

THE BULLETIN

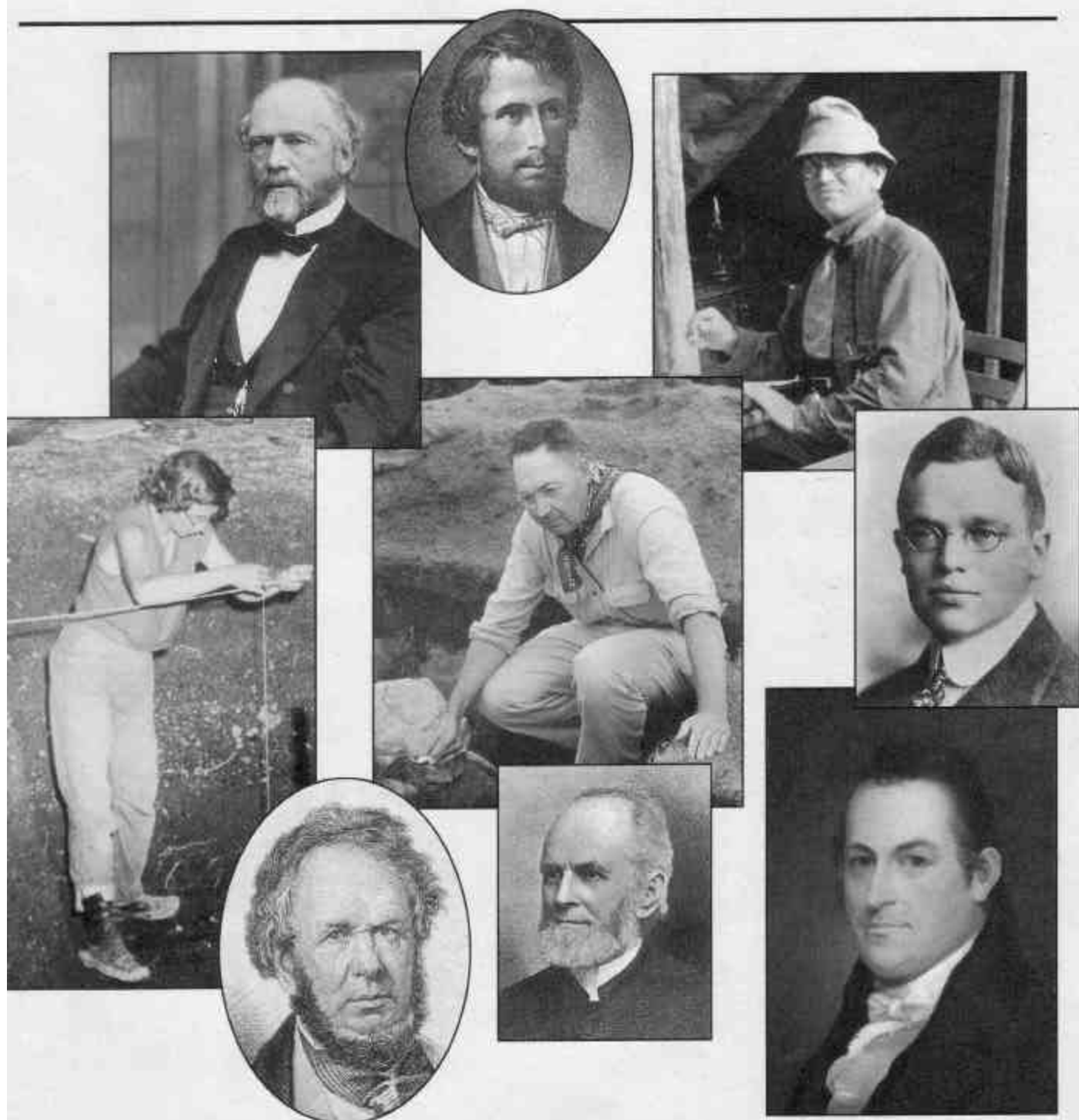
Number 113 1997

Contents

A Tribute to William A. Ritchie Robert E. Funk	1
An Introduction to the History of Prehistoric Archaeology in New York State Robert E. Funk	4
The Origins and Development of Historical Archaeology in New York State Paul R. Huey	60

The Bulletin

Journal of the New York State Archaeological Association



The Many Faces of Archaeology in New York State

The New York State Archaeological Association

Officers

President	Karen S. Hartgen
Vice President	David Fuerst
Secretary	Annette Nohe
Treasurer.....	Carolyn O. Weatherwax

Publications

Researches and Transactions

The Bulletin

Occasional Papers

Publications Chairman

William E. Engelbrecht
Dept. of Anthropology, Buffalo State College
1300 Elmwood Avenue Buffalo, New York 14222

The Bulletin

EditorCharles F. Hayes III
Assistant EditorsMartha L. Sempowski, Brian L. Nagel
Layout.....Patricia L. Miller/PM Design

The views expressed in this volume are those of the authors and do not necessarily reflect the position of the publisher.

Published by the New York State Archaeological Association.
Subscription by membership in NYSAA. For membership information write:
Annette Nohe, 7267 High View Terrace, Victor, NY 14564-9716

Back numbers may be obtained from:
Publication Sales, Rochester Museum & Science Center,
657 East Avenue, Box 1480, Rochester New York 14603-1480

Entire articles or excerpts may be reprinted upon notification to the Editor.
All manuscripts submitted are subject to editorial correction or excision
where such correction or excision does not alter substance or intent.

ISSN-1046-2368
Printed by Monroe Graphics, Rochester, New York.
Copyright © 1997 by the New York State Archaeological Association

A Tribute to William A. Ritchie

Robert E. Funk

When I was in graduate school in the early 1950s, I took a course in North American archaeology. When the lectures and reading assignments turned to the Northeast, the locus was almost entirely on one researcher, William A. Ritchie, and on prehistoric cultures both discovered and named by him, including Lamoka, Frontenac, Brewerton, Point Peninsula, and Owasco. Some of his already numerous publications were required reading.

