation sites and shell middens present in the Bronx have been previously identified by amateur archaeologists over the course of the last century. Many smaller camp sites have been identified as well. Many of the sites were identified in the vicinity of the East River and Long Island Sound shores, particularly in the area of Throgs Neck and Pelham Bay Park. The identification of a relatively large number of aboriginal sites in these areas is due to Native American settlement patterns and the lack of extensive development. The biologically rich and diverse shoreline areas, contiguous with rich upland forests abundant in game and mast, offered many excellent subsistence opportunities. The lack of extensive development, as characterizes Pelham Bay Park, to the minimal development until recently on Throgs Neck and Clason's Point, where summer bungalows and other small scale housing predominated, ensured that many sites remained intact well into the twentieth century.

Detailed information about most of the previously identified sites in the Bronx, however, such as site size, time periods represented, and site function is often lacking. The location of artifacts recovered is often unknown. Other sites, including temporary hunting/gathering/special purpose camps, small scale habitations, and small shell middens, remain to be identified. Many of these are probably located in areas that have not been examined archaeologically either by amateurs or professionals. Future cultural resource investigations will surely identify a percentage of them. Others, however, probably will not be identified before they are destroyed by development. Many of these sites are probably buried (perhaps deeply) under alluvial, colluvial, or other natural deposits, or under historic period fill.

Native American sites located in such areas would be difficult to detect using traditional archaeological survey techniques (shovel tests) which many times cannot penetrate extensive overlying natural deposits or fill layers to the extent necessary to identify and adequately test underlying former ground surfaces/deposits that may be present. Archaeological investigation of these areas should employ testing strategies and methodologies that take into account the presence of the overlying deposits.

Other, as yet undiscovered, sites are probably located in locales that have not traditionally been considered likely locations for Native American sites. Most of these areas tend

to be classified as "marginally sensitive or non-sensitive" in cultural resource studies. These studies assume or "predict" that Native American sites will not be present in non-sensitive areas which are subsequently only minimally investigated or not investigated at all. The truth of this assumption has never been subjected to evaluation based on adequate testing.

Traditional methods employed to predict the locations of Native American sites are limited in their usefulness. Evidence of Native American utilization is probably more common in areas traditionally considered less likely to contain Native American sites than is usually thought. Settlement pattern models that have established that certain areas are likely to contain sites based on a set of environmental criteria (i.e. ridge crests/knolls, distance from fresh water sources, slope of ground, shoreline areas near river mouths and sources of fresh water, etc.) are normative, deterministic, and self-fulfilling. Such models state that sites are located in certain areas and, accordingly, those areas are investigated (tested) with sites sometimes being found, thus validating the model in a "self-fulfilling" manner. Areas considered unlikely to contain sites based on another set of criteria (i.e. the presence of wetlands, distance to fresh water sources, slopes greater than 10 to 15 percent, etc.) are usually not tested or only minimally tested; accordingly Native American sites are rarely identified as located in those areas, also validating the model.

Although the use of predictive settlement models is obviously important and necessary, particularly in cultural resource studies where time and cost are paramount considerations, strict adherence to them in the formulation of a sampling design and research strategy/methodology is a mistake. It results in sites being consistently found only in similar environmental settings and possibly prevents a full understanding of the settlement system of a prehistoric culture from being developed.

While aboriginal sites may not occur in marginally sensitive areas as frequently as they do in locales traditionally considered to be sensitive, those that do are possibly of great archaeological interest since they may be oriented towards behavioral adaptations and/or activities that have not been previously recognized and represent unknown aspects of a settlement system.

Changing environmental conditions must also be taken into account when considering site location. What is currently a wetland may not have been so during all or a portion of the prehistoric period; such areas may have previously been drier or may have been a lake or pond. In the latter case, areas surrounding such bodies of water would have been ideal locations, following traditional settlement model notions, for the presence of Native American sites. Locations of small water

courses and springs may also have been different during the prehistoric period than they are currently.

B. Archaeological Sensitivity Assessment of the Bronx

As part of this study, the archaeological sensitivity of the Bronx for the presence of Native American cultural resources was generally assessed. The assessment divided the Bronx into zones of high, moderate, and low sensitivity. These zones are indicated on Figures 4a-4d. Areas of high sensitivity are considered likely to contain evidence of Native American occupation and use while areas of low sensitivity are unlikely to contain such cultural resources. Moderately sensitive locations, obviously fall somewhere between these designations.

The variables used for the assessment included: 1) presence/absence of known Native American sites; 2) presence/absence of sources of fresh water; 3) level of subsistence potential; 4) topographic characteristics; and 5) general soil characteristics (i.e. drainage).

In general, highly sensitive locations would be characterized by three or more of the following: 1) known sites in the immediate vicinity/surface finds recovered from immediate vicinity; 2) freshwater source located nearby; 3) high subsistence potential for an area (marsh, shoreline, river/stream mouth nearby, ridges as location for game/nut trees, etc.); 4) high, ground overlooking water with slopes not exceeding 30 percent; and 5) well drained soil, particularly areas with a sandy soil substratum. Moderately sensitive locations are generally characterized by less than three of the above characteristics. Locations considered to be of low archaeological sensitivity are generally characterized by no more than one of the above characteristics.

The extent of fill or the extent of disturbance in an area usually were not considered in determining sensitivity since data on these variables were generally not readily available. Also project area disturbance, unless extensive, should not necessarily eliminate the necessity for sub-surface investigation (see Section C).

The development of a sensitivity map follows a predictive model based on a set number of variables and as such is a normative contrivance (see above). The sensitivity assessments included here are meant to provide a general indication of the prehistoric archaeological potential of different sections of the Bronx. It must be recognized that the archaeological sensitivity of a given parcel (project area) within a zone may be different from what has been assigned to the overall area due

to local characteristics (i.e. presence of fresh water; subsistence potential; known site nearby, etc. - see below). Accordingly, it is imperative as part of any archaeological investigation that a specific project area's sensitivity be assessed. It must also be remembered when assessing an area's sensitivity, that prehistoric Native American sites can potentially be found anywhere. This archaeologist has discovered Native American sites in locations which traditionally would be considered as areas of low archaeological sensitivity (see Boesch and Pickman [1991] - site discovered on slope of greater than 15%). Accordingly, from the standpoint of ensuring that as many unknown Native American sites be discovered and recorded before they are destroyed as possible, it is perhaps appropriate to consistently require sub-surface testing unless obvious and extensive ground disturbance can be demonstrated and documented (see Section C).

In order to fully assess the Native American archaeological potential of the Bronx, New York City Landmarks Preservation personnel should develop a basic understanding of the subsistence potential of the various ecological zones in that Borough, especially those areas near the shoreline. Information in that regard may be present and easily available in various Environmental Impact Statements produced for a number of projects in the area by the United States Army Corps of Engineers.

1. Areas in the Bronx Considered Highly Sensitive for the Presence of Native American Sites

The following locations within the Bronx should be considered highly sensitive for the presence of Native American sites.

- 1) The area of Pelham Bay Park, including Hunter's Island and Rodman's Neck, has perhaps the greatest potential of any area in New York City for containing Native American sites that are relatively undisturbed (Figures 4a and 4c; Appendix C: Site Numbers 51-55, 57, 58, 82-96, 99-105). A variety of functionally diverse aboriginal sites have been identified there (e.g. habitations, camps, shell middens, mortuary/ceremonial) and others, particularly campsites, probably remain to be discovered. The area contains environments that are known to be sensitive for the presence of Native American sites. These include ridges, knolls, and other relatively high ground in proximity to sources of fresh water overlooking coves and inlets of Long Island Sound, salt water marshes, and in the Park's interior, fresh water wetlands.

The Pelham Bay Park area has not been subjected to extensive development. Most of the area has been only minimally disturbed. A major peril to the Native American sites located in Pelham Bay Park is the extent of "pot-hunting." The looting

of sites in the park was plainly observed during the pedestrian reconnaissance. Numerous, freshly dug holes were visible in areas that appeared to be the locations of Native American shell middens and along ridges and knolls that would rightly be considered archaeologically sensitive.

2) The Bronx shoreline of the Hudson River, particularly the lower terraces, should be considered sensitive for the presence of Native American shell middens and camp sites (Figure 4d; Appendix C: Site Numbers 48, 72, 111-113). Known sites and shell middens, such as those in Riverdale Park, Inwood Park, and around the mouth of the Harlem River, are documented for the area. Nineteenth and twentieth century filling along portions of the shoreline possibly preserved Native American cultural resources. Sites in these filled areas, if present, may be less disturbed than sites situated in unfilled locations.

Native American sites may also be located in some areas beneath the rail line of the Hudson Division of the MetroNorth Railroad which extends up the shoreline. Portions of the rail bed are raised up on fill.

3) The Kingsbridge section of the Bronx is the location of numerous previously identified Native American sites (Figures 4b and 4d; Appendix C: Site Numbers 62-65, 69, 73-80). Locations in the area, particularly those near the former shoreline of Spuyten Duyvil Creek and the former banks and mouth of Tibbetts Brook should be considered particularly sensitive (Figure 4: Zone 3A; Appendix C: 65-67).

4) The knolls and ridges within Van Cortlandt Park may contain evidence of Native American use, particularly those that overlook Tibbetts Brook (Figure 4d; Appendix C: Site Number 5).

It is probably that intact or truncated Native American features and possibly midden areas are located beneath portions of the Parade Ground within Van Cortlandt Park (Appendix C: Site Number 3). Filled areas within the Parade Ground are particularly sensitive. Another particularly sensitive location is the area immediately northwest of the Van Cortlandt Mansion where intact Native American pit features have been encountered relatively recently (Appendix C: Site Number 6).

Another apparently sensitive location is the area around the base of the west slope of Vault Hill. This area does not seem to have been subjected to extensive grading during the construction of the Parade Ground and accordingly may contain evidence of Native American sites.

The Indian Field within Van Cortlandt Park reportedly contained traces of Native American occupation and is the location of

Revolutionary War burials (Appendix C: Site Numbers 4).

5) Large portions of the New York Botanical Garden, and possibly portions of the New York Zoological Park and Fordham University, have been minimally disturbed and apparently contain evidence of Native American occupation and use (Figures 4a and 4b; see Appendix C: Site Numbers 119-122). Temporary hunting and gathering camps are most likely present within the grounds of these institutions. It is also possible that petroglyphs, in addition to the one discussed in Appendix C (Site Number 121), are located in the Botanical Garden and/or Zoological Park.

6) The extreme southeastern portion of the Bronx was apparently intensively utilized by Native Americans and, in general, should be considered sensitive for the presence of aboriginal resources (Figure 4a). A number of habitations sites, camp sites, burial sites, and shell middens were identified for the area, particularly along the shoreline (Appendix C; Site Numbers 8, 13-22, 24-31, 33-42). Until recently, development along the Long Island Sound and East River shorelines consisted primarily of small bungalows and cottages, most with no basements. Such construction would not have extensively impacted Native American sites. Even in locations where larger buildings with basements were constructed, it is possible that archaeological deposits remain intact in yard areas.

A number of sites have also been identified adjacent to the major rivers (Bronx River, Westchester Creek, Weir Creek) which currently or formerly extended through the southeastern corner of the Bronx (Appendix C: Site Numbers 9-12, 14, 15, 23). The high ground along the former banks of these rivers should be considered particularly sensitive.

7) The large north to south extending ridge overlooking the Harlem River east of Jerome Avenue formerly may have been the location of numerous hunting camps (Figure 4b). Likewise, the north to south oriented ridge that follows the route of Palisades Avenue, and which overlooks the Hudson River, could also be considered sensitive for the presence of temporary campsites (Figure 4d). A number of sites have been previously identified along the ridge line (Appendix C: Site Numbers 1, 2, 7, and 68).

8) Submerged areas near the East River and Long Island Sound shorelines of the Bronx were dry land during periods of lower sea level associated with the Wisconsin glaciation. The period of lower sea level dating between 12,500 and 4,000 B.P. includes the time of earliest occupation of the New York-New Jersey region by Native Americans, specifically populations associated with PaleoIndian and Early to Mid Archaic cultures. During this period, these areas probably included a number of rich habitats (i.e. marshland, forests, estuarial shoreline) and topographic

features (i.e. ridge/hills) that would have been attractive to PaleoIndian and Archaic groups.

Although no evidence of PaleoIndian or Early - Mid Archaic activity has been found in the area immediately surrounding the present shorelines, sites associated with those cultures have been identified in the region (e.g. Staten Island, Piedmont Lowlands area of New Jersey; Hudson River shoreline in Westchester County). PaleoIndian and/or Archaic groups could easily have exploited the attractive, now inundated, environments formerly present in the Bronx, producing archaeological sites that were subsequently submerged by marine transgression.

The possibility that PaleoIndian and Early-Mid Archaic groups utilized now inundated areas may also be inferred by the reported presence of post-Archaic period Native American sites in the vicinity of the contemporary shoreline. These sites are part of a recognized settlement pattern in which sites were located in most places where streams and/or elevations of land above tidal marsh were present. The extensive use of the surrounding vicinity by post-Archaic period Native Americans is not surprising, given the high subsistence potential of the area, a potential that was probably similar to that which existed within what are now submerged areas during the period 12,500 - 4,000 B.P.

As discussed by Rutsch (1977:18), by projecting the recognized settlement pattern backwards to earlier conditions of lower sea level and post-glacial environments, it is possible that lower elevations, which are now submerged beneath the East River and Long Island Sound bottom sediments near the contemporary Bronx shoreline were once used by Native Americans.

In evaluating the likelihood that evidence of PaleoIndian or Archaic activity is present immediately offshore of the Bronx, it is important to determine whether former surfaces (dating to the period 12,500 - 4,000 B.P.) are preserved beneath the bottom sediments. PaleoIndian and Archaic activity potentially could have occurred upon these surfaces.

Most such former ground surfaces were destroyed by marine transgression associated with rising sea levels and subsequent tidal and current effects. However, in isolated locations, pre-inundation surfaces may have been protected and preserved, particularly in the area of Pelham Bay and the Harlem River. It can be assumed that strata located immediately beneath peat deposits (if present or formerly present as in the area of the Harlem River Ship Canal excavations) were associated with a ground surface that dated to the period prior to the development of the marshland from which the peat derived. Any evidence of PaleoIndian or Archaic activity preserved within now submerged

contexts along the Bronx shorelines would be restricted to these sub-peat contexts. In areas where peat is not present, it must be assumed that marine transgression destroyed all former surfaces and any evidence of human occupation that could potentially have been located there.

The preserved peat deposits themselves, if present, may also be considered to have possible scientific value. Information on late Pleistocene and early Holocene climatological conditions, plant communities, and environmental setting in the lower Hudson estuary may be contained in such deposits. Such deposits may also contain late Pleistocene/Early Holocene aged fauna as evidenced by the mastodont remains recovered from the peat deposits encountered during construction of the Harlem River Ship Canal.

A requirement for the preservation of peat deposits and underlying strata would be the lack of extensive dredging activities in a given area.

The area with possibly the greatest potential for the presence of inundated sites is along the shorelines of Pelham Bay Park and the Harlem River. The shore of the Park contains a number of coves and inlets with salt and brackish water marshes. These areas were dry land during periods of lower sea levels and would have been excellent locations for subsistence activities. That Early - Mid Archaic (and possibly PaleoIndian) groups used the area is not unlikely. Native American sites may be present in wetland areas beneath more recent marsh deposits (perhaps in association with or below buried peat layers) or beneath bottom sediments in coves/inlets. Although boating channels and anchorages have been dredged in some offshore locations, many other locations appear not to have been dredged. In addition, the nature of Long Island Sound and the shoreline topography are not likely to produce rough surf that could destroy inundated sites.

The Harlem River area should also be considered sensitive for the presence of peat deposits since such deposits were encountered in the area during construction of the Harlem River Ship Canal. Although extensive destruction of these peat deposits apparently occurred during construction of the Canal, peat deposits in some areas may have been spared due to local conditions or due to their being outside of the area of impact of the Canal project.

C. Archaeological Testing Strategies - Some Recommendations

Identifying Native American cultural resources by sub-surface testing can be difficult. The nature of small sites (i.e. the structure of the site, the quantity of associated cultural

material) and burial sites frequently results in the failure of Stage I surveys to identify them. Frequently, because of low artifact density, the failure of a shovel test to detect artifacts does not necessarily indicate the absence of prehistoric activity in an area. I have had personal experience in this regard. Excavation of shovel tests along a section of the Ramapo River in the Borough of Oakland, New Jersey failed to reveal evidence of prehistoric activity. However, a single shovel test encountered some mammal bone which was subsequently identified as human. Subsequent excavation of larger excavation units in the area, revealed the presence of a number of Late Woodland burials although little cultural material was recovered from the area and none was associated with the burials. If the location of the single shovel test that initially encountered human remains was moved from its original position in any direction by as little as a foot, the first skeleton would not have been encountered and the site would not have been identified during the survey (see Pickman and Boesch 1991).

In order to increase the reliability and information content of cultural resource investigations the following suggestions are presented:

- 1) few or no areas of a project site should be eliminated from sub-surface testing unless extensive disturbance can be demonstrated. Methodology for testing less sensitive portions of a project site could include: a) random sampling of less sensitive portions; b) conducting systematic shovel test transects with individual tests more widely spaced than in areas considered highly sensitive; or c) directed testing whereby sub-surface investigation is conducted in the most likely locations for the presence of Native American sites in less sensitive areas. The most effective strategy, I feel, is the third option (c) combined with options a or b.
- 2) in areas that appear minimally disturbed, or in areas where sites had been noted previously but upon the basis of surface indications now appear to be gone, it is appropriate to open up extensive surface areas to look for the presence of truncated features.
- 3) for Stage Ia investigations, the depth of fill within a project area should be estimated either by borings, if available, or by comparing modern elevations and land forms to those indicated on historic period topographic maps. In locations that appear to be deeply filled, appropriate methods should be employed to ensure that strata below the fill are adequately tested.
- 4) Native American cultural material, discovered as a result of cultural resource investigations, that are associated with disturbed contexts may still contribute to an understanding of

prehistoric adaptations and culture. Artifact materials (i.e. stone tools and ceramics) by themselves could yield useful information on prehistoric lithic technology. Likewise recovered ceramics could yield information on ceramic technology and styles. Native American sites in the Bronx, as well as throughout the New York City region, are becoming rarer each year with resulting information loss. It is my opinion that each site, even those in disturbed contexts, has the potential to yield some information on site location and settlement pattern, subsistence adaptations, and culture history. Few, if any, Native American sites should be quickly dismissed as useless (written off) because they are "disturbed." The goal and challenge for archaeologists should be to develop additional methods (both field and analytical) to extract information from such sites.