In early 1960, toward the close of my second season with a Tulane University dig in Yucatan, Mexico, I sent out letters to several museums across the United States, inquiring about job openings in archaeology. I was pleasantly surprised that the most promising response was a letter from none other than Dr. Ritchie, explaining that a new position had just been approved for his office at the New York State Museum in Albany. We arranged to meet for an interview at the Society for American Archaeology meeting at Yale University in May. I arrived with a pessimistic attitude, expecting lots of competition and a strenuous interrogation. As I walked away from the registration desk the stern looking gentleman in front of me turned around, looked at my nametag, and said, "So you're my new helper!"

After I recovered from the shock, and spent a few minutes talking with my rather intimidating new boss, it was evident that I was about to embark on a very challenging period in my life. When I joined the staff of the New York State Museum a month later, Bill Ritchie and I began, I feel, a very fruitful and productive collaboration that didn't really end with his official retirement in 1971. The years of our professional association comprised the most important learning experience of my career. It wasn't easy at first, but it soon became evident that we shared pretty much the same research philosophy. I well remember Bill's repeated admonition to think critically, to rely on the evidence, and to avoid what he left was the excessive theorizing that seemed to accompany the rise of the so-called "New Archaeology."

Bill was not only the most prominent archaeologist in the Northeast, a hard-driving researcher, and a demanding taskmaster, but also a real friend who was always willing to offer advice and support to someone with a genuine interest in archaeology.

There are many stories about the "Old Master," as he was affectionately known to his former students and field assistants. Unfortunately we

don't have time to go into some of this often entertaining material. Bill and I shared a common interest in many subjects, including our concern for the environment and human overpopulation. The workday was occasionally enlivened by digressions into these and other non-archaeological topics- and there were also quite a few moments of high humor (and some not-so-high humor!). From the beginning of our collaboration, Bill let me know how disappointed he was that I was incapable of enjoying the fine sport of fishing.

In the years after his retirement, Bill kept in touch with developments in American archaeology despite his involvement with animal welfare and conservation. On numerous occasions I shared the results of my research with Bill, and this seemed to perk him up a bit even during his difficult final days. He died quietly in the hospital on December 14, 1995, after a fall in his home. He was 92 years old. He is survived by his wife, Beatrice; their son, Dr. Galen B. Ritchie; two brothers, Donald L. Ritchie of Brevard, North Carolina and Orrin B. Ritchie of Clarksville, Georgia; and two sisters, Olga C. Ritchie of Rochester, and Laura Ritchie Balch of Naples, Florida.

Bill Ritchie was the greatest archaeologist I have ever known, and he will be sorely missed by all of the men and women who had the privilege of working with him.

The following paragraphs are largely borrowed from a tribute to Bill Ritchie and Louis A. Brennan written by Herb Kraft for the special issue of the New York State Archaeological Association Bulletin commemorating the Association's 75th anniversary (1992).

With respect to Native American Studies, New York State has had a significant number of luminaries. However, from the select group of prehistorians, the name of William A. Ritchie looms large. William Augustus Ritchie, born on November 20, 1903 at Rochester, New York, began his archaeological career as a high school volunteer at the Municipal Museum, later to become the Rochester Museum of Arts and Sciences and presently the Rochester Museum & Science Center. In 1924, that institution provided him with a full-time salaried appointment as Museum Librarian and Assistant in Archaeology. While so engaged, Bill earned the Bachelor of Science degree from the University of Rochester, with the distinction of Phi Beta Kappa. Two years later he

was awarded a Master of Science degree by the same institution and was inducted into Sigma Xi, the scientific honor society. He received the Ph.D. in anthropology from Columbia University in 1944 with the publication of his doctoral dissertation, *The Pre-Iroquoian Occupations of New York State*, which also garnered the A. Cressy Morrison Prize of the New York Academy of Sciences.

During this time of study Bill advanced from Assistant Archaeologist to Archaeologist to Curator of Anthropology at the Rochester Museum where he conducted osteometric and paleopathological studies in addition to excavating and reporting such prehistoric sites as Lamoka Lake, Castle Creek, and Brewerton, among other now familiar places in Northeast prehistory. Eventually he would excavate nearly 100 major prehistoric sites and contact-period sites in many parts of northeastern North America, thereby becoming the undisputed authority on the archaeology of this region.

Dr. Ritchie worked for the Rochester Museum of Arts and Sciences until 1949 at which time he accepted the title and position of State Archaeologist at the New York State Museum in Albany. He continued in this capacity until his retirement in 1971. He had carried out numerous surveys and excavated over 100 sites in the northeastern United States and Canada.

Dr. Ritchie was the recipient of numerous honors and citations, among them a D.Sc. from Waynesburg College, and an honorary LL.D. degree from Trent University, Ontario, for his contributions to Canadian prehistory. In 1950, he received the Centennial Award for Distinguished Service to Archaeology, from his alma mater, the University of Rochester. In 1985, he was presented the Fiftieth Anniversary Award from the Society of American Archaeology, and in 1987, he earned that Society's highest honor, the Distinguished Service Award. For his contributions to Iroquois prehistory, he was awarded the Cornplanter Medal of the Cayuga Historical Society in 1966.

Dr. Ritchie was a fellow of the American Anthropological Association, and a member and past president of the Society for American Archaeology, and from 1935 to 1955 he served as Assistant Editor of the latter's publication, *American Antiquity*. He was also active in other professional organizations. In addition, Dr. Ritchie was a Research Associate of the Carnegie Museum of Pittsburgh and a Fellow of the Rochester Museum. He taught archaeology and anthropology at the University of Rochester, Russell Sage College, Syracuse University, and the State University of Albany.

Bill Ritchie's archaeological work received high praise for its originality, profound scholarship, meticulous attention to details, and careful control. It was he who coined the term "Archaic" as an early stage of cultural development in the Northeast. He was also the first archaeologist in the Northeast to recognize the importance

of stratigraphy as a means of isolating and defining cultural assemblages in a chronological sequence, and he employed the techniques of stratigraphic excavation at a time when other archaeologists in the region were still digging in arbitrary levels. In addition to being an exacting field technician, he was a trained physical anthropologist and paleopathologist.

Because he was convinced that information gained through archaeological excavations and research should be disseminated as quickly as possible, he espoused a rigorous publication regime. His first scholarly paper appeared in 1927. By the time he received his doctorate from Columbia University, he already had forty publications to his credit, some of major significance. Eventually, the list would grow to more than 165 books, articles, and monographs dealing with archaeological sites in New York, Ontario, Maine, Massachusetts, Vermont, eastern Long Island, Staten Island, New Jersey, and Pennsylvania. For a complete bibliography of Dr. Ritchie's work, see *Current Perspectives in Northeastern Anthropology: Essays in Honor of William A. Ritchie* (Researches and Transactions of the New York State Archaeological Association, volume 17, number 1, edited by R. E. Funk and C. F. Hayes III, 1977).