5) The issue of increased cost of a project to a developer or agency that may result when a cultural resource study recommends additional archaeological investigations of a project site, and other non-archaeological concerns that may arise, should not be the concern of the archaeologist conducting the study (and formulating the recommendations). The archaeologist should be concerned strictly with archaeological issues. Depending upon the stage of the investigation, the role of the archaeologist conducting the project study should be to: 1) determine whether a project area is sensitive for the presence of cultural resources; 2) determine whether cultural resources are present within a project area; 3) determine whether identified cultural resources within a project area are significant (National Register eligible) and why they are so and, if they are significant, recommend mitigation options; or 4) conduct mitigation excavation/recording at imperiled National Register eligible sites. Issues of increased project cost, contemporary societal needs, the degree/extent of impact to the larger archaeological/historical record, weighed against the nature and type of archaeological resource impacted by the development project, should be the concern of the government agency reviewing the cultural resource study report. That agency will then agree (sometimes with modifications) or disagree with the recommendations formulated by the archaeologist.

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 1980 "Early and Middle Archaic Cultures in the Northeast." Occasional Publications in Northeastern Anthropology, No. 7. Published by the Department of Anthropology, Franklin Pierce College, Rindge, New Hampshire.
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 1952 "The Indian Tribes of North America." Bureau of American Ethnology Bulletin No. 145, Smithsonian Institution, Washington, D.C.
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 1979b Central Park, New York-New Jersey, 7.5 Minute Series (Topographic). United States Department of the Interior, Geological Survey, Washington, D.C.
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 1978 A Sweet and Alien Land; The Story of Dutch New York. The Viking Press, New York, New York.
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 1983 "The Rabuilt Cave Site - PKE 4-4 Site Report." Bulletin and Journal of Archaeology for New York State 87:13-39.
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 1978 "Seventeenth-Century Indian Wars." Handbook of North American Indians Vol. 15:89-100. Smithsonian Institution Press, Washington D.C.
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 1980 "The Rockrimmon Rock Shelter." Bulletin of the Archaeological Society of Connecticut No. 42:15-28.
- 1983 Rockshelters of Southwestern Connecticut: their Prehistoric Occupation and Use. Norwalk Community College Press, Norwalk, Connecticut.
- 1989 Phase I Cultural Resource Survey of the Proposed Thomas Wright Subdivision Town of North Castle, Westchester County, New York. Prepared for Quepco, Inc., Valhalla, New York.
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 1977 The Geology and Landscapes of New Jersey. Crane, Russak, and Company, New York.

APPENDIX A
ANNOTATED BIBLIOGRAPHY OF THE BRONX PREHISTORY

Anonymous

n.d. History of the Kingsbridge and Van Cortlandt Village Areas.

Although the focus of this work is the Euro-American history of these communities, general information is presented on the Native American sites around Spuyten Duyvil and in what is now Van Cortlandt Park. Information is also provided on the former landsforms around Spuyten Duyvil and the changes caused by the construction of the Harlem River ship Canal.

MANUSCRIPT ON FILE AT THE BRONX COUNTY HISTORICAL SOCIETY.

Beauchamp, William M.

1900 "Aboriginal Occupation of New York." New York State Museum Bulletin No. 32:7, Albany, New York.

Provides information on some Native American sites in the Bronx.

1893 Indian Names of New York. Fayetteville, New York.

1907 Aboriginal Place Names of New York. New York State Bulletin No. 108, Albany, New York.

These two works provide information on Contact Period names for some localities in the Bronx.

COPIES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Bolton, Reginald Pelham

1919 "Snakapins, A Siwanoy Site at Clason's Point. Historical Introduction." In Exploration of Aboriginal Sites at Throgs Neck and Clason's Point, New York City by Alanson Skinner. Contributions, Museum of the American Indian, Heye Foundation 5:4.

Bolton provides information on the early 17th century history on this Siwanoy village. Some information is given on the archaeological finds discovered there in the early twentieth century.

- 1922 Indian Paths in the Great Metropolis. Indian Notes and Monographs, Miscellaneous #22. Museum of the American Indian, Heye Foundation, New York, New York.

Contact Period historiography of the New York City metropolitan area; also includes area maps showing the former routes of aboriginal trails and locations of Native American sites.

- 1934a Indian Life of Long Ago in the City of New York. New York.

Popular account of aboriginal lifeways in the New York City region.

- 1934b "Early History and Indian Remains on Throgs Neck, Borough of the Bronx, City of New York." Bronx Society of Arts and Sciences, Document No. 8.

A historiography of Throgs Neck through the mid-17th century is provided including accounts of Jan Throckmorton's settlement of Vriedelandt (Land of Peace) on Throgs Neck and the events of Kieft's War. Information is provided on the Native American Contact Period occupations along Weir Creek, the East River shoreline, and the Long Island Sound shoreline.

- 1975 New York City In Indian Possession. Indian Notes and Monographs, Vol. II:7:1-170. Museum of the American Indian, Heye Foundation, New York, New York. First printed in 1920.

Historiography of Contact Period New York City with descriptions of well known sites (including those in the Bronx); also includes maps showing locations of aboriginal sites.

COPIES OF R.P. BOLTON'S WORK ARE IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Bolton, Robert

- 1848 History of the County of Westchester from its First Settlement to the Present Time. Vol. I. Published by Alexander S. Gould, New York, New York.

- 1881 A History of Several Towns, Manors, and Patents in the County of Westchester, C.W. Bolton, editor. Charles F. Roper, Volumes 1 and 2, New York, New York.

Both works provide information on the early Contact Period history of the various Westchester County communities which formerly comprised the Bronx. General references are made to the locations of Native American remains. Descriptions are also provided on the 19th century topography and physiography of portions of the Bronx.

COPIES OF R. BOLTON'S WORK ARE IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION.

Brasser, Theodore J.C.

- 1971 "The Coastal Algonkians: People of the First Frontier." In North American Indians in Historical Perspective:64-91, Eleanor Burke Leacock and Nancy Oestreich Lurie (eds.), Random House, New York.

General account of the Wappinger Native Americans who inhabited the New York City region in the context of the coastal Algonkians inhabiting the area between Maine and New York.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Bronx County Historical Society
n.d. Neighborhood Files:

FILES IN THE COLLECTIONS OF THE BRONX COUNTY HISTORICAL SOCIETY.

- Calver, William Louis and Reginald Pelhem Bolton
1950 "A Pioneer Settler's Home on Spuyten Duyvil Hill." In History Written With Pick and Shovel. The New York Historical Society, New York, New York. Reprinted 1970.

Account of archaeological investigations of a mid-17th century house site at Spuyten Duyvil. Native American artifacts and an apparent aboriginal shell midden were encountered during the excavations.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Caviston, Ruth

1952 "A History of the New York Botanical Garden."
Manuscript of file at the New York Botanical Garden.

This work is a detailed historiography of the New York Botanical Garden. Information is also given on Contact Period Native American occupation of the area and on the location of some Native American sites within the Botanical Garden property.

COPY IN THE COLLECTIONS OF THE NEW YORK BOTANICAL GARDEN LIBRARY.

Ceci, Lynn

1977 The Effect of European Contact and Trade on the Settlement Patterns of Indians in Coastal New York 1524-1665: The Archaeological and Documentary Evidence. Ph.D. Dissertation, City University of New York.

Some discussion of the Bronx County Native Americans and the impacts of European colonization upon them.

COPY ON FILE AT THE DEPARTMENT OF ANTHROPOLOGY, GRADUATE CENTER, CITY UNIVERSITY OF NEW YORK. ALSO AVAILABLE THROUGH UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN.

- 1980a "The First Fiscal Crisis in New York." In Economic Development and Cultural Change, Vol. 28, No. 4. The University of Chicago Press, Chicago, Illinois.

Provides an account of the development of Wampum beads as a trade commodity with particular reference to the New York area. Mentions the Throgs Neck site and the Contact Period artifacts recovered there.

- 1980b "Maize Cultivation in Coastal New York: The Archaeological, Agronomical and Documentary Evidence." North American Archaeologist 1:45-74.

ARTICLES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Cohn, Michael and Robert Apuzzo

- 1988 "The Pugsley Avenue Site." The New York State Archaeological Association Bulletin 96:5-7.

Description of an apparent Late Woodland Period site on Castle Hill Neck, north of Pugsley Creek.

ARTICLE IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Comfort, Randall

- 1906 History of Bronx Borough, City of New York. Compiled by the North Side News, North Side News Press, New York, New York.

Provides general accounts of the Native American occupation of the Bronx with information provided on some of the larger sites.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION.

Cook, Harry T.

1913 The Borough of the Bronx 1639-1913: Its Marvelous
Development and Historical Surroundings. New York.

Provides general accounts of the Native
American occupation of the Bronx with
information provided on some of the larger
sites.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Cook, S.F.

1976 "The Indian Population of New England in the
Seventeenth Century." University of California,
Publications in Anthropology, Vol. 12. University
of California Press, Los Angeles, Ca.

A section of this work provides information
on the Wappinger Confederacy, the Contact Period
Native Americans that inhabited the lower Hudson
Valley including the area that now encompasses
the Bronx. The Native groups specific to the
Bronx, the Siwanoy and Weckquaesgeeks, are
discussed and information provided on village
locations, population estimates, and land
sales.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Danckaerts, Jasper and Peter Sluyter

1867 Journal of a Voyage to New York and a Tour in Several
of the American Colonies in 1679-1680. Translated
by Henry C. Murphy, New York. 1966 Reprint, University
Microfilms, Ann Arbor, Michigan.

The diary of Danckaerts relating his and fellow
Labadist Peter Sluyter's travels in and around
New York and other colonies. This is the
second oldest description of New York and
contains description of the 17th century
Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

De Vries, David Peterson

1853 Voyages From Holland to America A.D. 1632 to 1644.
Press of Henry C. Murphy, New York. Reprinted 1971,
Kraus Reprint Co., New York.

De Vries account provides a description of 17th
century lower Hudson Valley Native Americans
and gives account of 1643 Dutch and Indian War
that occurred in the Bronx.

COPY IN THE COLLECTIONS OF THE NYC PUBLIC LIBRARY, LOCAL HISTORY
AND GENEALOGY DIVISION.

Denton, Daniel

1902 A Brief Description of New York: Formerly Called New
Netherlands, with the Places thereunto Adjoyning.
(London 1660). Cleveland. Reprinted 1966, Readex
Microprint Corporation.

The earliest description in English of New York
Colony, published to encourage emigration to
the new colony. Descriptions of the physical
and cultural characteristics of the New York
area Native Americans are included.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Edsall, Thomas H.

1887 History of Kings-Bridge, Now Part of the 24th Ward, New
York City. Published by the Author, New York, New
York.

Provides general information about the Native
Americans sites in the Kingsbridge (Paparinemc)
vicinity prior to the construction of the
Harlem River Ship Canal.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Fluhr, George J.

1960 Historical Geography of the West Bronx. The Alden
Press, New York.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION AND THE BRONX COUNTY
HISTORICAL SOCIETY.

Funk, Robert E.

- 1976 "Recent Contributions to Hudson Valley Prehistory."
New York State Museum and Science Service Memoir No.
22, Albany, New York.

Includes discussion of lower Hudson Valley prehistory with references to Native American sites recorded for the Bronx, particularly the Pelham Bay area. Analytical interpretation of lower Hudson Valley settlement system issues provided.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Grumet, Robert S.

- 1981 Native American Place Names in New York City. Museum
of the City of New York, New York.

Includes identification and discussion of Contact Period aboriginal names for localities in the Bronx; includes linguistic and etymological analysis of the terms.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION AND AVAILABLE AT THE MUSEUM OF THE
CITY OF NEW YORK.

Harrington, M.R.

- 1909 "Ancient Shell Heaps Near New York City." American
Museum of Natural History, Anthropological Papers Vol.
3:167-179. New York.

Accounts of some shell midden sites in the New York vicinity, including sites at Throgs Neck and Pelham Bay.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Harrington, M.R.

- n.d.a "Unpublished Field Notes - Mount Saint Vincent."

NOTES IN THE COLLECTIONS OF THE HUNTINGTON FREE LIBRARY.

Hermalyn, Gary

1982 "A History of the Bronx River." Bronx County Historical Society Journal 19:1:1-22.

Some information provided on the Contact Period history of the Bronx River and Native American exploitation of it. Information on environments formerly associated with the river also provided.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

Jameson, J. Franklin

1909 Narratives of New Netherland 1609-1664 Charles Scribner's Sons, New York, New York.

Collection of twenty accounts of travels, adventurers, officials, and others in and around New Amsterdam. Some accounts provide description of the regional landscape and the local Native Americans

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Jenkins, Stephen

1912 The Story of the Bronx. G.P. Putnam' Sons, New York, New York.

Fairly detailed history of the Bronx. Information provided on the Native American occupation of the area and on the locations or former locations of some aboriginal sites. Detail is provided on the aboriginal sites located in Pelham Bay Park.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

Kaeser, Edward J.

- 1962a "The Archery Range Site: A Preliminary Report." New York State Archaeological Association Bulletin No. 24: 4-7. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Report on the excavation of a Late Woodland Period camp site and burial site in Pelham Bay Park.

- 1962b "Fossils and Concretions from Coastal New York Sites." New York State Archaeological Association Bulletin No. 26. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Report that documents the association of fossiliferous pebbles with Late Woodland habitation and burial sites in coastal New York, focusing on sites located in the Bronx. The fossiliferous pebbles may not occur naturally in the site areas and may have been procured by Native Americans for ceremonial/ritual use. The significance of the association is still debatable.

- 1963 "The Morris Estate Club Site." New York State Archaeological Association Bulletin No. 27:13-21. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Report on the excavation of a Middle to Late Woodland Period camp site located at the intersection of Balcom and Schurz Avenues. Pit features, occupational debris, and a cobble stone circle were located within a midden context.

- 1964a "Investigation of a Pot-Holed Knoll in Pelhem Bay Park Bronx County, New York." New York State Archaeological Association Bulletin No. 30. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Report on the excavation of a Late Woodland camp site in the vicinity of six glacial pot-holes in Pelham Bay Park. A scatter of domestic artifacts were recovered. It is conjectured that the pot-holes may have been used as metates or storage containers.

- 1964b "A Primer for Pottery Classification, Metropolitan Coastal New York." New York State Archaeological Association Bulletin No. 31. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Presentation of a classification of the principal ceramic types identified for the coastal New York area and their association with different cultural periods.

- 1965 "The Cherry Orchard Rock Site." New York State Archaeological Association Bulletin No. 34. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Report of the excavation of a Late Woodland Period camp site in Pelham Bay Park. The site consists of two hearths and a midden with associated domestic refuse located near a large glacial erratic.

- 1968 "The Middle Woodland Placement of Steubenville - Like Projectile Points in Coastal New York's Abbott Complex." New York State Archaeological Association Bulletin No. 44. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Discussion of Steubenville-like projectile points and a hypothesized Middle Woodland Period association for them in the coastal New York area. Data present from Bronx aboriginal sites located in the Throgs Neck and Pelham Bay area.

- 1970 "The Archery Range Site Ossuary, Pelham Bay Park, Bronx County New York." Pennsylvania Archaeologist 40:1-2.

Description of a Late Woodland Period child burial located within in a stone crypt. This burial site, located in Pelham Bay Park, is also associated with a habitation area.

- 1972 "Inference on the Northern Dispersal of Cony Projectile Points and Net-impressed Pottery, Based on Data from Coastal New York." New York State Archaeological Association Bulletin No. 54. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Discussion of the association of Steubenville-like projectile points with Middle Woodland Period net impressed pottery. The name Cony is proposed for the points which is an acronym for Coastal New York. It is shown that in interior areas of New York State, projectile points that are morphologically similar to Cony points are referred to as Fox Creek points.

THE NEW YORK STATE ARCHAEOLOGICAL ASSOCIATION BULLETIN AND THE COASTAL ARCHAEOLOGY READER ARE IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY GENERAL RESEARCH DIVISION.

Levine, Gaynell

1978 "The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977." Readings in Long Island Archaeology and Ethnohistory Vol. III. Suffolk County Archaeological Association.

Contains a number of articles on Native American sites located in the Bronx and other areas of coastal New York.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Lederer, Richard M. Jr.

1978 The Place-Names of Westchester County, New York. Harbor Hill Books, Harrison, New York.

Provides limited information on the Native American names of some localities in the Bronx which were formerly part of Westchester County.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION.

Lopez, Julius

1955 "Preliminary Report on the Schurz Site (Throgs Neck, Bronx County, New York)." Nassau Archeological Society Bulletin No. 1:6-21. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Report on the archaeological excavations at the Late Woodland and Contact Period Schurz site located in the Throgs Neck section of the Bronx. The site was a small camp and associated shell midden. A variety of lithic tools and debitage and ceramics were recovered. A 17th century historic period component was also present, possibly associated with a house site.

- 1956 "The Pelham Boulder Site, Bronx County, N.Y., an abstract. Eastern States Archaeological Federation Bulletin No. 15:15.