Dr. Ritchie's writings are clear and distinct, and relatively free of esoteric jargon. Moreover, he was not above writing for the average person, or school children for that matter, as witness his Educational *Leaflet* series entitled "The Indian History of New York State". His major book, *The Archaeological New York State*, first published in 1965, revised and updated in 1969, and reprinted in 1980 and 1994, not only gave professional and amateur archaeologists a comprehensive overview of northeastern prehistory, but it also provided a well-reasoned and clearly stated exposition of culture stages, traditions, and individual phases in holistic terms as adaptive systems functioning in the environment. Many data relating to settlement patterns were also incorporated into this highly illustrated and well-documented study, and were the central theme of *Aboriginal Settlement Patterns in the Northeast*, coauthored by Robert Funk (1973). In much the same way, Bill's *Archaeology of Martha's Vineyard* (1969) provided a much-needed archaeological, cultural-ecological overview for that coastal area. Other, more specialized texts, such as his *Typology and Nomenclature for New York Projectile Points* (1961, reprinted in 1971 and again in the 1990s), and *The Pre-Iroquoian Pottery of New York State*, written with R. S. MacNeish (1949), have long been standard references.

Dr. Ritchie was no manipulator of other people's data. He was a "dirt archaeologist" in the best sense of the word. He preferred to see the physical evidence at first hand. He was cognizant of the impact that environmental factors had on human beings and looked for empirical evidence that might

suggest appropriate responses to such forces. He sought evidence for mechanisms such as in situ development, migration, contact, and trade. In his writings and in designs for museum displays, he endeavored to put "flesh back on the bone-- in a way that would make the cultures of the past come to life, or as he once put it, to look for the Indian behind the artifact.

Bill's official retirement in 1971 did not diminish his enthusiasm for archaeology, but his energies were thereafter focused on issues of conservation, human and animal activism, and environmental work among various

national and international organizations. In recognition of his devotion to these causes, he received the "Conservationist of the Year" award from the Audubon Society in 1989.

Dr. Ritchie's many and significant contributions to archaeology will most certainly endure in the prehistoric and historic literature and in the souls of northeastern archaeologists. As for Bill, he asked only to be remembered as one who "loved the Earth and Nature, and was always kind to people and animals."

An Introduction to the History of Prehistoric Archaeology in New York State

Robert F. Funk, *New York State Archaeologists (Emeritus), New York State Museum, Albany, New York:*
Cultural Resource Advisor; H. L. Ferguson Museum, Fishers Island, New York

The history of archaeological activity in New York State is presented in terms of the five general periods proposed for all of the Americas by Willey and Sabloff (1974): The Speculative Period (1492-1840), the Classificatory-Descriptive Period (1840-1914), the Classificatory-Historical I Period (1914-1940), the Classificatory-Historical II Period (1940-1960), and the Explanatory Period (1900-present). These periods begin with unbounded speculation about American Indian origins by Europeans, followed by the antiquarian collecting of unusual or aesthetically appealing objects, the early stages of systematic description of sites, monuments, and artifacts, the rise of scientific archaeology and anthropology hand in hand with a growing institutional base, the development of regional cultural and chronological frameworks, and most recently efforts to understand native cultures as whole systems operating within the natural and cultural environment. Fieldwork and publications of such scholars as E. G. Squier, W. M. Beauchamp, A. B. Skinner; and M. R. Harrington lay the foundation for the great synthetic overviews of A. C. Parker; W. A. Ritchie, and C. S. Smith. After 1960 the explosive post-World War II growth in American archaeology was accompanied by the widely influential "New Archaeology" school of thought and the advent of public Archaeology programs. Together these developments added a radically new dimension to American archaeology as it is practiced in the late 1990s. This paper summarizes the contributions of numerous individuals and institutions to current understanding of 11,000 years of Native American cultural change in New York, and considers future directions of archaeological endeavor in the State.

Foreword

This paper is the long-delayed result of a lecture presented to the Oswego County Historical Society on October 29, 1985. The apparent Success of that presentation encouraged me to consider expanding it and revising it into a form suitable for publication. Years went by, however, while I was occupied with other projects. At one point I received input from former New York State Archaeologist William A. Ritchie, who provided helpful new data and corrected

some factual errors. I also benefited from conversations with George Hamell. He generously shared with me some of his vast knowledge of New York Indians, the archaeologists who studied them, and the institutions that supported the research.

In 1994 I typed up a new draft and mailed it to Charlie Hayes, who responded that he would like to see a complete version published in *The Bulletin*. For one reason or another, I missed deadlines for both issues in 1995. I learned that, quite coincidentally, Paul Huey was also working on a similar paper on the history of historical archaeology in New York. We agreed to aim for joint publication in *The Bulletin*. Subsequently, we exchanged drafts and information, held luncheon meetings, then labored on the final versions, and here we are at last. Paul and I agree that these papers could each be readily expanded into a book, or perhaps combined in one book; a project for the future.

It will be obvious that this paper omits or glancingly mentions many aspects of archaeological activity in New York State. Of necessity, this also means that some people, institutions, accomplishments and events have been left out, some through my own ignorance, others from lack of space or relevance to the main historical themes. The reader will recognize that this is primarily a survey of professional activities and institutional programs, with only secondary reference to the many contributions of amateurs ("avocationalists"). In addition, I was forced to leave out the huge corpus of largely unpublished cultural resource projects completed by professionals working in New York. Perhaps justice can be done to the contributions of both groups in a book-length sequel to this report.

Some readers will also note the bibliographies of certain prehistorians, for example William A. Ritchie, are rather abridged, again a space-saving measure. Finally, space permits only a very small number of photographs, confined in this essay to "old time" professionals (from before 1960).