An abstract of the excavations at the multicomponent Pelham Boulder camp site located in Pelham Bay Park. The site consisted of domestic debris and small features.

- 1957 "Some Notes on Interior Cord-Marked Pottery from Coastal New York." Pennsylvania Archaeologist 27:1: 23-32. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Descriptions of interior cordmarked Vinette I type pottery recovered from aboriginal sites on Throgs Neck and in Pelham Bay Park and their relationship to other regional ceramic types.

- 1958a "The Milo Rock Site, Pelham Bay Park, Bronx County, New York." Pennsylvania Archaeologist 28:3-4.

A report of the excavations at this Late Woodland campsite located in Pelham Bay Park. The site contained features, occupational debris, and a small midden area.

- 1958b "Curvilinear Design Elements in The New York Coastal Area." Bulletin of the Archaeological Society of Connecticut No. 28. New Haven Connecticut. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Description and discussion of the curvilinear decorated ceramics recovered from the coastal New York area and their relationship to the Middle Woodland Abbott Farm Complex or to a Late Woodland complex. Pottery recovered from Pelham Bay Park is used in the analysis.

- 1961 "The Areal Distribution and Complexities of "Abbott" Ceramics." Bulletin of the Archaeological Society of New Jersey 18 and 19:7-11. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Description and discussion of "Middle Woodland-like" ceramics recovered from the coastal New York area. Information provided from Native American sites in the Throgs Neck and Pelham Bay sections of the Bronx.

COPIES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

McNamara, John

- 1984 History in Asphalt; The Origin of Bronx Street and Place Names. The Bronx County Historical Society, The Bronx, New York.

Provides information on the names of present and former streets in the Bronx. Some information (real and apocryphal) given on the location of Native American sites and artifact scatters in the Bronx. Some Contact period aboriginal names for localities and features also present.

COPIES OF THESE SOURCES ARE IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

New York City Landmarks Preservation Commission
1991

COPY ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Pagano, Daniel N. with Maria L. Schleidt (contributor)
1991 Archaeological Bibliography of the City of New York.

Contains small section on the archaeology of the Bronx with references on prehistoric period topics.

COPY ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Parker, Arthur C.

1922 "The Archaeological History of New York, Part
Two." New York State Museum Bulletin, Nos. 237,
238, Albany, New York.

Classic work detailing the prehistoric period
culture history of New York State; contains
map of each N.Y. State county (including the
Bronx) showing the general location of Native
American sites and artifact scatters. Some
general information provided for each site.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY AT
THE ANNEX.

Ritchie, William A.

1980 The Archaeology of New York State. Harbor Hill
Books, Harrison, New York.

Detailed account of New York State Archaeology;
contains discussion of lower Hudson Valley
culture history with minor references to
aboriginal sites in the Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Ritchie, William A. and Robert E. Funk

1973 "Aboriginal Settlement Patterns in the Northeast."
New York State Museum and Science Service Memoir
No. 20. Albany, New York.

Discussion of prehistoric settlement patterns
in New York State using some data from
aboriginal sites in the Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Rothschild, Nan and Lucianne Lavin

- 1977 "The Kaeser Site: A Stratified Shell Midden in the Bronx, New York." New York State Archaeological Association Bulletin No. 70. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Description of excavations at this multicomponent shell midden site located in Pelham Bay Park. Lithic and ceramic artifacts were recovered as well as faunal material. Analysis suggested that the site was occupied on a semi-permanent basis from the Middle/Late Archaic to Late Woodland periods.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Rutsch, Edward

- 1970 "An Analysis of the Lithic Materials Used in the Manufacture of Projectile Points in Coastal New York." New York State Archaeological Association Bulletin 49:1-12.

Analysis of raw materials used in the manufacture of projectile points recovered from Long Island, Staten Island, Manhattan, the Bronx, and Westchester County; frequencies of certain raw materials used (chert, jasper, argillite, rhyolite) served as indicator of trade networks and contacts between Native American groups.

- 1978 "An Analysis of the Lithic Materials Used in the Manufacture of Projectile Points in Coastal New York." New York State Archaeological Association Bulletin No. 49. Republished in The Coastal Archaeology Reader: Selections from the New York State Archaeological Association Bulletin 1954-1977. Readings in Long Island Archaeology and Ethnohistory Volume II. Suffolk County Archaeological Association.

Reprint of Rutsch (1970)

COPIES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Ruttenber, E.M.

1872 History of the Indian Tribes of Hudson's River.
Kennikat Press, Port Washington, New York.

Discussion of Contact Period Native American
in the Hudson Valley including the Bronx and
their relations with Nieuw Netherlands.

1906 Indian Geographical Names of the Valley of the Hudson
River. New York State Historical Association No. 6,
Newburgh, New York.

Discussion of Native American names and terms
for topographical features, locations, and
cultural groups in the Hudson Valley region.

COPIES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Salomon, Julian Harris

1982 Indians of the Lower Hudson Region, The Munsee.
Historical Society of Rockland County, New City, New
York.

Information provided on the lower Hudson Valley
Contact Period Wappinger including the Siwanoy and
Weckquaesgeeks groups of the Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Scharf, J. Thomas

1886 History of Westchester County, New York Vols. 1 and 2.
L.E. Preston and Company, Philadelphia, Pa.

Provides information on the seventeenth century
history of Westchester County including areas
that are now part of the Bronx. The history of
relations between Native Americans and Euro-Americans
including the history of land-sales are presented.
Some information provided on Native American
sites and on the pre-development landscape.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Shonnard, Frederic and W.W. Spooner

1900 History of Westchester County From Its Earliest Settlement to 1900. The New York History Company, New York, New York.

Provides information on the seventeenth century history of Westchester County including areas that are now part of the Bronx. The history of relations between Native Americans and Euro-Americans including the history of land-sales are presented. Some information provided on Native American sites and on the pre-development landscape.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Skinner, Alanson

1909a "Archaeology of the New York Coastal Algonkian." Anthropological Papers of the American Museum of Natural History 3:213-235.

Description of archaeological investigations in the Bronx, on Staten Island, and at other locations in the New York City area.

1909b "The Massacre of the Lenape Indians in 1643." Proceedings of the Natural Science Association of Staten Island 2:53.

Account of the war between Native Americans and the Dutch during Kieft's war resulting in the deaths of large number of Native Americans in the Bronx, Staten Island, New Jersey, and other locations.

1915 Indians of Greater New York. The Torch Press, Cedar Rapids, Iowa.

Popular discussion of Contact Period Native American groups in the New York City area.

1919a "Exploration of Aboriginal Site at Throgs Neck and Clason's Point, New York City; Part I: The Throgs Neck or Schley Avenue Shellheap." Contributions from the Museum of the American Indian, Heye Foundation, Volume V, No. 4, Part I. New York, New York.

Description of the Schley Avenue (Weir Creek) site excavations. Analysis revealed that the site was a multicomponent, semi-permanent camp oriented towards the exploitation of shell fish and fish.

- 1919b "Exploration of Aboriginal Site at Throgs Neck and Clason's Point, New York City; Part II: Snakapins, a Siwanoy Site at Clason's Point." Contributions from the Museum of the American Indian, Heye Foundation, Volume V, No. 4, Part II. New York, New York.

Description of the excavations at the Contact Period site at Clason's Point. Data from feature and shell midden excavations are presented.

- 1932 The Indians of Manhattan Island and Vicinity. The American Museum of Natural History, Guide Leaflet Series No. 11.

Limited description of the lower Hudson Valley Wappinger Native Americans. Work contains discussion of site at 220th Street and Kingsbridge Road and information on shell midden sites in the Bronx at Pelham Bay, Throgs Neck, and Clason's Point. Lithic and pottery types common to the New York City area are also described.

COPIES OF SKINNER'S WORK IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Smith, Carlyle Shreeve

- 1940 "An Outline of the Archaeology of Coastal New York." Bulletin of the Archaeological Society of Connecticut 40:47-56.

Brief presentation of a culture history sequence for coastal New York based on ceramic style changes.

- 1944 "Clues to the Chronology of Coastal New York." American Antiquity 10:1:87-98. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Presentation of culture history sequence for coastal New York based on changes in ceramic styles and other cultural characteristics.

- 1950 "The Archaeology of Coastal New York." Anthropological Papers of the American Museum of Natural History, Vol. 43, Part 2, New York, New York.

Classic work on New York prehistoric archaeology; presents detailed descriptions of Native American ceramic types that occur in the lower Hudson Valley and New York coastal areas as well as descriptions of some major prehistoric sites. Work also presents culture history sequence for the region as well as some thoughts on ceramic style development.

- 1955 "Revised Chronology for the Archaeology of Coastal New York." Nassau County Archaeological Society Bulletin 1:4-5. Reprinted in The Second Coastal Archaeology Reader: 1900 to the Present. Readings in Long Island Archaeology and Ethnohistory Volume V. Suffolk County Archaeological Association.

Revision of Smith's 1950 cultural history chronology based on radiocarbon dates from a number of inland New York sites. In most instances, the C14 data increased the range of the temporal parameters associated with the cultural periods discussed.

COPIES IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Solecki, Ralph S.

- 1950 "The Archaeological Position of Historic Fort Corchaug, Long Island, and Its Relation to Contemporary Forts." Bulletin of the Archaeological Society of Connecticut 24:3-41.

This work discusses Contact Period Native American palisaded villages and other fortified sites in the New York metropolitan area focusing primarily on Fort Corchaug, L.I. The discussion makes reference to the fortified village reportedly located on Castle Hill Neck in the Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL
RESEARCH DIVISION.

1988 "A Petroglyph Found in the New York Botanical Garden, Bronx, New York." Bulletin of the Archaeological Society of New Jersey 43:31.

Describes a "turtle" shaped petroglyph found on a glacial erratic. The article attempts to place the motif in archaeological context and discusses possible ceremonial functions of the petroglyph and its relationship to Contact Period Native American symbols.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Suggs, Robert C.

1966 The Archaeology of New York. Crowell Company, New York, New York.

General account of the archaeology of New York. Some information provide of site locations in the Bronx.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Swanton, John R.

1952 "The Indian Tribes of North America." Bureau of American Ethnology Bulletin No. 145, Smithsonian Institution, Washington, D.C.

Part of this classic work discusses the Lenni Lenape groups that lived in the New York City region.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Tieck, William A.

1968 Riverdale, Kingsbridge, Spuyten Duyvil, New York City: A Historical Epitome of the Northwest Bronx. Fleming H. Revell Company, Old Tappan, New Jersey.

Brief history of this section of the Bronx. Information presented on the Native American sites and remains present in the northwest Bronx (Kingsbridge sites, Van Cortland Park sites).

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

Trelease, Allen W.

1960 Indian Affairs in Colonial New York: The Seventeenth Century. Cornell University Press.

Some discussion of the Native Americans of the Bronx and their relationship to 17th century Dutch and English settlers.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Trigger, Bruce (ed.)

1978 Handbook of North American Indians: The Northeast. Smithsonian Institution Press, Washington, D.C.

Contains numerous articles dealing with the culture history of the New York City region, the Contact Period groups inhabiting the area, and the linguistic affiliations of the Contact Period groups. Numerous references to Staten Island archaeology and local Native American groups.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Truex, James (editor)

1982 "The Second Coastal Archaeology Reader: 1900 to the Present." Readings in Long Island Archaeology and Ethnohistory Vol. V. The Suffolk County Archaeological Association.

Collection of articles dealing with the prehistory ethnohistory of the New York City region. Articles deal with issues of cultural history, pottery styles, environmental changes, and cultural adaptations. Specific information on some Native American Bronx sites is presented.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Ultan, Lloyd

1983 The History of Van Cortlandt Park. Published by the Author, The Bronx County Museum, New York.

Article gives some general information about the Native American sites in the park.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

Van der Donck, Adriaen
1968 A Description of the New Netherlands. Syracuse
University Press.

Well known account of New Netherlands first published in 1655. Van der Donck provides ethnographic descriptions of the lower Hudson Valley Native Americans as they existed in the 1640's. Descriptions of the environment in the New Amsterdam area are also provided.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Van der Zee, Henri and Barbara van der Zee
1978 A Sweet and Alien Land; The Story of Dutch New York.
The Viking Press, New York.

Detailed account of 17th century Dutch settlement of the New York area (including the Bronx); includes history of relations with local Native American groups.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY, GENERAL RESEARCH DIVISION.

Wells, James L., L. Haffent, and J. Briggs
1927 The Bronx and Its People: A History 1609-1927. Volumes
I, II, and III. The Lewis Historical Publishing Co.,
Inc.

This history of the Bronx includes information on the environment of the Borough prior to development. Information is also given on the 17th century Native American occupations there and on some of the more well known aboriginal sites.

COPY IN THE COLLECTIONS OF THE NEW YORK PUBLIC LIBRARY, LOCAL HISTORY AND GENEALOGY DIVISION AND THE BRONX COUNTY HISTORICAL SOCIETY.

Westchester County Historical Society
1978 The Westchester Heritage Map. Published by the
Westchester County Historical Society.

This map, which is compiled from numerous sources, indicates the general location of some Native American sites in the Bronx which was formerly a part of Westchester County. Some information is also provided by icon on the types of sites indicated on the map (e.g. village site, burial site, camp site, shell midden etc.).

COPIES IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
MAP DIVISION AND THE WESTCHESTER COUNTY HISTORICAL SOCIETY.

Wissler, Clark (ed.)
1909 The Indians of Greater New York and the Lower Hudson Valley. American Museum of Natural History
Anthropological Papers, Vol. III:3-62.

Series of articles concerning Native American
Contact Period groups in the lower Hudson Valley
(including the Bronx Native American groups).

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
GENERAL RESEARCH DIVISION.

Wolley, Charles
1701 A Two Years' Journal in New York. Harbor Hill Books
Reprint 1973, Harrison, New York.

Account of travels of the Reverend Wolley in
New York in 1678 and 1680. Account provides
limited descriptions of lower Hudson Valley
Native Americans, including those who resided
in the Bronx. This late Contact Period
account provides comparative information on
the cultural changes New York City area Native
Americans had undergone since the early period
of European contact.

COPY IN THE COLLECTIONS OF THE NEW YORK CITY PUBLIC LIBRARY,
LOCAL HISTORY AND GENEALOGY DIVISION.

Works Progress Administration

1933 Map of Westchester County Showing Indian Occupation.
Prepared under the direction of the Westchester County
Historical Society.

This map shows the general location of some Native American sites in Westchester County and the Bronx (formerly part of Westchester County). Some information is also provided by icon on the types of sites indicated on the map (e.g. village site, burial site, camp site, shell midden etc.).

APPENDIX B

ANNOTATED BIBLIOGRAPHY OF CULTURAL RESOURCE INVESTIGATIONS
CONDUCTED IN THE BRONX, NEW YORK THROUGH MAY 1995

- Allee King Rosen and Fleming, Inc.
1. 1987 Draft Environmental Impact Statement for the Shorehaven Project, CEQR #87-010X. Prepared for Housing Futures, Inc., and Soundview Associates, Co. New York.

Ten areas within the project site are considered sensitive for the presence of Native American cultural resources.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Bankoff, H. Arthur and Frederick A. Winter
2. 1991 Van Cortlandt House Excavations 1990 and 1991. Prepared for the New York City Department of Parks and Recreation.

A Native American shell pit feature containing chert debitage was encountered during the 1991 excavations. The feature probably dates to the Late Woodland Period. No other Native American deposits were found during the fieldwork.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Boesch, Eugene and Arnold Pickman
3. 1986 Hostos College Archaeological Borings. Prepared for Sanchez and Figueroa, Architects, New York.

No indications of possibly significant archaeological deposits were detected in any of the archaeological borings conducted in the project area. The conducted borings suggested that all of the lots within the project area have been disturbed to the extent that intact deposits would no longer be present.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Boesch, Eugene, Leonard Bianchi, and Philip A. Perazio
(Kittatinny Archaeological Research, Inc.)
4. 1993 Phase IA Cultural Resource Investigation of the Saint Raymond's Cemetery Expansion Area, Bronx County, New York CEQR # 92-612X. Prepared for Saint Raymond's Cemetery, The Bronx, New York.

Portions of the project area considered sensitive for the presence of Native American cultural resources. Field testing for former buried ground surfaces utilizing mechanical equipment is recommended. Such buried surfaces may contain

Native American deposits.

Boesch, Eugene J. and Philip A. Perazio (Kittatinny
Archaeological Research, Inc.)

5. 1993 A Phase IB Cultural Resource Investigation of the
St. Raymond's Cemetery Expansion Area, Bronx
County, New York (CEQR # 92-612X). Prepared for
Saint Raymond's Cemetery, The Bronx, New York

Buried former ground surfaces encountered in the northwestern portion of the project area. A small quantity of Native American lithic debitage was found to be associated with one buried ground surface. It is recommended that the proposed cemetery project be redesigned to avoid impacts to the area containing the buried surface. If this is not feasible, than additional archaeological investigation of the area is recommended.

REPORTS (#'s 4 AND 5) ON FILE AT THE NEW YORK CITY LANDMARKS
PRESERVATION COMMISSION.

City/Scape:Cultural Resource Consultants and Historical
Perspectives, Inc.

6. 1990a Revised Cultural Resources Report For Chapel Farm
II, Riverdale, New York, CEQR 85-325X. Prepared
for Robert Kahn, Hastings-on-Hudson, New York.

Project area considered sensitive for the presence of Native American cultural resources. A number of sites and finds were recorded within a mile of the project area which is topographically the highest point in the Bronx. It is postulated that Native Americans may have used the project area as an observation point while hunting. Additionally, Transitional Period aboriginals are known to have interred their dead on high promontories in other locations. The possibility is presented that similar activities may have occurred within the project site. The project area is also considered sensitive for the presence of Historic Period cultural resources associated with the late nineteenth century Goodridge estate.