Introduction

This paper is concerned with the history of prehistoric archaeology in New York State, the archaeology of the American Indian, rather than such related subjects as social anthropology, ethnology. Ethnohistory or historic (Euroamerican) archaeology. Perhaps the title should more

accurately refer to "American Indian Archaeology" or "Amerindian¹ Archaeology" since T will be touching on proto-historic and early post-contact Indian archaeology as well as prehistory in the strict sense. It is impossible to do justice to even that limited topic in a short report that summarizes developments going back over 300 years. This survey stresses the mainstream of archaeological activities, of necessity leaving out many details. It begins with a short history of the people, ideas, programs and institutions that shaped the growth of archaeology in New York from the European intrusion to the present day (1996). There follows a synopsis of our current understanding of the archaeological record, then a speculative section on future directions.

It should be noted that archaeology in New York State did not evolve in isolation, but was part and parcel of intellectual, economic and social processes at work throughout both North America and Europe. Although anthropology and archaeology both originated during, and in part as a result of, the expansion of European colonial powers around the globe, the subsequent development of these disciplines after the Renaissance was linked closely with the growth of other areas of scientific thought, in particular biology, geology and paleontology (Butterfield 1957; Wightman 1953; Taton 1964). In a different sense, it should be obvious that modern political boundaries were meaningless to native peoples, and that prehistoric events in New York State could not be described without reference to those in surrounding states, even to more distant parts of North America including Canada. This means that the modern New York archaeologist has the added burden of keeping abreast of research in those surrounding areas.

Gordon R. Willey and Jeremy Sabloff organized their *History of American Archaeology* (1974) into five general periods. The writer finds these useful for the purpose of this review. They consist of 1) a Speculative Period, 2) a Classificatory-Descriptive Period, 3) a Classificatory-Historical I Period, 4) a Classificatory-Historical II Period, 5) an Explanatory Period. Of course, these periods and the underlying concepts that define them are the products of a Euroamerican cultural and intellectual tradition with meaning primarily for archaeologists, since historical and scientific inquiry as systematic endeavors were not part of pre-contact Indian culture. Nevertheless, in some respects the seventeenth-century Seneca Iroquois of western New York were collectors of prehistoric artifacts, for example, their use of

projectile points made by much older peoples placed alongside European trade items as grave offerings (perhaps in medicine bundles), and the recycling of other chert items into gunflints.

Historical Summary

The following summary not only chronicles the people, ideas, events, and general characteristics of the Willey and Sabloff periods, but touches on certain theoretical and methodological themes or threads that persisted from period to period, in some cases to the present day. The intellectual and conceptual approaches that distinguish the successive periods, one from the other, could be regarded as paradigm shifts or scientific revolutions (T. S. Kuhn 1970; Cohen 1985).

The **Speculative Period** (1492-1840) in American archaeology was initially characterized by the European discovery of the New World, followed by exploration, trade with and conquest of indigenous peoples, and colonization. There were few hard data on the natives with whom the explorers and colonists traded or fought; the European attitude was primarily one of religious proselytization and economic exploitation, and Indians were viewed in terms of preconceived stereotypes (Morrison 1971; Meinig 1977; Brasser 1974, 1978; Washburn 1978; Trigger 1978). Archaeology as a science was nonexistent and few writers could refrain from uncontrolled speculation. Various "authorities" proclaimed that the Indians had originated somewhere in Europe, the Mediterranean region, or Central Asia; they were identified as Vikings, Danes, Scythians, the Ten Lost Tribes of Israel, or even immigrants from the mythical lost continent of Atlantis. A very few writers realized that the meager historical, biological and geographic evidence available at that time pointed to an origin somewhere in northeastern Asia. This hypothesis was confirmed by later research (Willey and Sabloff 1974). The initial populating of the New World occurred sometime during the latter part of the final glaciation of North America (Laughlin and Harper 1979; West 1981, 1983; Dillehay and Meltzer 1991). This does not rule out, however, the strong probability of subsequent long-distance contacts, perhaps accidental landfalls or actual trade expeditions by boats carrying small numbers of people from Polynesia, Asia, even Europe (Jett 1983).

Indians resident in New York at the time of European contact were described, in varying detail and accuracy, by early travelers, missionaries, military men, and traders. Data on the sixteenth and seventeenth centuries are especially sketchy, and even nonexistent for some parts of the state (Trigger 1978; Gehring and Starna 1988; Greenhalgh 1849; Gillette and Funk 1993). References to archaeological objects (i.e., objects not obviously made and used by the contemporary Indian groups) were rare. During his expedition to upstate

1 I am reluctant to use the term "Native American" in the title although it appears in various places in the text because I am uncomfortable with its "politically correct" connotations, because it is not entirely satisfactory in view of the fact that all persons born in the Americas including Euroamericans are natives, and because I much prefer "American Indian" or "Amerind" or "First Americans" to any other term.



Figure 1. Lewis Henry Morgan (1818-1881) in his library, Rochester, New York. Photograph courtesy University of Rochester Library, Rochester, New York.

New York about A.D. 1743, the English traveler and writer John Bartram (1751) found some potsherds and projectile points which he sent to Sir Hans Sloane, a well-known English collector and physician (George R. Hamell, personal communication, 1985). In a paper published in 1818, De Witt Clinton, governor of New York, described a number of archaeological sites including "forts," "villages," and "burials." Some of the sites are well known in the twentieth-century archaeological literature.

One of the most often cited early ventures in the pursuit of knowledge concerning prehistoric native cultures was Thomas Jefferson's opening of a burial mound in Virginia (Koch and Reden 1944:222-224). This was a unique eighteenth-century pioneering effort that anticipated modern field techniques, including the recognition of discrete strata within the mound. Nothing comparable is known to have been attempted at that time in the Northeast.

Several early nineteenth-century sources concern the "excavation" (mining) of large amounts of iron, copper, and brass from seventeenth century Seneca sites in western New York, principally in the shape of kettles, axes, and other European trade items put to use by local residents including blacksmiths (George R. Hamell, personal communication, 1988). These activities could not, however, be considered as motivated by a systematic search for knowledge.

The period from the late eighteenth to the early nineteenth century has been described as the Age of Antiquarianism, because so much archaeological activity consisted of the collecting of unusual or aesthetically appealing artifacts, with little regard for their context or meaning, by sailors, travelers, military men, and wealthy dilettanti. By 1840 the scholarly world was familiar with the basic facts about the Iroquois, Mahican, Delaware, and other tribes who had lived in New York at the time of European contact, but almost nothing was known about their antecedents.

The **Classificatory-Descriptive Period** (1840-1914) saw the beginnings of archaeology as a discipline. Wilder forms of speculation waned as archaeological remains and monuments were increasingly subjected to systematic description and classification. An important step forward was the professionalization of archaeology, hand in hand with the establishment of museum and university anthropology departments, in the last half of the nineteenth century. This was also the age of Darwin, Huxley, Spencer, and other thinkers whose evolutionism heavily influenced the fledgling sciences of anthropology and archaeology (Eiseley 1961; Harris 1968).

The scholar most responsible for the founding of American anthropology was Lewis H. Morgan (Figure 1), a Rochester lawyer who studied the Iroquois and other living North American tribes in the 1830s and 1840s. He collected archaeological artifacts in addition to the ethnological materials he acquired for the New York State Cabinet of Natural History (precursor of the New York State Museum) in Albany². His written works were and still are major contributions to anthropology (Morgan 1851, 1871, 1877, 1881).

References to archaeological sites in various parts of New York state appeared in works by other nineteenth-century scholars such as H.R. Schoolcraft (1847, 1851-1857), J. Taylor (1850), F. B. Hough (1850, 1851, 1854), F. H. Cushing (1874), E. M. Rittenber (1872), C. Stafford (1873), G. Furman (1875), L. M. Hammond (1872), P. Jones (1875), E. Emerson (1898), A. L. Benedict (1891), H. Woodworth (1894) and S. L. Frey (1898).

The mysterious and often spectacular Indian mounds of the Ohio Valley and the generally smaller, less numerous mounds of western New York intrigued many people and stimulated a great deal of speculation. In a effort to determine whether or not the mounds were built by ancestors of the historic tribes, or by a completely different race of people. E.G. Squier (1849, 1851) visited, mapped, and described many

² The vast majority of ethnographic artifacts collected by Morgan for the State Museum were destroyed in a fire in 1911, leaving only about 80 items out of an estimated 2000. A mere six of the archaeological pieces survived.



Figure 2. Reverend William C. Beauchamp lecturing to a group of men and women on an archaeological site: name and location of site unknown. The date was presumably during the first years of the century. Photograph courtesy of Lisa Anderson, Anthropology Collection's Manager, New York State Museum, Albany, New York.

Indian constructions in New York. These included hemispherical and annular mounds as well as earthworks. He concluded correctly that some mounds were built by prehistoric Indians, but that many earthworks had been constructed by the Iroquois in more recent times.

The first major government-funded scientific institution in New York was the Geological and Natural History Survey, established in Albany in 1836. The embryo of the present New York State Museum Anthropology Office was the Historical and Antiquarian collection of 1843, which was incorporated in 1845 with the Natural History Survey in a Cabinet of Natural History. This became the New York State Museum in 1870.

L. H. Morgan was hired by the Regents of the New York State Education Department (the parent agency for the various surveys and the State Museum) to collect Iroquois objects, thus beginning the ethnology collection in 1847. A formal Indian section of the State Museum was created in 1896 with one honorary curator. Morgan's report to the Regents had been published in

1849; thereafter bulletins on archaeology and ethnology appeared with regularity in the Museum Series.

In 1904, the Rev. William Beauchamp (Figure 2) became affiliated with the State Museum as "Honorary Archaeologist." The Museum had already published several bulletins on his research, including *The Aboriginal Occupations of New York* (1900a), the first comprehensive survey of Indian sites within the state's borders. Beauchamp was an Episcopalian minister, born in 1830 and deceased about 1925, who lived in Baldwinsville, New York. He had a wide range of interests apart from his religious activities. He studied Indian life and culture, was an adopted member of the Onondaga tribe, and was also an accomplished historian, folklorist, and botanist. His anthropological publications were numerous (Beauchamp 1892, 1894, 1897a, 1897b, 1898, 1900a, 1900b, 1901, 1902a, 1902b, 1903, 1905a, 1905b, 1905c, 1907, 1908, 1916, 1921, 1925). They included eight monographs describing stone, bone, horn, shell, pottery, metal, and wooden artifacts made and used by New York Indians, as well as site reports. Another contribution, not widely known, is a massive,



Figure 3. Arthur C. Parker at an unidentified site, probably in western New York State. Photograph courtesy Rochester Museum & Science Center, Rochester, New York.

unpublished compendium of notes, text, drawings and miscellany entitled *Antiquities of Onondaga*, now in the Archives and Manuscripts section of the New York State Library. It has been microfilmed with annotations by James Bradley.

Beauchamp hired young Arthur C. Parker as an assistant and in 1906 Parker (Figure 3) became the first full-time, salaried archaeologist in New York State. Parker (1881-1955) was the grandnephew of Ely S. Parker, a famous Seneca sachem, engineer, and Union Army general. Arthur C. Parker's Caucasian mother was from New England. Known to the Iroquois as "Big Snowsnake", Parker had a distinguished career in folklore, ethnology, archaeology, history, and museology.³ His mixed heritage created an ambivalence

toward the different customs and values of his parents' cultural traditions which is evident in some of his writings about Indian history and culture. His formal education after high school consisted of three years at a Protestant seminary (Fenton 1968; Zeller 1987).

Parker's first archaeological experience was in coastal New York, where around 1901 he worked briefly for the American Museum of Natural History. That institution, then directed by F. W. Putnam, also supported and encouraged two other young archaeologists, Alanson B. Skinner (Figure 4) and Mark R. Harrington. Parker worked as field assistant to Harrington in the summers of 1903 and 1904. He also spent some time as a newspaper reporter before his employment by the State Museum.

Skinner's research (Harrington 1926) was confined largely to coastal New York (Skinner 1903a, 1903b, 1903c, 1903d, 1904a, 1904b, 1904c, 1905a, 1905b, 1906a, 1906b, 1908a, 1908b, 1909a, 1909b, 1909c, 1909d, 1909e, 1912a, 1912b, 1912c, 1913, 1915a, 1915b, 1917, 1918, 1919a, 1919b, 1919c, 1920a, 1920b, 1920c, 1920d, 1920e, 1921, 1922, 1924, 1925a, 1925b, Skinner and Schrabisch 1913).