7. 1990b Cultural Resources Report For Chapel Farm II,
Riverdale, New York, CEQR 85-325X. Prepared for
Robert Kahn, Hastings-on-Hudson, New York.

This completed form presents the results of a preliminary archaeological investigation of the project area. The project area contains a significant concentration of quartz fragments which may have been worked by Native Americans and may be associated with a "quarry" site. The report recommends that additional field investigations of the project area be conducted.

8. 1991 Cultural Resource Investigations Stage II Report For Chapel Farm, Riverdale, New York CEQR #85-355X. Prepared for Robert Kahn, Hastings-on-Hudson, New York.

This document is a Stage 2 site evaluation form. It presents the archaeological evaluation of a Native American "quarry" site located in the Riverdale section of the Bronx. The report concludes that the majority of the recovered quartz fragments are of natural origin and derive from a nearby quartz bedrock exposure. Some of the recovered quartz is worked and appears to be of Native American origin. The site is apparently disturbed, at least in part. The report concludes that the site does not meet the criteria for inclusion on the National Register of Historic Places.

9. 1993 Chapel Farm Estate Riverdale, Bronx, New York SEQR #89PR111, CEQR #85-325X, Cultural Resource Investigation Stage 2 and Quarry Investigation Survey (QIS). Prepared for Robert Kahn, Hastings-on-Hudson, New York.

Presents the results of the Stage 2 investigation of the quartz quarry/procurement site previously identified. The bedrock quartz exposures in the project area apparently represent a previously unidentified lithic resource that was utilized by Bronx and Manhattan area Native Americans. Additional investigation consisting of mapping of the quarry features and quartz exposures is recommended.

REPORTS (#'s 6-9) ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Clements, Carol J., Daniel N. Pagano, Amanda Sutphin,
and Marina Averbukh (Contributor)
10. 1995 Archaeological Bibliography of the Borough of the Bronx, City Environmental Quality Review Reports.

Bibliography of the cultural resource reports produced under CEQR in the collection of the New York City Landmarks Preservation Commission.

BIBLIOGRAPHY ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- De Leuw, Cather/Parsons
11. 1979 Northeast Corridor Improvement Project Task 110:
Historic and Archaeological Resources of the
Northeast Corridor: New York.

Portions of the study area in the Bronx determined to be sensitive for the presence of Native American cultural resources due to the former environmental and physiographic characteristics of those locations.

REPORT ON FILE AT THE NEW YORK STATE OFFICE OF PARKS,
RECREATION, AND HISTORIC PRESERVATION.

- Energy and Environmental Analysts, Inc. (Garden City, New York)
12. 1981 South Bronx - Oak Point Link Environmental
Assessment Technical Support Document No. 3.
Prepared for the New York State Department of Transportation.

Project area considered sensitive for the presence of Native American cultural resources due to the former topography and physiography of the area. Extensive disturbance, however, may have occurred within the project site.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION AND THE UNITED STATES ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT.

- Geismar, Joan H.
13. 1989 Historic and Cultural Resources of the Sea Breeze
Estates Site, City Island, The Bronx, CEQR
89-040X. Prepared for Konheim and Ketcham, Inc.

The project area considered sensitive for the presence of Native American cultural resources, particularly on the south side of Marine Street. It is recommended that archaeological borings be conducted as an initial sub-surface testing program to determine whether intact buried former ground surfaces are present.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Geismar, Joan H.
14. 1991 Archaeological/Historical Assessment, Family Court
Site, Bronx, New York. Prepared by Edwards and Kelcey, Engineers.

COPY OF REPORT WAS NOT LOCATED.

15. 1992 An Archaeological Assessment of the Morrisania Urban Renewal Project Bronx, New York. CEQR #91-033X. Prepared for TAMS Consultants, Inc.

Portions of the project area considered sensitive for the presence of Native American cultural resources. It is recommended that soil borings required for construction also be analyzed archaeologically, particularly in the southwestern portion of the project area where Native American sites may be located, to determine whether intact buried former ground surfaces are present. It is also recommended that an appropriate field testing program that follows a New York City Landmarks Preservation Commission approved scope of work be implemented prior to construction.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Greenhouse Consultants, Inc.

16. 1991 Melrose Commons URA Bronx, New York Historical and Archaeological Field Inspection and Documentary Research CEQR #88-087X. Prepared for New York City Department of City Planning.

Portions of the project area are considered sensitive for Native American cultural resources. Additional archaeological investigation of these areas is recommended.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Hartgen Archaeological Associates, Inc.

17. 1990 Archaeological Field Reconnaissance SEQR Parts 1B and 3 Chapel Farm II Bronx County, New York, CEQR 85-325X. Prepared for Robert Kahn, Kahn Associates, The Bronx, New York.

Form Report of investigation of the Chapel Farm project area. Presence of quartz debitage within the property is documented.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Historical Perspectives, Inc.

18. 1985 Bartow-Pell Estate Carriage House Site Archaeological Report. Prepared for the International Garden Club and Beyer Blinder Belle, Inc.

Report documents the archaeological testing of the nineteenth century carriage house on the Bartow-Pell Estate. Historic Period features and deposits encountered and tested. Prehistoric Period cultural resources were not encountered during the field work.

19. 1986a Phase IA Archaeological Assessment Report on the Shorehaven Project, The Bronx, New York, CEQR 87-010X. Prepared for Soundview Associates, New York. Revised June 30th, 1987.

Portions of the project area are considered sensitive for the presence of Native American cultural resources including burials. The area is part of Clason's Point, the former location of the Contact Period Siwanoy village of Snakapins. Artifacts dating from the Early Archaic Period to the Contact Period have been recovered from the Point. Portions of the project area also considered sensitive for Historic Period cultural resources associated with the Cornell/Willett/Clason Farmhouse (c.1643-1900). Field testing is recommended for the portions of the project site that have not been previously disturbed.

20. 1986b Archaeological Sensitivity Study for the Quality Housing Rezoning Project. Prepared for AKRF, Inc., New York.

Project area not considered sensitive for the presence of Native American cultural resources.

21. 1987a Second Level Documentary Study - Phase IA Shorehaven Project, New York, N.Y. CEQR 87-010X. Prepared for Soundview Associates, New York.

This report analyzes each block and lot within the project area for Native American and Historic Period site potential based on: 1) information gathered from a Stage Ia archaeological study of the property; 2) deed and other primary source research; and 3) recorded prior disturbance within the property. Sub-surface testing is recommended for portions of seven blocks and for portions of Cornell Avenue and Bronx River Avenue.

22. 1987b Phase IA Archaeological Assessment Report for the Tibbett Gardens Project, Bronx, New York, CEQR 87-164X. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Project area considered sensitive for the presence of Native American cultural resources. Due to extensive filling of the project site, field testing employing archaeological borings is recommended. The borings will provide the data necessary to construct a soil profile for the project area and determine whether any former ground surfaces remain intact beneath the fill.

23. 1987c Tibbett Gardens Project Site Bronx, New York, Second Level Study September 1, 1987. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Portions of the project area considered sensitive for the presence of Native American cultural resources. Some of these areas may be avoided during construction of the proposed project. If avoidance is not feasible than sub-surface testing may be necessary.

24. 1988a Shorehaven Project, CEQR Number 87-010X, Phase IB Archaeological Fieldwork Report Fall 1987. Prepared for Soundview Associates, New York.

This report presents the results of archaeological testing within the project area. Native American artifacts were recovered from Areas C and D during sub-surface testing. Analysis of the artifacts and associated stratigraphy suggested that the recovered material was not in-situ but had undergone "post-depositional movement." No additional archaeological investigations were recommended for the project area.

25. 1988b Archaeological Assessment Report for the Board of Education Project: Finast Site CEQR 88-123X. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Project area considered sensitive for the presence of Native American cultural resources. A sub-surface testing program consisting of a series of archaeological borings is recommended in order to further evaluate the project site.

26. 1988c Documentary Study of the Archaeological Potential for the Proposed School Site Selection: CEQR #88-182X Loring Place, Block 3224, Lot 14. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Project area not considered sensitive for the presence of Native American cultural resources. No additional archaeological testing was recommended.

27. 1989a Department of Correction Prison Barge Proposal Project Data Statement: Preliminary Archaeological Assessment Halleck Street Site, CEQR 90-001X. Prepared for Parsons Brinckerhoff Quade and Douglas, Inc., New York.

Project area considered sensitive for the presence of Native American cultural resources. The northeast quadrant is considered to have the greatest likelihood of producing archaeological data. It is recommended that sub-surface testing consisting of archaeological borings be conducted in that area.

28. 1989b New York City Department of Correction: Hunts Point Correctional Facility CEQR #89-143X. Phase Ia Archaeological Assessment Report. Prepared for Parsons Brinckerhoff Quade and Douglas, Inc., New York.

Portions of the project area considered sensitive for Native American cultural resources. Areas formerly inundated are now covered by approximately 15 feet of fill. Early Archaic period sites may be located beneath the fill. Any Native American sites at these locations, however, would be situated below the present water table. The report recommends that field testing not be conducted in this area due to the problems involved in retrieving potential resources from deeply buried, inundated sites. The portion of the project area west of the former shoreline is the former location of the Historic Period Hunt Mansion. That area is also considered sensitive for the presence of Native American sites. This area will not be impacted by the proposed project. Shell was encountered in construction borings conducted approximately 300 feet south of the project area.

29. 1990 The City of New York Department of Correction: Oak Point Site. Preliminary Archaeological Review, CEQR 90-012X. Prepared for Parsons Brinckerhoff Quade and Douglas, Inc., New York.

The project area may have formerly contained Native American cultural resources. Activities associated with the establishment of a railroad yard as well as tidal action in the East River, however, would have disturbed any such resources present. No additional archaeological investigations recommended.

30. 1991a The New York City Long Range Sludge Management Plan Generic Environmental Impact Statement III Zerega, Bronx Preliminary Archaeological Assessment, CEQR-Generic. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Project area consists primarily of mid-twentieth century landfill and is not considered sensitive for archaeological resources.

31. 1991b The New York City Long Range Sludge Management Plan Generic Environmental Impact Statement III North Brother Island Phase IA Archaeological Assessment, CEQR-Generic. Prepared for Allee King Rosen and Fleming, Incorporated, New York.

Project area not considered sensitive for the presence of Native American cultural resources due to its unfavorable environmental characteristics and to previous disturbance on the island. No additional investigations are recommended.

32. 1993a Stage 1A Archaeological Assessment The New York Botanical Garden Bronx, New York. Prepared for Vollmer Associates and the City of New York Department of Cultural Affairs.

Only restricted portions of the project area considered sensitive for the presence of Native American cultural resources. These locations predominantly within the Forest and Magnolia Grove. South of the Snuff Mill are located additional areas (one east and one west of the Bronx River) considered sensitive for Native American cultural resources. Field testing of the sensitive areas is recommended if they are to be impacted by the proposed project.

33. 1994a Police Service Facility #8 Block 3540, Castle Hill Bronx, Phase 1A Archaeological Study, CEQR 95-CHA002X. Prepared for Wall and Associates, New York.

Project Area not considered sensitive for the presence of Native American cultural resources.

34. 1994b Cultural Resources Topic Intensive Documentary Study Third Avenue HUB Retail Development The Bronx, New York, CEQR 94DME-012X. Prepared for Rosenshein Associates, New York.

HISTORICAL PERSPECTIVES, INC. REPORTS (#'s 18-33) ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION. COPY OF 1994b REPORT (#34) NOT FOUND.

Hopping, Daniel M.C., Frank G. Matero, and Zachary N. Studenroth

35. 1980 Historic Structure Report: The Bartow-Pell Stable. Prepared for the International Garden Club, Inc. and the New York State Parks and Recreation Division for Historic Preservation.

This study provides information on the history of the Bartow-Pell Stable site and on the construction history of the stable, built between 1836 and 1842. Exterior and interior architectural data is also presented. The likelihood that Native American cultural resources are present in the vicinity of the stable is not addressed.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Johannemann, Edward J. and Laurie Schroeder

36. 1981 Phase 1A Cultural Resource Survey of the "Shore Route", Oak Point Link Study - Full Freight Access Program in the Bronx, New York.

37. 1982 Archival Documentation of a Phase IA Cultural Resource Survey for the Harlem River Yard Oak Point Link Study - Full Freight Access Program in the Bronx, New York. Prepared for Energy and Environmental Analysts, Inc., Garden City, New York.

Both reports conclude that the project area is not sensitive for the presence of Native American cultural resources due to probable twentieth century disturbance. It is recommended that field testing confirm the disturbed nature of the site.

REPORTS ON FILE AT THE NEW YORK STATE DEPARTMENT OF PARKS, RECREATION AND HISTORIC PRESERVATION AND THE NEW YORK ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT.

- Kopper, J.S.
38. 1978 Cultural Resources Reconnaissance, Combustion Equipment Associates Facility, South Bronx, Bronx County, New York. Prepared for Fred Hart Associates, Inc., New York, New York.

COPY OF REPORT NOT WAS LOCATED.

- La Porta Associates
39. 1993 Chapel Farm Estate Riverdale. Bronx County, New York SEQR #89-PR111, CEQR #85-325-X. Prepared for Robert Kahn, Hastings-on-Hudson, New York.

This report provides a detailed description of the bedrock geology of the western Bronx particularly in regard to the origin of the quartz veins exposes within the project area. The location of known exposures of quartz veins in the lower Hudson Valley is given. Native American utilization of these surface exposures for raw material quarrying is addressed.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Lenik, Edward
40. 1986 Phase IA Archaeological Sensitivity Report on the Resource Recovery Project: Barretto Point. Prepared for Parsons, Brinckerhoff Quade and Douglas, Inc., New York.

Project area not considered sensitive for the presence of Native American cultural resources.

Lenik, Edward J. and Nancy L. Gibbs (Sheffield
Archaeological Consultants)

41. 1994 An Evaluation of Prehistoric Cultural Resources at
the Chapel Farm Estate Property Bronx, New York.
SEQR #89PR11, CEQR #85-325-X. Prepared for Tim
Miller Associates, Cold Spring, New York.

A Native American quartz quarrying and lithic processing site determined to be located within the project area. A determination of the cultural affiliation of the site could not be determined. The site was determined to be extensively disturbed by historic period activities and not eligible for listing on the National Register of Historic Places. No additional archaeological investigation of the site is recommended.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION
COMMISSION.

Louis Berger and Associates, Inc.

42. 1985 Archaeological Testing of the Proposed Egress
Stair and Dry Well Excavation, Van Cortlandt
Mansion, Van Cortlandt Park, Bronx, New York,
Project Number 1016. Prepared for Lake
Construction and Development Corporation, New
York.

No intact archaeological deposits encountered within the project area during field testing. Additional archaeological investigation of the project area is not recommended.

43. 1987 Phase I Archaeological Investigation of Proposed
Sewage/Plumbing Lines and Seepage Basin at Van
Cortlandt Mansion Broadway and 242nd Street Van
Cortlandt Park, Bronx, New York. Prepared for
McCullagh Mechanical Co., Inc. Bronx, New York.

Project area considered sensitive for the presence of Native American and Historic Period cultural resources. Sub-surface testing, however, encountered no intact archaeological deposits or features. No additional archaeological investigations were recommended.

44. 1988a A Phase IA Cultural Resource Assessment: Proposed Juvenile Detention Center and 40th Precinct Stationhouse, The Bronx, New York. CEQR #88-012X. Prepared for the New York City Department of Juvenile Justice, New York, New York.

Project area considered sensitive for the presence of Native American cultural resources. Secondary level investigation recommended to further evaluate the likelihood that potentially significant Historic Period resources dating to the mid to late nineteenth century are located within the project area. The development of a field testing program in consultation with the New York City Landmarks Preservation Commission is recommended after completion of the secondary level investigation.

45. 1988b Environmental Impact Statement Juvenile Detention Facilities and 40th Precinct Statehouse. CEQR #88-011K, CEQR #88-012X. Prepared for the New York City Department of Juvenile Justice, New York, New York.

Project area considered sensitive for the presence of Native American cultural resources.

46. 1989 Secondary Cultural Resource Study, Proposed Juvenile Detention Center and 40th Precinct Station House, The Bronx, New York. CEQR #88-012X. Prepared for the New York City Department of Juvenile Justice, New York, New York.

The report identifies lots within the project area that have the potential for containing Historic Period archaeological resources. Areas sensitive for the presence of Native American cultural resources were also identified within the study area. Stage Ib field testing was recommended for the archaeologically sensitive locations.

47. 1990 Stage IB Cultural Resource Investigation Juvenile Detention Facilities 40th Precinct Station House The Bronx, New York. CEQR #88-012X. Prepared for the New York City Department of Juvenile Justice, New York, New York.

Field testing consisting of 14 machine trenches conducted within the project area. No evidence of Native American or Historic Period cultural resources encountered. No additional archaeological investigations recommended for the project area.

REPORTS (#'s 42-47) ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Pickman, Arnold
48. 1990 Stage I Archaeological Investigation
Reconstruction of Electric Feeder System, Van
Cortlandt Park, The Bronx, New York. Submitted to
Valquest Contracting, Inc.

Project area considered sensitive for the presence of Native American cultural resources. Sub-surface testing encountered a small quantity of Native American debitage in disturbed contexts. Additional sub-surface investigation of Historic Period feature was recommended.

49. 1994 Archaeological Documentary Study, The Nehemiah
Project, Block 2537, Lots 1 and 10, Borough of The
Bronx, New York, CEQR 93HPD-015X. Prepared for
South Bronx Churches, Inc.

Portions of the project area considered sensitive for the presence of historic period cultural resources associated with mid to late nineteenth century residential occupations. Field testing is recommended for selected portions of the project area.

50. 1995 Archaeological Field Testing, The Nehemiah
Project, Block 2537, Lots 1 and 10, Borough of the
Bronx, New York, CEQR #93-HPD-015X. Submitted to
South Bronx Churches.

Historic Period archaeological deposits associated with late nineteenth century residential occupations were encountered within a cistern and another feature of unknown function during field testing. Mitigation excavation of these deposits is recommended.

REPORTS (#'s 48-50) ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

- Pickman, Arnold and Eugene Boesch
51. 1991 Research and Investigative Report Vault Hill
Cemetery Van Cortlandt Park Bronx, New York.
Prepared for Ward Associates, New York, New York.

Project area considered sensitive for the presence of Native American cultural resources. Native American artifacts recovered from the surface in the immediate vicinity of the Vault Hill cemetery. Sub-surface testing of the project area is recommended.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Reedy, James R. Jr.

52. n.d. Phase I Preliminary Report: HMS Hussar Search.
Conducted by Maritime Explorations, Inc.

Report does not address the possible presence of Native American cultural resources within the study area.

REPORT ON FILE AT THE NEW YORK STATE OFFICE OF PARKS, RECREATION AND HISTORIC RECREATION.

Roberts IV, William I. (Greenhouse Consultants, Inc.)

53. 1991 Archaeological and Historical Sensitivity
Evaluation of the Benson Street Demapping
Project, Westchester Square, The Bronx, New York,
CEQR #91-028X. Prepared for The RBA Group by
Greenhouse Consultants, Inc., New York.

The project area is not considered sensitive for the presence of archaeological resources. No additional investigations are recommended.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Roberts IV, William I. and Anna V. Farkas (Greenhouse Consultants, Inc.)

54. 1988 Stage IA Archaeological/Historical Sensitivity
Study, Castle Hill Development Project, The Bronx,
New York, CEQR #88-042X. Prepared for Ethan Eldon
Associates Greenhouse Consultants, Inc., New York.

Project area considered sensitive for the presence of prehistoric period cultural resources. A portion of the project area considered sensitive for the presence of architectural remains and deposits associated with the occupation of a mid-19th century farm house. A Stage Ib level of investigation is recommended.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Rothchild, Nan and Christopher Matthews.

55. 1993 Phase Ia and Ib archaeological Investigation for Proposed Area of Construction of Six Tennis Courts on the Parade Ground of Van Cortlandt Park, the Bronx, New York.

Project area considered sensitive for the presence of Native American cultural resources. Field testing encountered Native American lithic debitage in disturbed contexts in a few locations.

REPORT ON FILE AT THE NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION.

Storch Associates (Westbury, New York)

56. 1986 Van Cortlandt Park Borough of the Bronx, Restoration Master Plan for the City of New York, Department of Parks and Recreation, Volumes 1 and 2. Prepared by Lloyd Ultan for the New York City Department of Parks.

This study provides a brief and general account of the Native American remains recovered in Van Cortlandt Park focusing principally on the "Parade Ground" area.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

TAMS Consultants, Inc.

57. 1990a Melrose Commons URA Preliminary Draft Environmental Impact Statement Bronx, New York CEQR #88-087X, August 1990. Appendix E: Cultural Resources. Prepared for the United Nations Development Corporation, New York and the New York City Department of Planning.

Portions of the project area considered sensitive for the presence of Native American cultural resources.

58. 1990b Morrisania URP, Preliminary Draft Environmental Impact Statement, Bronx, New York CEQR #91-033X. Prepared for the New York City Economic Development Corporation.

59. 1990c Project Data Statement for the Morrisania URP, Bronx, New York. Prepared for the New York City Economic Development Corporation.

Both documents indicate that portions of the project area are sensitive for the presence of Native American cultural resources. Sub-surface testing of those areas is recommended.

60. 1993 Harlem River Yard Intermodal Transportation and Distribution Center Bronx, New York. Final Environmental Impact Statement Cultural Resources. Prepared for Harlem River Yard Ventures, Inc., New York.

Results of a Stage Ia and Stage Ib archaeological investigation of the project area is summarized in this report. Although the Stage Ia study determined that the project area was sensitive for the presence of Native American cultural resources, the recommended Stage Ib sub-surface testing did not encounter any archaeological deposits.

REPORTS (#'s 57-60) ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

Weiss, Dennis

61. 1987 Paleo-Environmental Interpretation of the Tibbett Gardens Project Site Bronx, New York, CEQR #87-164X. Submitted to Historical Perspectives, Inc. Riverside, Ct. and Allee, King, Rosen and Fleming, Inc., New York.

This report is an analysis of the data from 181 borings taken within the project area and its immediate vicinity. An environmental reconstruction of the project area for the time periods 18,000 B.P., 6,000 B.P., 4,000 B.P., and 2,000 B.P. is presented. It is concluded that during these periods the western and southeastern portions of the project area would have provided favorable environments for Native American occupation.

REPORT ON FILE AT THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION.

United States Department of Transportation and Federal
Railroad Administration

62. 1978 Final Programmatic Environmental Impact Statement:
Northeast Corridor Improvement Project,
Washington, D.C.

Portions of the study area in the Bronx determined to be sensitive for the presence of Native American cultural resources due to the former environmental and physiographic characteristics of those locations.

REPORT ON FILE AT THE UNITED STATES ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT.

APPENDIX C

PREVIOUSLY DOCUMENTED NATIVE AMERICAN ARCHAEOLOGICAL
SITES IN THE BRONX, NEW YORK

I. ARCHAEOLOGICAL SITE LOCATIONS IN THE BRONX

Despite more than a hundred years of amateur and professional archaeological work, much of it conducted early in this century, the prehistory of the Borough of the Bronx is not fully known or understood. Problems that confront archaeological research of the Bronx include poorly defined stratigraphic relationships of the components of documented sites, lack of single component sites, and site disturbance and destruction from both natural and cultural factors. The most destructive of these factors is the rapid pace and scope of development of the Bronx which has resulted in the loss of many Native American sites. Most of the sites mentioned in this Appendix were not subject to controlled excavations and cannot be properly evaluated.

The following section provides the information available on recorded Native American archaeological sites in the Bronx. The numbers and/or letters to the left of each site identifier indicate the location of the site on Figures 1a-1d. Locational information is presented whenever possible and is as accurate as the sources from which it was derived. Site location information in the sources consulted, however, is frequently given in general terms; inconsistent with other sources; vague; or lacking totally. Sites recently discovered by archaeological investigation conducted as part of the cultural resource management process are more precisely located.

Archaeological site numbers, if assigned, are given below the site identifier. These numbers were assigned either by the New York State Museum (e.g. NYSM #710) or the New York State Office of Historic Preservation (e.g. #HAR 3-1).

Whenever possible current conditions at each site are described. For most sites, however, such information is not readily available.

Other information provided include the cultural period associated with each site, if known, as well as primary reference sources. The full citation for each reference cited can be found either in Appendix A, Appendix B, or Section V (References Cited).

A brief summary is also provided of the available information reviewed concerning the nature and location of each site.

No.	Site Identifier	Cultural Period	References
1.	<u>Mount St. Vincent</u> (NYSM #710; HAR #3-1)	Woodland; possible Archaic component	NYS Museum and SHPO Site Files; Harrington n.d.a

The Prehistoric Site Files of the New York State Museum and Office of Historic Preservation list a site on the grounds of Mount Saint Vincent College in Riverdale. Ceramics and lithic debitage were reportedly recovered from the site. No other information is provided about the site which was probably a camp. Much of the College property is undeveloped so the site may still be present.

2.	<u>Chapel Farm</u>	Prehistoric; possible Archaic component	City/Scape 1993; Lenik and Gibbs 1994
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Evidence of a Native American quartz procurement site containing quarry work shops and lithic processing stations was discovered on Riverdale Ridge in the area between 250th Street on the south, 253rd Street on the north, Fieldston Road on the east, and Iselin Avenue on the west. Quartz bedrock outcrops are in the immediate vicinity of the Native American activity areas. Investigation of the site has determined that it is extensively disturbed.

3.	<u>Planting Field,</u> <u>Van Cortlandt</u> <u>Park</u>	Woodland; possible Contact Period component	Beauchamp 1900; Skinner 1920; Bolton 1922, 1934a; Parker 1922; Bolton 1975
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A large Native American site, approximately 14 acres in size, was formerly present in Van Cortlandt Park north of the Van Cortlandt Mansion house on the level land west of Van Cortlandt Lake and Tibbetts Brook. Most of the site was destroyed in 1890 when the field was graded for a parade ground and playing field (Ultan 1983). The site was probably occupied during different periods but contained an extensive Late Woodland component. By the early Historic Period the site area was no longer the location of an active village. It was probably still used by Native American's, however, as an agricultural field when Adriaen Van der Donck purchased the land from the Reckgawancs since the area was referred to at that time by local Native Americans as the "Planting Field." Temporary campsites used by individuals working in those fields were probably located in the vicinity. During the Contact Period, the area was referred to as "Mosholu" and was part of a large tract known as "Keskeskick" which includes all of Fordham Heights (Bolton 1922:93-94; Bolton 1975: 83).

According to a December 14th, 1890, New York Tribune account of the destruction of the site (Skinner 1920:2:144-145), it was located:

...to the north of the old Van Cortlandt mansion, extending to Broadway on the west, and the lake on the east, and running northwest some 2000 feet... and comprising a large level plain, forty to fifty acres in extent. The northern half of this tract is low meadow, somewhat swampy, and traversed from north to south, and through its center, by a brook which, about midway of the whole plain, bends off at a right angle with its general course, and running eastward empties into Van Cortlandt Lake.

The recovered artifact assemblage associated with the site was varied. Chipped, groundstone, and bone tools, pottery, and subsistence remains consisting of bone, shellfish, and nutshell were recovered. In addition, a number of features (trash and storage pits, hearths some of which were bowl shaped) and a midden were noted by J.B. James of the Bronx during the 1890 grading. According to Skinner (1920:2:144):

The shell-heaps, or hearths, were found scattered over a space 650 feet wide by 950 feet in length, or an area equal to about fourteen acres, and were most numerous in the north and north-central part, where for a considerable extent the soil was black with ashes and minute particles of charcoal, and thickly dotted with hearths.... Throughout the whole fourteen acres they appeared at intervals and often close together in groups.

In addition, 13 human interments were also discovered at the site, four of which were reportedly interred in hearth features (Skinner 1920:2:146). A number of dog burials were also present.

A 1991 construction excavation for an electric utility trench in the southern part of the field, northwest of the Van Cortlandt mansion, exposed the edges of two shell filled pits. A large ceramic sherd was removed from one of the pits (Julie Mirsberger: Personal Communication). Pickman and Boesch (1991) noted the presence on the surface of the northern portion of the ball field one utilized black chert flake, one gray chert blocky fragment, and one quartz flake. These remains are obviously associated with the Native American site formerly situated at this location.

It is probably that truncated features exist within the ball field area (the former Parade Ground) and that truncated or

intact features exist in the vicinity of the Van Cortlandt Mansion. The Mansion area was not graded during the construction of the ball field and has, in fact, been subjected to various amounts of filling which may have preserved Native American deposits. The area west and northwest of the Mansion, being nearest to the former Native American site location on the Parade Ground, should be considered particularly sensitive as evident by Native American features found there (see above and Site Number 6).

Bolton shows an aboriginal trail, known from the Contact Period, which led southward from the Van Cortlandt playing field site to Paparinemin (Site Number 65) and Spuyten Duyvil Creek (Bolton 1922:2:Map VII A).

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| 4. <u>Indian Field,</u>
<u>Van Cortlandt</u>
<u>Park</u> | Woodland; possible
Contact Period
component | Bolton 1922;
Parker 1922 |
|--|---|-----------------------------|

Bolton (1922:2:Map VII, A) indicates the existence of an "Indian field" northeast of the Van Cortlandt Mansion. He may be referring to a former Native American agricultural field in which shell pits and a scatter of artifacts were located. Parker (1922:490 and Plate 147), also indicates the existence of this site. The site is located in Van Cortlandt Park east of the Major Deegan Expressway and west of Van Cortlandt Park East between extensions of East 239th and East 242nd Streets.

The field was also the site of a revolutionary war battle between British and American troops. On August 31, 1778, five hundred Loyalist and British troops under Colonel Simcoe and Lieutenant Colonel Tarleton advanced towards Woodlawn Heights, where slightly more than one hundred Americans were posted (Hufeland 1974:260). Fifty of these American troops were Stockbridge Indians under their "chief" Daniel Ninham, a member of the Wappinger group of Native Americans. The Stockbridge Indians were remnant New England and southeastern New York Native Americans who had joined the American cause. At the time of the Revolution, they lived together with Euro-American settlers in an Anglican "mission village" in Stockbridge, Massachusetts (Conkey, Boissevain, and Goddard 1978:181). On that August afternoon the Indians were positioned south of present day McLean Avenue in Yonkers, near the northeastern corner of Van Cortlandt Park. The remainder of the Americans, Continental troops under Major Stewart and Westchester Volunteers under Captain Daniel, were situated to the north of McLean Avenue (MacDonald 1927:45). A British column advancing from the east was attacked by the Stockbridge force. A second British column soon struck the Indians from the south. The Indians turned their fire to face this threat. Before the Indians had time to reload, a third column, a troop of British

Dragoons under Lieutenant Colonel Tarleton, hit them from the northwest. The Indians were compelled to retreat across descending ground, reportedly Cortlandt Ridge (Ferris 1897:xxii) located northeast of what is now the Major Deegan Expressway into an open field, now situated in the northeast portion of Van Cortlandt Park, where they were followed by the British cavalry. Greatly outnumbered and without the benefit of bayonets, the Indians were slaughtered. According to Comfort (1906:23) and Hufeland (1974:260), thirty-seven of the fifty Stockbridge Indians were killed and two were taken prisoner while Jenkins (1912:303) places the number of Indian dead at seventeen individuals. The other Americans, stationed north of McLean Avenue, were also attacked and dispersed with few casualties. Total losses to the British and Loyalists during this engagement were two men killed and six wounded. The Indians were buried in the "Indian Field", almost where they fell (Jenkins 1912:303; Hufeland 1974:261). "Indian Field" is now part of the northeastern portion of Van Cortlandt Park, west of the present day Major Deegan Expressway.

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| 5. <u>Vault Hill,</u> | Prehistoric; | Pickman and |
| <u>Van Cortlandt</u> | probably Woodland | Boesch 1991 |
| <u>Park</u> | | |

Evidence of Native American activity on Vault Hill in the location now occupied by the Van Cortlandt (Vault Hill) cemetery was found by Pickman and Boesch (1991). Two worked quartz tools (scraper and knife) were recovered from the surface immediately west of the cemetery. The material indicated the presence of a campsite possibly associated with the larger site located in the field north of the Van Cortlandt Mansion (Site Number 3).

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| 6. <u>Mansion,</u> | Prehistoric; | Bankoff and |
| <u>Van Cortlandt</u> | probably Woodland | Winter 1991 |
| <u>Park</u> | | |

A trash pit feature was encountered on the west side of the Van Cortlandt Mansion during archaeological field work in 1991. The feature was bell-shaped and contained primarily oyster shell and some clam shell. Lithic debitage and quartz projectile point fragments were also recovered.

Another Native American pit feature was uncovered during construction excavations in 1990 north west of the mansion (Arnold Pickman: Personal Communication).

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|---|-----------------------------------|-------------|
| 7. <u>Pascal Avenue,</u>
<u>Fieldston Road</u> | Prehistoric;
probably Woodland | Bolton 1922 |
|---|-----------------------------------|-------------|

A number of camps sites and shell heaps were located in the vicinity of 247th street and Pascal Avenue (no longer in existence) and at 247th Street and Fieldston Road (Bolton 1922:94). Nearby Indian Road may indicate the general location of a camp site. It has been speculated that these sites were associated with the village site located north of the Van Cortlandt Mansion (Site Number 3; see Bolton 1922).

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| 8. <u>Burial Point,</u>
<u>Ferry Point</u>
NYSM #716,
HAR #8-4,
NYSM #2825,
ACP-BRNX | Woodland; probable
Contact Period
component | Bolton 1922;
Bolton 1975;
McNamara 1984 |
|---|---|---|

A large area of Native American occupation and use referred to as Burial Point was located near Ferry Point on what was formerly referred to as Ferris' Neck (also Spicer's Neck and Zerega's Neck; see Bolton 1848:145 and 578; Bolton 1922:113, 223; Bolton 1975:81). The Neck is now the location of the toll booths, approach roads and ramps of the Bronx-Whitestone bridge. The Native American site consisted of a burial area, scattered shell middens, and camp sites. The burial area was reportedly used by the Siwanoy (McNamara 1984:326). Whether or not earlier burials were present is unknown since the site was never systematically investigated (Bolton 1922:223). According to Bolton (1922:223), this was the most important prehistoric site east of Westchester Creek. The probable site of the burial area was "a mound [or knoll] facing Morris cove on the border of the marsh at the foot of the Ferris estate" (Bolton 1922:223). The burial area was reportedly located approximately a quarter mile northeast of the tollbooths for the Bronx-Whitestone bridge (McNamara 1984:326). Part of Foote Avenue reportedly overlay a portion of the burial area (McNamara 1984:378).

Shell middens and "scattered native objects" were located intermittently along the shores of the point (Bolton 1922:113 and 223). The largest of the shellheaps was located immediately east of the burial knoll along the former north shore of Morris Cove (Bolton 1975:81). Bolton indicates the location of this site, including apparently the knoll, on his Map of Indian Paths in the Great Metropolis (Bolton 1922:Map VII,D:No. 10). Parker (1922) also indicates the presence of a large shell heap along the former north shore of Morris Cove (NYSM #2825, ACP-BRNX).

Since Bolton's work, Morris Cove and most of the surrounding marshland have been filled. This may have protected portions of the site. Other portions have probably been destroyed by the

construction of the Hutchinson River Parkway, the Bronx-Whitestone Bridge, and other local development.