³ Parker was responsible for the six famous life groups portraying Iroquois culture that were installed in 1915 in the old State Museum on the fifth floor of the State Education Building on Washington Ave., in Albany. Because these exhibits were beginning to deteriorate and for other practical reasons they were removed to storage when the new Museum was constructed as part of the new Cultural Center in the Empire State Plaza. A new and up-to-date series of permanent exhibits on both prehistory and the historical tribal groups has been installed in the Center, chiefly from 1980 to 1992.

Following his affiliation with the American Museum, he excavated a number of sites for the Museum of the American Indian, Heye Foundation (cf. Smith 1950). In addition to coastal sites, Harrington worked at Iroquois villages in the Mohawk Valley as well as western and northern New York (Harrington 1909a, 1909b, 1922a, 1922b, 1922c, 1922d, 1924, 1925, n.d.). He subsequently devoted his energies to the archaeology of the western United States.

Other contributors to coastal archaeology during this period were Reginald P. Bolton (1909), Foster Saville (1920), James K. Finch (1909), and Clark Wissler (1909). Also deserving of mention is the monumental work on pottery of the eastern United States by W. H. Holmes (1903), which illustrated and described some ceramics from northeastern sites.

Scholars lacking formal training in archaeology were active in upstate New York during this period, describing native sites and sometimes attempting to interpret them in a larger context. Two examples are D. D. Luther (1910) and F. W. Houghton. Houghton (1912, 1916, 1922) was among the first individuals to systematically study Seneca village sites and arrange them in sequence.

By the close of the **Classificatory-Descriptive Period**, information on numerous archaeological sites had been more or less systematically gathered by Beauchamp and other authorities. The New York State Museum, the American Museum of Natural History and a few other institutions had begun to accumulate sizeable archaeological collections from New York and adjoining areas. Some Iroquoian and coastal Algonquian sites had been professionally excavated, but the time dimension of prehistory still appeared quite shallow; it was generally believed that pre-Iroquoian cultures were at most a few centuries old.

The **Classificatory-Historical I Period** (1914-1940) was dominated by an interest in the history and chronology, as well as the classification, of archaeological complexes. Chronological control was improved by the development of methodological innovations such as stratigraphy and seriation. Stratigraphy refers to the recording and interpretation of deposits in which the remains of individual occupations happen to occur in separate layers or levels, younger ones above the older. Such deposits are to be found in sites which have been subject to geological processes such as those involved in buildup of cave and rockshelter sediments, flood-plain terraces, and colluvial fans, as well as anthropogenic processes such as midden accumulations or the superimposition of structural building stages. Seriation is a statistical method for determining the frequencies of artifacts (usually pottery types or attributes) from each of several sites and then ranking the sites in temporal order; it requires advance knowledge that one of the sites is either first or last in sequence, or that prior research suggests a particular trend in the artifact



Figure 4 Portrait of Alanson B. Skinner as a young man. Photograph courtesy of Department of Library Services, American Museum of Natural History. Negative Number 125304.

seriation. By these methods, occupational remains attributed to particular cultures at particular sites can be fitted into local or regional time-space frameworks (Rowe 1961; Willey and Philips 1958; Willey and Sabloff 1974).

The classification and identification of cultural units were facilitated by the use of the direct historical approach and ethnographic analogy (Willey and Sabloff 1974). The direct historical approach (Steward 1942) requires a knowledge of the material culture, subsistence habits and settlement patterns of historically documented peoples, and these traits are then traced back into prehistory as far as the thread of continuity will allow. By this method, the antecedents of historic peoples can sometimes be tracked hundreds or even thousands of years into the non-literate past. Ethnographic analogy attempts to determine the function and meaning of prehistoric artifacts and other traits by comparison with similar traits recorded for historic cultures.

During this period, archaeology continued to broaden its institutional base. As one of the major sub-disciplines of American anthropology, it was taught alongside ethnology, social anthropology, and physical anthropology in college and university departments.

The State Museum continued to dominate prehistoric research in New York through 1924. In 1922, A.C. Parker produced his major synthesis of New York prehistory entitled *The Archaeological History of New York*. In the first volume, he described the goals and methods of archaeology; presented several of his previously published reports on western New

York Iroquoian sites written by him, Harrington (1922a, 1922b, 1922c, 1922d) and Frank Cushing (1922); and described his period categorization of the culture sequence in New York. In the second volume, he listed hundreds of sites, county by county, for the whole state. These lists were based on those originally published in Beauchamp's *Archaeological Occupations of New York* (1900a) and were presented with minor additions by Parker.

For the contemporary archaeologist, Parker's and Beauchamp's surveys left much to be desired in terms of precise site locations, the identification and description of associated artifacts and cultural units, and other data categories. Those surveys were however important pioneering efforts: some of the listed sites were confirmed and documented by later work and a few proved crucial to the developing picture of New York prehistory.

Parker (1922) proposed a six-part classification of New York cultures, which in chronological order from early to late consisted of three Algonquian periods, an Eskimo-like period, a Mound-Buider period, and the Iroquois period. The pre-Iroquoian periods proved invalid in view of later research, since they incorporated considerable mixture of traits now known to belong to separate cultures and traditions. However, in Parker's day most known single-component sites were Iroquoian villages; the majority of sites in his files were surface sites in which the remains of multiple occupations were thoroughly intermingled by plowing. The differentiation of archaeological cultures and complexes by the application of proper excavation techniques to both single-component and stratified sites was still in its infancy.

Parker became a major advocate of the migration theory of Iroquoian origins. There were several versions of this theory, but basically it pictured the Iroquois as late prehistoric immigrants from a homeland in the Mississippi Valley, who displaced previously dominant Algonquian-speaking groups in the area of present-day New York and southern Ontario (Parker 1916, 1922; Fenton 1940; Trigger 1970; Tuck 1978). Parker also published separate reports on his investigation of Iroquoian sites in western New York (Parker 1907, 1918, 1919), on the contemporary Seneca Indians (Parker 1926), on Iroquois subsistence (Parker 1910), and on major native "flint mines" of the Hudson Valley (Parker 1924).

In 1924, Parker left the State Museum to become Director of the Rochester Municipal Museum (subsequently the Rochester Museum of Arts and Sciences and now the Rochester Museum & Science Center). He was replaced by Noah T. Clarke, who, however, was not trained as an archaeologist. The title of State Archaeologist, New York State Museum, was created by internal memorandum within the State Education Department in 1937 and used thereafter by Clarke. The title was, however, never granted the force of state law. The intellectual momentum had shifted to Rochester because Parker found there a recently appointed young aide who was to become the next major

voice in New York archaeology. The aide, William A. Ritchie, immediately established a reputation as an energetic field worker and a prolific writer of research reports.