Other Native American activity in the vicinity of Ferris Neck is suggested by references to Contact period aboriginal trails in the area. Present day East Tremont Avenue and portions of the Bruckner Expressway and Hutchinson River Parkway follow the course of such trails. Bolton depicts the locations of these and other aboriginal trails relative to the roads in existence early in the twentieth century (Bolton 1922: Map VIII, D, and pages 112-114). One trail is shown following the route of Eastern Boulevard (now part of the Bruckner Expressway) and Ferris Road (now part of the Hutchinson River Parkway). It linked the Saint Raymond's Cemetery site (Site Number 8) with the Burial Point sites.

9. St. Raymond's
Cemetery I

Woodland

Bolton 1922;
McNamara 1984

A Native American burial and camp site was located in the southeastern part of the old section of Saint Raymond's Cemetery (Bolton 1922:Map VII,D:No. 102). According to Bolton (1922:112 and 236), the site is "indicated by burials which have been disturbed at Saint Raymond's Cemetery on the Throgs Neck Road [now East Tremont Avenue]" in the vicinity of Baisley Avenue and Haskin Street and "where excavations for [modern] interments have from time to time disturbed shell-pits." A fresh water spring was apparently located in the area of the Native American site (McNamara 1984:505).

10. St. Raymond's
Cemetery II

Prehistoric

Boesch and
Perazio 1993

Evidence of a small camp site was present within a buried ground surface in a portion of Saint Raymond's Cemetery located adjacent to Ferry Point Park and the Hutchinson River Parkway (Boesch and Perazio 1993). The former ground surface was buried beneath approximately three to 13 feet of fill (Boesch and Perazio 1993:16-17). The former ground surface apparently represents an area of formerly raised, dry ground that bordered tidal wetlands formerly located on Ferris Neck.

11. Westchester Creek I Prehistoric
NYSM #5327
ACP-BRNX

Parker 1922

Parker (1922:Plate 147) depicts the presence of "traces of (Native American) occupation" east of Westchester Creek immediately north of the vicinity of Lafayette Avenue. He may

be indicating the site in Saint Raymond's Cemetery. If so, it suggests that a small habitation or camp site was associated with the burials. Parker, however, may be referring to another occupation along the shoreline of Westchester Creek on a line from Brush Avenue to the old section of Saint Raymond's Cemetery. It is not unlikely that Native American sites and evidence of activity was formerly present along both shores of Westchester Creek for its entire length.

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| 12. <u>Westchester Creek II</u> | Prehistoric;
probably Late
Archaic through
Late Woodland | Bolton 1922;
McNamara 1984 |
|---------------------------------|---|-------------------------------|

Small camp sites with shell filled pits were situated on both sides of Westchester Creek near a ford in the vicinity of East Tremont Avenue (Bolton 1922: Map VII, D). A portion of the Westchester Path, a Contact Period aboriginal trail, extended along the west bank of the upper reaches of Westchester Creek. Eastchester Road now follows the route of the former trail (McNamara 1984:539).

A skirmish occurred between American and British troops at the bridge spanning that Westchester Creek ford in 1776 (Hufeland 1974). During the nineteenth century the bridge was locally known as Swain's Bridge (McNamara 1984:510-511). The course of Westchester Creek was shifted slightly to the east when the Hutchinson River Parkway was built so the exact location of the ford is unclear. It, and the associated Native American camp sites, may have been located where now the Hutchinson River Parkway passes under East Tremont Avenue. Samuel H. Young Park borders the parkway in this area.

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| 13. <u>Schley Avenue</u>
NYSM #714,
HAR #6-4 | Transitional
through Contact
Period | Harrington 1909;
Skinner 1919a; Bolton
1922; Parker 1922;
Bolton 1975; McNamara
1984 |
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The Schley Avenue or Throgs Neck site (also known as the Weir Creek site) was located on the Long Island Sound shore of Throgs Neck near a fresh water spring at the mouth of Weir creek, a mixed fresh and salt water stream (Bolton 1922:Map VII,D:No. 12 and page 224; Parker 1922:488). Much of the former course of Weir Creek is now the location of the Throgs Neck Expressway (McNamara 1984:192).

The Schley Avenue site was located in the vicinity of Shore Drive and Schley Avenue, extending westward to Wilcox Avenue and southward to the area of the Bicentennial Veterans Memorial Park

(formerly Weir Creek Park) which now covers the former mouth of the creek. A Native American tidal fish weir was reportedly located near the mouth of Weir Creek, providing that waterway with its name (Bolton 1922; McNamara 1984:32, 223, 537). Weir Creek formerly extended westward from its mouth with its northern branch extending north to what is now Middletown Road and its southern branch extending to what is now Lawton Avenue (McNamara 1984:537). Just west of its mouth (and just west of the Schley Avenue site), Weir Creek flowed down what was formerly known as Wolfe's Hill. The hill was leveled during the late 1950's as part of the construction associated with the building of the Throgs Neck Expressway. Weir Creek was also filled as part of that construction (McNamara 1984:546, 537). The Contact Period name for the Throgs Neck peninsula was reportedly "Quinshung" (McNamara 1984:478). A translation of this term was not located.

The Schley Avenue site was excavated by the American Museum of Natural History in 1900 (Harrington 1909) and the Museum of the American Indian, Heye Foundation in 1918 (Skinner 1919a; see also Bolton 1975:81). A shell midden, trash pits, some containing burials, and hearths were discovered and investigated at the site which was found to have been periodically occupied from the Archaic to the Contact Periods. According to Harrington, components of the site are among the earliest identified along this portion of Long Island Sound (Parker 1922:488). In total six or seven skeletons were discovered at the site, all of which were associated with seventeenth century English or Dutch trade goods such as brass buttons and clay pipes (McNamara 1984:276). Some of the skeletons displayed evidence of violent death. According to Skinner (1919a), these individuals may have been killed during the Dutch and Indian war of 1643-1644, also known as Kieft's War. Reportedly during that conflict, parties of Dutch soldiers frequently sailed up the East River to attack and harass groups of Native Americans living along the East River and Long Island Sound shores of the Bronx (Jenkins 1912).

Native American violence against settlers also occurred in the Throgs Neck vicinity during the 1643-1644 war. In the autumn of the previous year, 35 Quaker families from New England under the leadership of John Throckmorton (also Trockmorten, Throgmorton, etc.) occupied, with Dutch permission, the tract of land later referred to as Throgs Neck. In August or September 1643, this settlement was destroyed and 18 settlers killed by a party of Siwanoy (Jenkins 1912:52). The Siwanoy who attacked the Quakers were probably the same group that had previously killed the Antinomian refugee Ann Hutchinson and five of her children who had settled at "Anne's Hoeck" (near present day Split Rock Road) near Pelham Bay (Jenkins 1912:52; Battis 1962:248; McNamara 1984:516).

14. Unnamed Site Prehistoric Bolton 1922
NYSM #5325,
ACP-BRNX

Parker (1922:Plate 147) indicates the presence of "traces of occupation" northwest of Weir Point in the vicinity of Lafayette Avenue and Wilcox and Dean Streets.

15. Adees Point Prehistoric Bolton 1922

Across the cove from the Schley Avenue site, at Adees point, was located another shell midden from which "stone artifacts" were recovered (Bolton 1922:Map VII,D and page 112-113). The site was located in the vicinity of the intersection of Shore Drive and Pope Avenue.

16. Schurz Avenue Transitional Bolton 1934a, 1934b;
NYSM #715, #7768 through Contact Lopez 1955; McNamara
#7769, #5326, Period 1984
ACP-BRNX, HAR #7-4

The Schurz Avenue site (NYSM #715, HAR #7-4) was formerly located near the East River shore in the vicinity of the intersection of East Tremont and Schurz Avenues and extended eastward along Silver Beach Place and westward to the intersection of Revere and Schurz Avenues (Bolton 1934a; 1934b; Lopez 1955; McNamara 1984:94-95, 209, 231). Bolton (1934a:138) describes the site (also referred to as the Throgs Neck site) as "a very extensive native settlement which at one time was about a quarter of a mile in length" (see also Lopez 1955). It was interpreted as a small habitation site occupied for various lengths of time during the Early Woodland, Late Woodland, and Contact periods (Lopez 1955). Two shell middens, as well as, several trash and ash pits and burials were discovered at the site (Bolton 1934a, 1934b; Lopez 1955).

The burials (NYSM #7768) and shell middens (NYSM #7769 and #7770) have been assigned separate site identification numbers.

Parker (1922:Plate 147) indicates the presence of "traces of occupation" (NYSM #5326, ACP-BRNX) in the general area of the Schurz site and is probably referring to it.

A number of "colonial foundations" were also formerly present in the vicinity of the intersection of Revere and Schurz Avenues (McNamara 1984:209). The general area was the location of the 1642 settlement by John Throckmorton.

17. Milton Place Prehistoric - McNamara 1984
Contact Period

A camp site, containing an intact Siwanoy ceramic pot, was located on Throgs Neck in the vicinity of Milton Place and Hollywood Avenue (McNamara 1984:176). The site was investigated by George Younkheere. Interestingly, Milton Place is coincidentally named after Archer Milton Huntington co-founder of the Museum of the American Indian (McNamara 1984:176).

18. Silver Beach Prehistoric - McNamara 1984
Gardens Contact Period

A camp site was located along the southern shoreline of Throgs Neck in Silver Beach Gardens and Camp development (McNamara 1984:231).

19. Sunset Trail Prehistoric - McNamara 1984
Contact Period

A camp site was located at the end of Sunset Trail by the East River at the tip of Throgs Neck (McNamara 1984:239).

20. Morris Estate Early Woodland- Kaeser 1963
Club Middle/Late Woodland,
NYSM #5326, #7146, Contact Period
ACP-BRNX

The Morris Estate Club site was located at the intersection of Balcom and Schurz Avenues (Kaeser 1963). The site was identified as a small summer habitation site occupied sometime between 1,000 B.C. and A.D. 700. Pottery, a grooved axe, turtle shell, mammal bone, and whelk shells were recovered from the site. A ring of stones, postulated to be the remains of a dwelling, were also discovered there (Kaeser 1963). The site was located approximately 200 to 300 yards west of the Schurz Avenue site (Site Number 16; see Kaeser 1963).

The Morris Estate Club site may be the village site indicated by Parker (1922:Plate 147).

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| 21. <u>Unnamed Shell Midden</u>
NYSM #2825
ACP-BRNX | Early Woodland-
Middle/Late Woodland,
Contact Period | Kaeser 1963 |
|---|--|-------------|

Parker (1922:Plate 147 and page 488) indicates the presence of an extensive shell midden along the East River shore south of the Throgs Neck site. He (Parker 1922:488) quotes M.R. Harrington as believing that this midden is "one of the oldest along the sound, judging from the character of the relics disclosed."

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| 22. <u>Locust Point</u> | Prehistoric;
probably Woodland
and Contact Period | Bolton 1922;
Bolton 1975 |
|-------------------------|---|-----------------------------|

"Native objects" were reportedly recovered along the north shore of Locust Point on what was formerly known as Wright's Island (Bolton 1922:Map VII,D:No. 11 and page 222; Bolton 1975:81). The site was probably a fishing camp. Construction for the approach ramp of the Throgs Neck Bridge apparently destroyed the site which was probably located in the area north of East 177th Street between Giegerich Place and Glennon Place.

An early Historic Period burial ground was also formerly located on Wright's Island. In the late 1950's a miniature golf course occupied the burial ground. Construction excavations in the former cemetery area at that time encountered buried unmarked grave stones (McNamara 1984:549).

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| 23. <u>Bronx River Avenue</u>
NYSM #2830, #2831,
ACP-BRNX-9 | Prehistoric;
probably Late
Archaic through
Late Woodland | Parker 1922 |
|---|---|-------------|

A shell midden and small camp site containing pit features were located in the West Farms section immediately east of the Bronx River in the vicinity of Westchester Avenue and Bronx River Avenue (Parker 1922:Plate 147). The Contact Period aboriginal name for the Bronx River including the adjoining Hunts Point shoreline at its mouth was reportedly "Aquahong" which roughly translates as "high bank" in reference to the area's topography (McNamara 1984:362). Another stream, aboriginally referred to as "Sacrahong" was reportedly formerly located near the site (McNamara 1984:487).

24. Castle Hill

Late Woodland-
Contact Period

Bolton 1848;
Skinner 1915; Bolton
1922; Bolton 1975

A large area of Native American occupation was located in the vicinity of Castle Hill west of Westchester Creek, almost immediately across from the Burial Point site (Bolton 1922:114; Bolton 1975:80). The site consisted of a palisaded enclosure situated on Castle Hill surrounded on three sides by marsh. The area between Effingham Avenue and Torry Avenue between Lacombe and Norton Avenues reportedly cover the former location of the castle (McNamara 1984:97, 137, 248, 250).

An associated habitation area, approximately eight acres in size, was located south of Castle Hill, south of what is now Norton Avenue and west of what is now Zerega Avenue (McNamara 1984:187, 283). The village was investigated by Alanson Skinner and the Museum of the American Indian, Heye Foundation (Bolton 1975:80) who found the area "abundantly furnished with oyster-shells and yielding from time to time fine specimens of native weapons and tools" (Bolton 1922:114).

The elevation of Castle Hill upon which the palisaded enclosure was located is approximately 60 feet above sea level and easily visible from the East River (Skinner 1915). The enclosure and habitation area were apparently occupied during the early Contact period, probably by the Siwanoy, since Adrian Block on his voyage through Long Island Sound in 1614 reportedly observed "wigwams" at both locations (Bolton 1848; Skinner 1915:76).

25. Castle Point

Late Woodland-
Contact Period

Bolton 1922

South of the Castle Hill habitation area, at Castle Point (also known as Screvens Point), was located a large shell midden which reportedly contained evidence of wampum manufacture (Bolton 1922:114 and 223).

26. Clason's Point I
NYSM #713
HAR #5-4

Late Woodland-
Contact Period

Skinner 1919b;
Bolton 1922; Parker
1922; Bolton 1975

The area of Clason's Point neck south of Seneca Avenue was referred to during the Contact Period as "Quinnahung" which roughly translates as "the planting neck" in reference to numerous Native American agricultural fields apparently located there (McNamara 1984:227). Clason's Point also was the location of a large Contact period Siwanoy village site (Bolton 1922:Map VII,D:No. 8 and pages 115-116, 223; Bolton 1975:80). Parker (1922:490 and Plate 147) also indicates the presence of

this site. The name of the village is reportedly recorded in early Dutch accounts as "Sean-auke-pe-ing" which was later shortened to Snakapins (McNamara 1984:493). A reported translation of this term is "river, land, and water place" which probably refer to the Bronx River, Clason's Point, and Pugsley Creek (McNamara 1984:493). The creek and river form the bounds of Clason's Point. Another reported translation is "place of ground nuts" from the Algonquin work "Sagapin" (Jenkins 1912:75; McNamara 1984:54, 493).

The area covered by the Snakapins site extended west and south of the present intersection of Soundview, Lacombe, and Leland Avenues to the East River shoreline. It was situated west of the village at Castle Hill, across a salt grass meadow (Skinner 1919b). Early Dutch accounts reportedly described the village as consisting of approximately 60 lodges (Skinner 1919b; McNamara 1984). Archaeological excavations conducted at the site in 1918 by Alanson Skinner and a Native American assistant named Amos One-Road, uncovered "about sixty fire-pits and shell-pits, with several human burials" (Skinner 1919b; Bolton 1922:116). Skinner suggested that the lodges were located at regular intervals and separated by "streets" (Skinner 1919b).

27. <u>Clason's Point II</u> NYSM #2840 ACP-BRNX-18	Late Woodland- Contact Period	Skinner 1919b; Bolton 1922
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A large planting ground was reportedly situated south of the Clason's Point Contact Period village (Site Number 26) where "extensive shell beds [were located] on the surface of which hundreds of discarded weapons, tools, and fragments were gathered" (Skinner 1919b; Bolton 1922:116).

28. <u>Clason's Point III</u>	Late Woodland- Contact Period	McNamara 1984
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A small campsite was reportedly associated with a Contact Period Native American landing along the west bank of Pugsley Creek (also known during various periods as Cromwell's Creek, Wilkin's Creek, and West Creek; McNamara 1984:57-58). The landing was reportedly associated with the Snakapins site and within walking distance of it. The landing location was east of Compton and Stephens Avenues and is now part of Soundview Park. The landing area as well as the upper portions of Pugsley Creek are now filled. Much of the filling occurred in 1972 (McNamara 1984:476).

29. Clason's Point IV Late Woodland- Bolton 1919b;
 Contact Period Parker 1922

A fishing camp and shell midden was reportedly situated along the shoreline of Clason's Point south of the intersection of Sound View Avenue and Bronx River Avenue (Bolton 1919b:222 and Map VII, D; Parker 1922:290 and Plate 147).

30. Clason's Point V Late Woodland- Bolton 1922;
 Contact Period Parker 1922

Another fishing camp and shell midden was located along the shoreline of Clason's Point south of the intersection of Bronx River Avenue and Underhill Avenue (Bolton 1922:Map VII, D; Parker 1922:290 and Plate 147).

31. Ranachqua Late Woodland- Bolton 1922;
 NYSM #4539, #5474, Contact Period Bolton 1975;
 #5475, A005-01-0027, De Leuw, Cather,
 A005-01-0031 Parsons 1979

A habitation site containing shell filled pits, hearths, and human interments was located at Cypress Avenue between what was 130th and 133rd streets near the former site of the Morris Mansion. Extensive shell middens were also located in the immediate area (Bolton 1922:106; McNamara 1984:76). The area has been filled and is now the location of the Triborough Bridge Approach Road. Calver and Bolton conducted excavations there (Bolton 1975:79). The site was reportedly associated during the early Contact Period with the Reckgawawancs group of the Wappinger Confederacy (Bolton 1975:79) although earlier components were probably present. The site was part of a tract, also referred to during the early Contact Period as "Ranachqua", which Jonas Bronck purchased from the Reckgawawancs in 1639 and latter renamed "Emmaus" (Bolton 1922:221-222). The term Ranachqua reportedly derives from the Algonquoin work "wanachquiwi-auke" which roughly translates as "the extreme end" or "the end place" referring to the peninsula's location at the tip of the mainland adjoining the waters of the Harlem and East Rivers (Bolton 1922:209; McNamara 1984:479).

The present routes of Bruckner Boulevard (formerly Eastern Boulevard) and Willow Avenue follow the route of Contact Period aboriginal trails leading to the Ranachqua village site (McNamara 1984:544).

32. Burial Site

Prehistoric

McNamara 1984

A Native American burial site was reportedly located between Rae and Carr Streets and Saint Ann's Avenue. A nineteenth century cemetery also covered the site which is now occupied by Public School 38 (McNamara 1984:206, 446).

33- Hunt's Point
41. A005-01-0028

Late Archaic -
Contact Period

Cook 1913; Bolton
1922; Bolton 1975;
Historical Perspectives,
Inc. 1989a.

A number of Native American sites were formerly located on Hunts Point. The point was referred to by Native Americans during the early Contact Period as "Quinnahung" which reportedly translates as "the great planting neck" while the shoreline along with the Bronx River were referred to by the term "Aguahong" meaning "high bluffs" (Bolton 1922:222; McNamara 1984:302). According to Bolton (1975:80):

Evidences of Indian occupancy were found by Calver and Bolton at the site of the first Richardson house, a little west of the Hunt burial-ground, now "Joseph Rodman Drake park" (Site Number 33).

Six arrowpoints and a chipped stone axe were reportedly recovered from a gravel pit located near the Hunts Point Burial Ground (Drake Park). Bolton (1922:222) states that the recovery of the stone axe indicates the site was occupied during the Woodland Period.

A natural spring was formerly present near Drake Park (Bolton 1922:222). The area is now the vicinity of the intersections of Faile and Bryant Streets and East Bay Avenue (Bolton 1922:Map VII, C).

Another camp site on Hunts Point (Site Number 34; A005-01-0028) was located in the vicinity of Hunts Point Road and Randall Avenue along Causeway Creek which has been filled (Bolton 1922:222). This area was formerly the nineteenth century Dickey Estate.

Another camp site and shell midden were located on a section of raised ground within a tidal marshland (now filled) near what was formerly the intersection of Eastern Boulevard (now Bruckner Boulevard) and Preble Street (Site Number 35; Bolton 1922:110 and 222). This location is now part of the New York Terminal Market.

Another camp site was located at the former end of East Bay Avenue (Site Number 36). This location is now within the New York Terminal Market (McNamara 1984:487).

Numerous shell deposits were located along the Hunts Point shoreline in the vicinity of the former location of the Hunt Mansion (Site Number 37; Bolton 1922:222). Shell was encountered in construction borings conducted in this general vicinity (Historical Perspectives, Inc. 1989b).

Another shell midden was located along the East River shoreline east and west of Farragut Street (Site Number 38; see Bolton 1922:Map VII, D).

A small habitation site containing shell pits was located on the eastern end of Hunts Point (Bolton 1975:80; Site Number 39).

A cave site (Site Number 40) was reportedly located a short distance east of the Hunts Point Burying Ground approximately three hundred yards north of the former location of the bridge crossing Hunt's Point Creek (now filled; see Cook 1913:106).

Borings conducted as part of a cultural resource investigation produced evidence of a shell midden (Site Number 41) buried beneath fill 300 to 400 feet east of Food Center Drive at the tip of Hunts Point. This location was formerly part of the East River shoreline of Hunts Point (Historical Perspectives, Inc. 1989a).

42. <u>Longfellow Avenue</u>	Late Woodland - Contact Period	McNamara 1984
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A habitation site was formerly located in the vicinity of the intersections of Longfellow and Whittier Avenues and Viele Avenue. This location was formerly the shoreline of a small East River cove that is now filled. The site reportedly contained a Contact Period component (McNamara 1984:160, 275-276).

43. <u>Bear Swamp</u>	Late Woodland - Contact Period	Jenkins 1912; Bolton 1922; Bolton 1975
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A large Contact Period Siwanoy village was located west of Downings Brook, near the former location of Bear Swamp Road, in the Morris Park/Westchester section of the Bronx (Bolton 1922:224; Bolton 1975:81-82). This location is south of Pelham Parkway and east of Bronx Park East Road in the vicinity of Lydig and Brady Avenues (Bolton 1922:Map VII, C). The site was reportedly occupied by remnants of the Siwanoy as late as 1782

(Bolton 1922:224). Surface evidence of occupation was visible as late as the 1920's (Bolton 1975:81-82). A Contact Period path reportedly extended westward from this village to northern Manhattan following the route of what is now Kingsbridge Road, crossing the Bronx River at a shallow place known aboriginally as "Acqueegenom." In Algonquian, the term reported translates "where the path goes over" apparently referring to the Bronx River crossing. The latter location is now within the Bronx Botanical Gardens, approximately 150 feet north of the Pelham Parkway (Bolton 1975:81-82).

44. Sedgwick Avenue Prehistoric; Bolton 1922
possible Late Woodland
component

A small campsite containing shell deposits was located immediately south of the intersection of Sedgwick Avenue and Giles Street (Bolton 1922:116). In this area, the route of Sedgwick Avenue follows the route of the Contact Period Westchester Path (Bolton 1922:116).

45. Fordham Road Prehistoric; Hermalyn 1972
possible Late Woodland
component

A habitation site was located near the junction of Fordham Road and the Bronx River placing it within what is now the Bronx Zoological Garden.

46. Bronx River I Prehistoric; Westchester County
#113X possible Late Historical Society
(Westchester Woodland 1933
Historical component
Society Number)

The Westchester County Historical Society's (1933) Map of Westchester County Showing Indian Occupation indicates the presence of a camp site immediately south of the New York Botanical Garden along the banks of the Bronx River.

47. Bronx River II Prehistoric; Westchester County
possible Late Historical Society
Woodland component 1933

The Westchester County Historical Society's (1978) Westchester Heritage Map indicates the presence of shell heaps south of Delancy's Mills, on the east bank of the Bronx River. This location is within or immediately south of the New York Zoological Garden.

48. Unnamed Camp Prehistoric; Bolton 1922
Site possible Late Woodland
NYSM #4064 component

A small campsite with shell deposits was located in the immediate vicinity of the Kingbridge Road Station of the Hudson Division of the MetroNorth Railroad (Bolton 1922:119).

49. Unnamed Camp Prehistoric; Bolton 1922
Site possible Late Woodland
component

A small campsite was reportedly located along the banks of the Bronx River at the wading place known during the Contact Period as "Acqueegenom" (Bolton 1922:240).

50. Unnamed Camp Prehistoric; Bolton 1922
Site possible Late Woodland
component

A small campsite was reportedly located along the banks of the Bronx River at the crossing place for the Westchester Path known during the Contact Period as "Cowangongh" (Bolton 1922:240). The setting is now the location of the Gunhill Road Bridge over the Bronx River. The term "Cowangongh" reportedly roughly translates as "a boundary place" and refers to a place where the territories of the Siwanoy and Weckquaesgeek met.

- 51- Bartow Estate Prehistoric; Bolton 1922;
55. possible Late Woodland Parker 1922
and Contact Period
components

A number of habitation sites, camp sites, and shell middens are located near the Bartow Estate within Pelham Bay Park and its immediate vicinity (Bolton 1922:125-128; 226-228; Parker 1922: Plate 147 and pages 488-490). All or a portion of these habitation areas may have been occupied during the early Contact Period (Bolton 1922:124).

A large Native American village site was located close to the entrance gate (north of the northern portion of the entrance driveway loop) to the Bartow Estate and Mansion within what is now Pelham Bay Park (Site Number 51; see Bolton 1922:124 and Map VII, B; Parker 1922:488). Another occupation area is situated immediately south of the Main House and private parking driveway (Site Number 52; see Bolton 1922:124 and Map VII, B; Parker 1922:488). Another occupation area is located immediately west of the main entrance gate and Shore Road and north of Prospect

Road (Site Number 53; see Bolton 1922:124 and Map VII, B; Parker 1922:488).

Excavations were conducted at the sites by the Reverend W.R. Blackie for the Museum of the American Indian, Heye Foundation. A large midden, shell deposits, trash pits, hearths, a human interment, and dog burial were encountered. M.R. Harrington also conducted excavations of a shell midden that was located along the electric line that extended between the Bartow Estate and City Island near two large glacial boulders (Site Number 54; Parker 1922:488).

Site Number 55, reportedly a camp site, is situated on the slope of ground on which reportedly grew the historic oak tree (referred to as the Treaty Oak) where in 1654 Thomas Pell concluded his land purchase with the Siwanoy. The tree was destroyed by fire in 1906 but a circular iron fence marks its former location (McNamara 1984:518).

56. Edgewater

Prehistoric

McNamara 1984

A Native American fishing camp was located along the shoreline of the Park of Edgewater, a 40 acre privately owned tract located on Eastchester Bay south of Weir Creek. Many "Indian arrowheads" have reportedly been recovered there (McNamara 1984:195, 537).

57. Pelham Bay

Prehistoric

Parker 1922

According to Parker (1922:488), the entire shoreline of Pelham Bay including the shorelines of the Pelham Bay Lagoon, Eastchester Bay, and the Hutchinson River/Eastchester Creek is the location of scattered shell middens and other camp sites (Parker 1922:488). The Contact Period aboriginal name for the Hutchinson River was reportedly "Acquehounk" which roughly translates as "high bank" in reference to the former topography of the river bank or "red cedar tree" in reference to the tress that formerly grew along its banks (McNamara 1984:298).

58. Hutchinson River
Parkway Bridge

Prehistoric

McNamara 1984

A camp site is located in Pelham Bay Park on top of a prominent bluff on the east bank of the Hutchinson River approximately 200 yards north of the Hutchinson River Parkway bridge. "Many aboriginal artifacts [are] found there" according to one source (McNamara 1984:359-360). The site overlooks a small cove in the Hutchinson River.

59. Rose Island

Prehistoric

McNamara 1984

A camp site, possibly containing a shell midden, was located on Rose Island, a small island in the Hutchinson River at the mouth of Barrow Creek opposite Goose Island. The island and Barrow Creek were filled in 1963 and are now part of the southern end of Co-op City (McNamara 1984:309).

60. Dodge Pond

Prehistoric

McNamara 1984

A campsite was located along the shoreline of Dodge Pond, a natural, spring fed body of water that was formerly located at the southwestern corner of 247th Street and Arlington Avenue (McNamara 1984:355-356). Many Native American artifacts were reportedly recovered from the site during the latter part of the nineteenth century. Whether the recovered material came from a restricted location or was present along the entire shoreline is unknown. More than one site (and component) was probably present. The pond, and presumably the camp site or sites, have been filled.

The area was reportedly referred to by seventeenth century Native Americans as "Shorakapkok" which translates as "setting down place" or "wet ground" (McNamara 1984:497). The name has also been attributed to the portion of Spuyten Duyvil Creek west of the "Wading Place" (see Site Number 61; McNamara 1984:497) and to the area around Inwood in Manhattan (Bolton 1975:83).

61. Wading Place
NYSM #4539Late Woodland-
Contact PeriodFluhr 1960; Tieck
1968; Bolton 1975;
McNamara 1984

A camp site was reportedly located in the Bronx at the "Wading Place", a Contact Period and early Historic Period crossing of Spuyten Duyvil Creek between Manhattan and Paparinemin (Site Number 65). The approximate location of the wading place is now the location of West 230th Street, slightly west of Broadway at the foot of Godwin Terrace. During the early Historic Period, the location was called "The Ford" from which derives the name "Fordham" (McNamara 1984:530).

62. Spuyten Duyvil
HillLate Woodland-
Contact PeriodSkinner 1915;
Bolton 1922; Fluhr
1960; Suggs 1966;
Tieck 1968; Bolton
1975

A Native American camp site and shell midden was located on the summit of Spuyten Duyvil Hill on what was formerly known as

Berrians Neck (also formerly known as Konstabelsche Hook), near the intersection of West 231st Street and Arlington Avenue. Bolton (1975:83) states that this was the site of a fortified station of the Reckgawawanc, possibly their principal village, named Nipinichsen which reportedly translates roughly as "muddy water" (Bolton 1922:209 and 225). Calver and Bolton (1950:68-69) report seeing a "scraper, an arrow-head, and a broken flint reject" on a ground surface strewn with shell. The site was also the location of an eighteenth century homestead. Others place the location of the site west of Johnson Street overlooking 230th Street (Tieck 1968).

63. <u>Ewen Park</u>	Prehistoric	Bolton 1934
NYSM #4063		

Shell and ash deposits were reportedly uncovered in Ewen Park (near 231st Street in the Kingsbridge section).

64. <u>Henry Hudson</u>	Prehistoric	Bolton 1934
<u>Monument</u>		

A storage pit was reportedly uncovered near the Henry Hudson Monument in Kingsbridge on the grounds of the former William Muschenheim estate.

65. <u>Paparinemin</u>	Late Woodland- Contact Period	Bolton 1922; Bolton 1975
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This site was located approximately 200 feet west of Broadway in the vicinity of 231st street in the Kingsbridge section (Bolton 1975:18). Prior to development, the area was reportedly high ground (actually an island) within a large marsh formed by twin branches of the Mosholu River (Tibbetts Brook) and bordered the northern shore of Spuyten Duyvil Creek (Harlem River). The site was reportedly a Contact Period village, possibly seasonally occupied, and associated planting fields of the Reckgawawanc and Weckquaesgeek called "Paparinemo" or "Paparinemin" (McNamara 1984:463). The name reportedly translates as "place of false starts" apparently alluding to the double tidal currents affecting the area by the Hudson River and Spuyten Duyvil Creek (McNamara 1984:463). Earlier components may also have been present at the site. Shell pits, hearths, lithics, and ceramics, including at least one complete vessel (found within a hearth and described as decorated in an Iroquois pattern) now in the collections of the Museum of the American Indian Heye Foundation were recovered from the site by Calver and Bolton (Bolton 1922:90-91 and 102; Skinner 1932; Bolton 1975:18).

66. Tibbetts Brook I Prehistoric Parker 1922

Traces of Native American occupation were located along the eastern shoreline of Tibbetts Brook from its mouth (in the vicinity of West 230th Street and Corlear Avenue) northward crossing what is now Irwin Avenue to approximately West 236th Street (Parker 1922:Plate 147; McNamara 1984:268). The brook has been filled in this area but formerly ran diagonally from Van Cortlandt Lake to its mouth.

67. Tibbetts Brook II Prehistoric Parker 1922

A habitation site was reportedly located at the mouth of Tibbett's Brook (Parker 1922:490 and Plate 147). The lower course and mouth of the brook have been filled. The former location of the mouth was in the vicinity of Corlear Avenue and West 230th Street (McNamara 1984:59).

68. Unnamed Camp Site Prehistoric Parker 1922
NYSM #4065

Traces of Native American occupation were discovered south of Johnson and Palisade Avenues along the north shoreline of the Harlem River (Parker 1922:Plate 147).

69. Unnamed Village Site Late Woodland Parker 1922

A habitation site was located east of Sedgwick Avenue in the vicinity of West 231st Street (Parker 1922:490 and Plate 147). The site has apparently been partly or entirely destroyed by construction of the Jerome Park Reservoir.

70. Unnamed Camp Site Prehistoric Parker 1922

Traces of Native American occupation were identified along the southern limits of the Jerome Park Reservoir (Parker 1922:Plate 147).

71. Unnamed Camp Site Prehistoric; Parker 1922;
possible Woodland component Bolton 1922

A camp site containing "scattered oyster shells and a large pit filled with shells, bones, and carbonized material was located south of west 238th street near its intersection with Riverdale Avenue (Bolton 1922:96).

72. Spuyten Duyvil Railroad Station Prehistoric; Bolton 1922
possible Woodland component

A scattered shell deposit was buried beneath fill in the area that is now the Spuyten Duyvil Railroad Station and railyard of the Hudson Division Line of the MetroNorth Railroad (Bolton 1922:96). This location is south and southeast of Edsall Avenue.

73. Albany Avenue Prehistoric; Bolton 1922
possible Woodland component

A small camp site containing "a shell pocket with pottery fragments" was excavated by Calver and Bolton immediately east of Albany Avenue at 234th street in the Kingsbridge section (Bolton 1922:92). Albany Avenue follows the route of the Contact Period Hudson River Path which ran northward along the Hudson River connecting the major Reckgawawanc and Weckquaesgeek villages.

74. Kappock Street I Prehistoric; Bolton 1922
possible Woodland component

A shell deposit containing Native American pottery was found near the site of Public School 24 on Kappock street (Bolton 1922:97).

75. Kappock Street II Prehistoric; New York State
NYSM #709 possible Woodland Museum Site File
component

An undescribed site was reportedly located in the vicinity of Kappock Street and 227th Street. No other information is provided on the site.

76. Unnamed Camp Prehistoric; Bolton 1922
Site possible Woodland
component

A shell midden containing Native American material was located in the vicinity of 231st street and Palisade Avenue (Bolton: 1922:98).

77. Unnamed Camp Prehistoric; Bolton 1922
Site possible Woodland
component

A small camp site containing shell filled pit features was located approximately 200 feet west of Broadway, immediately north of 230th street in the Kingsbridge section (Bolton 1922: Map VI).

78. Bailey Avenue Prehistoric; Bolton 1922
A061-01-0113 possible Woodland
component

A Native American shell midden was located immediately east of Bailey Avenue between 229th Street and Kingsbridge Road (Bolton 1922:Map VI). Bailey Avenue follows the route of the Westchester Path, a Contact Period aboriginal trail whose Native American name was "Sachkerah" which roughly translates as "the shore road (Bolton 1922:99).