Ritchie (Figure 5) was born in Rochester in 1903 and died in Albany, New York, on December 14, 1995. His childhood enthusiasm for science crystallized into a passion for prehistory by the time he reached his teens. He worked as a volunteer at the Rochester Museum for several years before becoming a salaried employee, eventually becoming Curator of Anthropology. After earning his college degree, he went on to a Master's degree in archaeology at the University of Rochester, where he also acquired some training in medicine and pathology. When he entered Columbia University to complete his doctoral requirements in anthropology, he arrived with a distinguished series of publications and a completed dissertation. The doctorate was awarded in 1944. He went on to publish more than 150 books, articles, papers, reviews and reports covering all aspects of northeastern prehistory. There are stories of all kinds about the "Old Master," as he is affectionately known to many former students and assistants. Available space does not permit me to digress into this and other aspects of his life and career (for more complete biographical sketches see Funk (1971, 1977c) and Kraft (1992)).⁴

Archaeologists were active at other institutions besides the Rochester Museum and the State Museum. Excavations were conducted in the Champlain Valley, chiefly in Vermont by John Bailey under the auspices of the Champlain Valley Historical Society. Most important of his Vermont sites were the Donovan Site (Bailey 1939), with its major Late Archaic component later assigned to the Vergennes phase (Ritchie 1965) and the stratified Chipman's Point Rockshelter which contained both Late Archaic and Late Woodland components (Bailey 1940). He also excavated sites in New York including

4 It may be of interest to note that in my biographical sketch (Funk 1977c) I divided Ritchie's career into four periods which conform only vaguely to the last three Willey and Sabloff's periods. I suggested: 1) a "Parker" period (1925-1937) during which Ritchie was strongly influenced by Parker's concepts of prehistory including his now obsolete Cultural classification scheme, 2) a "Midwestern Taxonomic" period (1938-1955) during which Ritchie, like most of his contemporaries, was employing the classification scheme of McKern (1939) for the many newly discovered prehistoric cultures of New York, but with the difference that Ritchie effectively modified the scheme to incorporate chronological data: 3) a "Transitional" period (1956-1961) in which Ritchie had turned to a focus on the delineation of settlement patterns: and (4) a "Cultural-Ecological" period (1962-1971) during which he more fully expressed his growing interest in the relationship of cultures to their environments, including the realization that culture change was in part a result of changing environmental parameters.



Figure 5. William A. Ritchie excavating a feature at the Clarke Site, Rockaway Pt., St. Lawrence County, New York in 1954. Photograph courtesy of Lisa Anderson, Anthropology Collections Manager, New York State Museum.

rockshelter at Fort Ticonderoga (Bailey 1937) and published a study of Iroquoian ceramics (Bailey 1938). William Stiles of the Museum of the American Indian, Heye Foundation, explored several sites in the Hudson Valley. The results remain unpublished, except for the writer's analysis of Stiles' collection from the late Middle Woodland component at the Black Rock Site, Greene county, excavated by the writer in 1964 (Funk 1976). Mary Butler's 1939-40 investigations for Vassar College at numerous sites in the same river basin also remain almost entirely unstudied and unpublished; the most important of these sites were the Goat Island Rockshelter and associated campsite (Funk 1976; Chilton 1992).

This was also the period when a number of organizations came into being that supported and encouraged studies of the American Indian. The Society for American Archaeology was organized in 1935 and with an international

membership continues to lead the field in the 1990s. The Society's Journal, *American Antiquity*, publishes articles and short reports on research conducted throughout the Americas, but with the recent addition of *Latin American Antiquity*, the first journal now generally confines its coverage to North America⁵. State and regional societies also appeared, including the New York State Archaeological Association, founded in 1916 (Hayes

⁵ A survey of the issues published over the last 30 years indicates that articles dealing specifically with New York prehistory or even New England prehistory only rarely appear. This does not necessarily reflect editorial policy or preferences, but may at least in part indicate a paucity of submissions by northeastern archeologists (who also have available a number of excellent regional journals).

1992). This organization also publishes a journal, *The Bulletin, Journal of the New York State Archaeological Association*. The membership of the state societies has always been chiefly made up of nonprofessionals, although professionals are often active participants.

It seems relevant to mention other publications, most associated with societies in surrounding states, which New York prehistorians frequently consult and in which they often publish research reports. These include: the *Pennsylvania Archaeologist*, the *Ohio Archaeologist*, the *Bulletin of the Massachusetts Archaeological Society*, the *Bulletin of the Archaeological Society of Connecticut*, *Northeast Anthropology* (formerly *Man in the Northeast*), the *North American Archaeologist*, *Archaeology of Eastern North America*, *Occasional Publications in Northeastern Anthropology* and the *Journal of Middle Atlantic Archaeology*. One must also include the Canadian journals such as the *Ontario Archaeology*, the *Canadian Journal of Archaeology*, and even the Canadian-American joint venture, *Arctic Anthropology*. I should note, however, that some of these journals were founded in the 1950s, 1960s and 1970s.

The listed societies as well as the numerous other state societies and the Eastern States Archaeological Federation ushered in an era of generally, though not always, amicable relations between amateurs and professionals. Both parties realized that they had much to gain from cooperative sharing of information. The professional had much to offer the amateur in educating him or her about current knowledge of culture history and correct archaeological methodology, and the amateur was indispensable to the professional as a source of data on sites and as a helper on digs (Ritchie 1956). This remains true today even though the rise of Historic Preservation programs, accompanied by a business orientation (hitherto foreign to most archaeologists) with its inevitable profit motive, and an extremely idealistic and proprietary view of cultural resources on the part of some archaeologists, has led to negative and even overtly hostile treatment of amateurs and collectors.

This is a shortsighted and ultimately counterproductive attitude. It should be obvious that many nonprofessionals are simply that: they don't get paid to do archaeology, but prove themselves to be competent field workers, analysts, and writers with a grasp of goals and methods that would do credit to any professional. There are also innumerable other amateurs who are informed and well-motivated, but have not been closely associated with professionals or received any formal training in archaeology. Some of these people may surface-collect artifacts without regard for provenience, or dig in a destructive manner, or fail to keep good records, but that does not justify ostracizing them when more often than not all that is required is a friendly interest and guiding hand on the part of professionals.