79. Unnamed Shell Prehistoric; Bolton 1922
Midden possible Woodland
A061-01-0535 component

A shell midden was located on a small island formerly located in the Harlem River between Paparinemin and the Marble Hill section of Manhattan. At low tide it was connected to the northern tip of Manhattan. The island was severed from Manhattan during construction of the Harlem River Ship Canal and attached to the Bronx mainland by landfill (Grumet 1981:49). The island was reportedly referred to aboriginally as "Saperewack" which roughly translates as "extended land" (Grumet 1981:49). The automobile bridge carrying Broadway over the Harlem River now passes over the former location of the island. This location is south of 230th Street and Broadway (Bolton 1922:Map VI).

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| 80. <u>Kingsbridge Post Office</u> | Prehistoric;
possible Woodland
component | Tieck 1968 |
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Arrow and projectile points, pottery, shell and a Native American burial were reportedly found during construction of the Kingsbridge Post Office located at 5517 Broadway.

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| 81. <u>Unnamed Village and Camp Site</u> | Woodland -
Contact Period | Parker 1922;
Bolton 1922 |
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A camp site and "castle" were situated astride the Bronx-Westchester County border in the old Village of Eastchester. The "castle" was reportedly the habitation of a Siwanoy sachem named "Simanon" (Parker 1922:490). The site extended along a hill top southwest of the intersection of Columbus Avenue and Provost Avenue in Westchester County to the current locations of Mulvey Avenue and Merritt Avenue in the Bronx (Bolton 1922:120 and Map VII, A).

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| 82. <u>Split Rock Road</u> | Prehistoric;
possible Woodland/
Contact Period
components | Bolton 1922 |
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A camp site was located along Split Rock Road near the Split Rock. The rock is located immediately south of the New York City-Pelham boundary, immediately north of the south bound lane of the New England Thruway, and approximately 300 feet east and 200 feet south of the remaining portion of Split Rock Road, which is located within the Town of Pelham.

The route of Split Rock Road follows the former route of the Contact Period Shore Path (Bolton 1922:124). Prior to the construction of the Hutchinson River Parkway, a branch of Eastchester Creek and associated marshlands were located approximately 100 feet to the west (Bolton 1922: Map VII, B). Somewhere in the vicinity of the Split Rock was located the house of the Antinomian refugee Anne Hutchinson who was murdered along with five of her children by a group of Siwanoy in August or September of 1643 (Ruttenbur 1872:81, 112). Other accounts place the location of the house and massacre in the vicinity of Peartree Avenue. (An old account states that a sighting through the cleft of the Split Rock, to the opposite side of the Hutchinson River points directly to the former house location; Peartree Avenue is in that line-of-sight; see McNamara 1984: 197).

With the establishment of Hutchinson's homestead, the area (now Pelham Neck) became known as "Anne's Hoeck" (Jenkins 1912:52; Battis 1962:248).

83. LeRoy Point

Prehistoric; Bolton 1922;
possible Woodland/ Bolton 1975
Contact Period
components

A large habitation site was located on a point of land (formerly called LeRoy Point) extending into a shallow bay (formerly called LeRoy Bay or Pelham Bay) on the northeastern side of Anne's Hook (now Pelham Neck or Rodman's Neck; see Bolton 1922:Map VII, B). The Contact Period aboriginal name for the bay was recorded as "Sewanhacky." "Sewant" was reportedly the Algonquoin word for wampum and "Sewanhachy" reportedly translated as "Great Bay of the island of shells" (McNamara 1984:495). That the bay was used during the Contact Period by Native Americans to collect quahog shells for wampum manufacture is not surprising given that a large Siwanoy village (referred to contemporaneously as "Shippa"), located a little more than two miles to the north on Davenport Neck in what is now New Rochelle, was reportedly a center for it's manufacture (Ruttenbur 1872).

The former area of LeRoy bay and point has been filled, joining Rodman's Neck to Hunter's Island. Most of the bay is now covered by the Orchard Beach Parking Field. The former location of the point and Native American site is now covered by the southwestern end of that parking field and by the adjacent traffic circle (McNamara 1984:426, 466).

The site was excavated by M.R. Harrington in 1898 for the American Museum of Natural History and contained large shell deposits and a number of human burials (Bolton 1922:227; Bolton 1975:84). The Contact Period name for this location was reportedly "Asumsowis", which Tooker (1900) considers to have been a personal name.

Other sections along the shore line of Pelham Neck are reportedly the location of shell middens (Bolton 1922:127-128).

84. Roosevelt Brook

Prehistoric; Bolton 1975
possible Woodland/
Contact Period
components

A small habitation site extends westward from the mouth of Roosevelt Brook near the boundary between New York City and the City of New Rochelle. Associated shell middens ring the small cove that forms the mouth of Roosevelt Brook. The area is now part of Split Rock Golf Course. Shore Road crosses over the site. Lithics and ceramics were reportedly recovered (Bolton 1975:84). The Contact Period aboriginal name for the location, including the brook, is "Maninketsuck." The site was excavated by Morgan H. Secor of New Rochelle.

85- Hunter's Island
92.

Prehistoric;
Woodland/Contact
Period components

Bolton 1922;
Parker 1922;
Bolton 1975

A number of camps and shell middens are located in Pelham Bay Park on Hunter's Island and the adjoining East Twin and West Twin Islands (Bolton 1975:84-85; Parker 1922:490). According to Bolton (1922:126), the three islands "were much frequented by natives, whose arrowheads have been found by the scores on the sandy beaches, their shell-pits in the interior, and their kitchen-middens in sheltered coves along the shore." The southern portion of Hunter's Island has been filled joining it to Rodman's Neck. Formerly marshy areas separating East and West Twin Islands have been filled creating a single island (Twin Island). In 1948, Twin Island was joined to the mainland by the extension of Orchard Beach (McNamara 1984:95).

Shell middens are recorded for the following locations on the islands (see Bolton 1922:Map VII, B; Parker 1922:488 and Plate 147):

Site Number 85: along the west shore of Hunter's Island immediately north of the access roadway (immediately north and east of the causeway bridge);

Site Number 86: along the northwesternmost point of Hunter's Island (at the tip of a tongue of land extending northward from the main body of Hunter's Island);

Site Number 87: along the northeasternmost shoreline of Hunter's Island;

Site Number 88: along the northernmost branch of the northernmost roadway on Hunter's Island;

Site Number 89: along the eastern shoreline of Hunter's Island immediately north of the island's access roadway (immediately west and north of the causeway to Twin Island);

Site Number 90: along the former southern shoreline of Hunter's Island near what apparently was a fresh water pond;

Site Number 91: along the southeasternmost shoreline of (West) Twin Island. The point of land here was formerly called Persimmon Point (McNamara 1984:468);

Site Number 92: along the northeasternmost shoreline of (East) Twin Island.

Hunter's Island, including probably the Twin Islands, were reportedly referred to by Contact Period Native Americans as "Mishow." It is reported that a large glacial erratic on

Hunter's Island served as a ceremonial meeting point for local Contact Period aboriginals (Bolton 1922:126; Bolton 1975:84-85). Which of the numerous rocks on the island served this purpose is unknown. According to McNamara (1984:431, 444, 468), the boulder was located at the southeastern point of Hunter's Island (formerly known as Lorelei Point). Sometime during 1935-1936, all but the tip of the boulder were covered by landfilling operations when Hunter's Island was joined to Rodman's Neck. Bronx Borough Historian, Dr. Theodore Kazimiroff, was responsible for the rock's crown remaining exposed. The crown is still visible in the lawn near the eastern end of the Orchard Beach promenade.

The name "Mishow" is apparently preserved in the name "Machaux or Michaux Rocks" which is indicated on an 1857 Valentine Map as the name of some uninhabitable rocks located several hundred feet offshore of the northeastern shoreline of Hunter's Island (Bolton 1922:125-126 and Map VII, B).

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| 93. <u>Unnamed Burial Site and Shell Midden</u> | Prehistoric;
possible Woodland/
Contact Period
components | Parker 1922 |
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A burial site is reportedly located on two small knolls situated approximately three quarters of a mile south of the Bartow Mansion. A large shell midden, 40 feet in diameter, is reportedly present behind the larger knoll (Parker 1922:490). The location indicated and described by Parker (1922:490 and Plate 147) suggests that the site was located near the southern shoreline of the northern portion of Pelham Bay Park near the mouth of the Hutchinson River/Eastchester Creek, east of the AmTrack Railroad bridge in the vicinity of the intersection of the Shore Road and the road to City Island.

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| 94. <u>Unnamed Camp Site</u> | Prehistoric | Parker 1922 |
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A camp site was located along the Hutchinson River approximately one mile south of the Pelham Railroad Station. According to Parker (1922:490), "many stone relics have been found there."

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| 95. <u>Unnamed Village Site</u>
NYSM #2838 | Prehistoric | Parker 1922 |
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A habitation site was located in the area of Edgehill Avenue between 230th and 227th Streets. No other information is available about this sites.

96. Unnamed Village Prehistoric Parker 1922
 and Burial Site

A habitation site containing burials was located on the Hutchinson River/Eastchester Creek northeast of the old East Church (Parker 1922:490). The location is in the vicinity of Hutchinson Avenue.

97. Unnamed Village, Prehistoric Parker 1922
 Burial Site, and
 Shell Midden

A habitation site containing burials in association with shell heaps and other traces of Native American occupation was reported along the Hutchinson River approximately one quarter of a mile north of the AmTrack Railroad bridge (Parker 1922:490 and Plate 147). This location is, approximately, in the vicinity of Einstein Loop North, east of the Hutchinson River Parkway. Much of the area has apparently been filled.

98. Middletown Road Prehistoric Parker 1922

Traces of Native American occupation have been recorded for the area between Griswold Avenue and Middletown Road (Parker 1922: Plate 147).

99. Unnamed Shell Prehistoric Parker 1922
 Midden

A shell midden was located along the shoreline of the southern portion of Pelham Bay Park near the mouth of a small brook east of the AmTrack Railroad line. The site was investigated by M.R. Harrington (Parker 1922:490 and Plate 147).

100. Unnamed Camp Prehistoric Parker 1922

Traces of Native American occupation were located along the shoreline of the southern portion of Pelham Bay Park between the AmTrack Railroad line and Shore Road (Parker 1922:Plate 147).

101. Unnamed Camp Prehistoric Parker 1922
 Site

Parker (1922:Plate 147) indicates the presence of a camp site, as well as traces of Native American occupation, along the southern shoreline of the northern portion of Pelham Bay Park west of Rodman's Neck.

102. Bartow Creek Prehistoric McNamara 1984

Native American artifacts were reportedly recovered in "great quantity" on "Indian Island" which is a small island located in Bartow Creek in Pelham Bay Park. The island is reportedly accessible at low tide from the south bank. Glacial pot holes are also reportedly located on the island (McNamara 1984:141).

103. Rodman's Neck I Prehistoric Parker 1922

Parker (1922:Plate 147) indicates the presence of traces of occupation within Pelham Bay Park along the northern shoreline of the cove bordering the western side of Rodman's Neck.

104. Rodman's Neck II Prehistoric Parker 1922

A shell midden was reportedly located on the northern shoreline of the cove situated on the western side of Rodman's Neck within Pelham Bay Park (Parker 1922:490 and Plate 147).

105. Rodman's Neck III Prehistoric Parker 1922

Traces of Native American occupation were reported along the eastern shoreline of Rodman's Neck south of the bridge to City Island (Parker 1922:Plate 147).

106. Unnamed Site Prehistoric Historical
Site Perspectives 1986a;
Cohn and Apuzzo
1988

A site containing a large quantity of Native American artifacts is located on Department of Parks and Recreation property (Block #3529), adjacent to the former course of Pugsley Creek between Lacombe, Newman, Pugsley, and Randall Avenues.

107. Unnamed Camp Prehistoric City History Club
Site 1913; Bolton 1922

A small campsite was reportedly located adjacent to a large glacial erratic located at the intersection of Boston Post Road and East 166th Street.

108. Rattlesnake
Creek

Prehistoric

Bolton 1922

A small campsite with earthen embankments and a cave site were reportedly present near a bend of Rattlesnake Creek on the former W. E. Seton Estate (Bolton 1922:240 and Map VII, A). The site location is now within Seton Falls Park south of the intersection of East 233rd Street with Wilder and De Reimer Avenues.

109. Unnamed Cave Site

Prehistoric

McNamara 1984

A cave site is reportedly located in one of several gorges that lead from the steep hillside on the grounds of the former Seton Hospital in Riverdale. According to tradition, two of Daniel Ninham's Stockbridge Indian Revolutionary soldiers took refuge there after their defeat near Woodlawn Heights (Site Number 4) in August of 1778 (McNamara 1984:410).

110. Unnamed Site
NYSM #5320

Prehistoric

New York State
Museum Site File

An unnamed site was located in the vicinity of Edsall Avenue, Johnson Avenue, and the Harlem River. No other information is available.

111. Riverdale Station

Prehistoric

Parker 1922

A shell midden and "heap" was located along the Hudson River shoreline north of the MetroNorth Railroad (Hudson Division) Riverdale Station.

112. Wave Hill Park

Prehistoric;
possible Woodland
component

Bolton 1922

A shell deposit and a small fishing campsite was located along the Hudson River shoreline on a line with 232nd street (Bolton 1922:97). The location is now within Wave Hill Park on partially filled land near the MetroNorth Railroad line.

113. <u>Riverdale Park</u>	Woodland; possible Archaic component	Riverdale Archaeological Project Field Records
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Ten shell midden locations have been identified within Riverdale Park. The middens are located on the lower terrace overlooking the Hudson River (Valerie DeCarlo: Personal Communication). The New York State Department of Parks, Recreation, and Historic Preservation has declared Riverdale Park an Archaeological District.

114. <u>City Island I</u>	Prehistoric	Parker 1922
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A shell midden was located along the southwestern shoreline of City Island between Browne and Bay Streets. It was reportedly investigated by M.R. Harrington (Parker 1922:488).

115. <u>City Island II</u>	Prehistoric	Parker 1922
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Traces of Native American occupation were reportedly located on the raised middle ground on City Island in the area between Fordham and Schofield Streets (Parker 1922:488).

116. <u>City Island III</u>	Prehistoric	Parker 1922
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Shell middens were located intermittently along the northern and eastern shoreline of City Island. These were investigated by M.R. Harrington (Parker 1922:490).

117. <u>High Island</u>	Prehistoric	Parker 1922
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Native American artifacts were recovered along the shoreline of High Island, an eight acre island off Carey's Point on City Island (McNamara 1984:133).

118. <u>Unnamed Burial Site</u>	Prehistoric	Parker 1922
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A Native American burial site at and south of the intersection of Kearney and Lawton Avenues was excavated in the 1920's by the Heye Foundation (McNamara 1984:155). No other information on this site was found.

119. New York Botanical Prehistoric
Garden I

Caviston 1952,
Butler 1977

A camp site was reportedly located within what was formerly the property of Fordham University (now part of the New York Botanical Gardens) in the area of the former Jesuit Cemetery. A large number of oyster shells and arrow heads were reportedly recovered at that location (Caviston 1952:3). The interments in the cemetery were moved to a new location, also on New York Botanical Garden grounds, and it is possible that the Native American material came from that location.

120. New York Botanical Prehistoric
Garden II

New York City
Landmarks
Preservation
Commission 1991;
Historical
Perspectives 1993

A cave site or rockshelter was located on the grounds of the New York Botanical Gardens on the west side of the Bronx River near the Magnolia Road Bridge. The site was reportedly investigated by Dr. Theodore Kazimiroff who recovered lithic material and pottery.

121. New York Botanical Prehistoric
Garden III

New York City
Landmarks
Preservation
Commission 1991;
Historical
Perspectives 1993

A turtle petroglyph was reportedly located on a glacial erratic located on the east side of the Bronx River and identified by Dr. Ralph Solecki. The erratic was located about 386 feet north of the Bronx River waterfall in the middle of a trail 36 feet east of the river. The erratic has been removed from its original location and is now protected under glass in the Watson Building of the New York Botanical Garden.

122. New York Botanical Prehistoric
Garden IV

Historical
Perspectives 1993

Dr. Theodore Kazimiroff reportedly collected numerous projectile points eroding from various locations on the grounds of the New York Botanical Garden.

123. Fordham University Prehistoric

Dr. Alan Gilbert:
Personal
Communication

A Late Archaic projectile point fragment, typologically probably a Brewerton point, was recovered from fill deposits during excavations at the site of the nineteenth century Rose Hill Mansion house at Fordham University.

124. Unnamed Camp
Site

Prehistoric

Parker 1922

A camp site was reportedly located at the foot of Quincy Avenue by the East River on Throgs Neck (McNamara 1984:205).

125. Isolated Find

Prehistoric;
Woodland component

Heye Foundation
Research Files

A hammerstone and pottery fragments were found in the vicinity of Kappock Street and Henry Hudson Parkway. No other information on the finds is provided.

126. Isolated Find

Prehistoric

Heye Foundation
Research Files

A bannerstone (atlatl weight) was found on the Hudson River shoreline near West 232nd Street.

127. Isolated Find

Prehistoric

Heye Foundation
Research Files

An undescribed projectile point was recovered at West 235th Street near St. Giles Church.

128. Isolated Find

Prehistoric

Heye Foundation
Research Files

A projectile point and a preform were recovered at West 230th Street and Broadway.

129. Isolated Find

Woodland

Heye Foundation
Research Files

Fifteen pottery fragments were recovered along the banks of the Harlem River at Broadway.

130. Isolated Find

Prehistoric

Ms. Valerie
DeCarlo:
Personal
Communication

A "cache blade" biface made from gray chert was recovered by a local resident north of the grounds of Riverdale Park.