The hard-core pothunter and looter do exist, although they comprise a small minority, and may or may not be able or willing to learn the ideals and nuts and bolts of scientific archaeology. But it behooves the professional and the knowledgeable amateur to work in a positive manner with all those interested enough to join societies like the New York State Archaeological Association or who attend professional lectures, take courses, and volunteer on digs (Gorall 1996; De Angelo 1992, 1996).

During the Great Depression, American archaeology benefited greatly from public works programs such as the Works Progress Administration (W. P. A). Numerous sites were excavated with the aid of large crews of previously unemployed men. Great quantities of data and artifacts, which remain only partially studied and published today, were amassed throughout the United States.

By 1940 large collections of New York Indian artifacts were stored at the Rochester Museum of Arts and Sciences and the New York State Museum, while smaller collections from New York existed at the American Museum of Natural History, the Museum of the American Indian, Heye Foundation, and some other large institutions. In addition, Native American artifacts had been acquired, largely through donations from collectors, by numerous local historical societies and small museums. This trend continues to the present. There is presently no way to arrive at a reliable estimate of the total quantities involved.

Ritchie's interpretation of the prehistoric sequence rapidly superseded Parker's. Ritchie's cultural classifications came to pervade the thinking of archaeologists over a large area of the northeastern United States. Prehistoric assemblages in regions adjoining New York were often compared to, or even described in terms of, Lamoka, Laurentian, Middlesex, Orient, Point Peninsula, Owasco, and other complexes named and defined by Ritchie, mainly on the basis of his own field researches. His original concept of an "Archaic," or simple hunting, fishing, gathering level of culture, based on his work at the Lamoka Lake and Brewerton Sites, was widely accepted to denote a basic stage of cultural development that preceded the advent of pottery, maize horticulture, and village life in the Eastern Woodlands (Ritchie 1932, 1936, 1937, 1938, 1939).

At this stage in his career, Ritchie, like his contemporaries, was using the terminological framework of the Midwestern Taxonomic System proposed by W. C. McKern (1939) for conceptual ordering of the growing mass of data and materials recovered from prehistoric sites. He was unusually successful at using this system to show time depth.

From 1940-1960, i.e., the **Classificatory-Historical II Period**, New York archaeologists continued to excavate sites and to fill in regional sequences. After 1948 they were greatly

assisted by the newly developed radiocarbon-dating technique, which eliminated much of the guesswork that had characterized attempts at dating sites without the aid of written texts. Many prehistoric cultures proved to be much older, by hundreds or even thousands of years, than previously estimated. During this period there was also an increasing awareness of the need to go beyond the "simple" placement of artifact types and other archaeological traits in space and time to the reconstruction of whole cultural systems as dynamic entities interacting with the natural and cultural environment (Taylor 1948).

Still at Rochester through the 1940s, Ritchie continued to excavate and to publish at an astonishing pace (Ritchie 1940, 1944, 1945, 1946, 1947, 1949; Ritchie and MacNeish 1949). His doctoral dissertation, published by the Rochester Museum in 1944 as *The Pre-Iroquoian Occupations of New York State*, was his first major synthesis of New York prehistory and was immediately dubbed "The Green Bible." The other publications comprised: the site report for the Robinson and Oberlander No. 1 Sites in Onondaga county, type stations for the Late Archaic Brewerton focus; the site report for the Frontenac Island Site, Cayuga County, type site for the Late Archaic Frontenac focus; a report on the stratified Middle and Late Woodland components at the Wickham Site, also at Brewerton; a description of the ceremonial pottery dump of the Owasco culture at Carpenter Brook, Onondaga county; the site report on a Late Woodland occupation of the Delaware Valley at the Bell-Philhower Site, in New Jersey; and with R. S. MacNeish, the definition and description of pre-Iroquoian pottery types.

Ritchie showed no signs of slacking off after moving to the State Museum in Albany and being appointed State Archaeologist in 1949 (Ritchie 1951, 1951, 1953, 1954, 1955, 1957, 1958, 1959). These publications included a synthetic overview of New York prehistory, the formulation of the Chance horizon of Iroquoian ceramic development, a description of the late Paleo-Indian occupation at the Reagan Site, Vermont, a description of investigations at the early historic period Seneca Iroquois Dutch Hollow Site, the definition of an Early Woodland burial cult in northern New York, a summary of data on Paleo-Indian manifestations and their distribution, in relation to late-glacial lakes and landforms, a synthesis of Hudson Valley prehistory, and a report on his excavation of Archaic and Orient phase sites on Long Island.

In 1950 the State Museum hired its first full-time anthropology curator, Charles E. Gillette. He not only catalogued incoming collections from active field projects, and maintained the collections already in place, but participated in the excavation of many sites located throughout the state. His major interests included wampum belts and the history of Indian-European contacts (Gillette and Funk 1993).



Figure 6 Alfred A. Guthe at the Factory Hollow Site, Ontario County, New York in 1956. Photograph by Albert Hoffman and courtesy of the Rochester Museum & Science Center, Rochester, New York.

Ritchie's successor at the Rochester Museum was Alfred K. Guthe (Figure 6), whose research interests centered on Iroquoian development in southwestern New York (Guthe 1958). In 1959 Charles F. Hayes III was hired as Assistant Curator of Anthropology; Hayes became Curator of Anthropology in 1961 following Guthe's move to the Frank H. McClung Museum at the University of Tennessee.

Meanwhile the investigations of Carlyle S. Smith in coastal New York had resulted in his important synthesis, *The archaeology of Coastal New York* (1950), published by the American Museum of Natural History. Smith compiled data from over two dozen sites in New York and Connecticut, the majority located in New York City and on Long Island. Some sites were excavated by him, but most had been investigated by Alanson Skinner, Mark R. Harrington, Foster Saville, and others. Smith summarized the ethnohistoric data for his study area, then projected a cultural sequence into the past, using the direct historical approach, the stratigraphy at certain sites, and typological comparisons with the better-known upstate New York framework of Ritchie. No radiocarbon dates were available at that time.

There were obvious differences in ceramics and other traits when compared with upstate assemblages. The importance of marine resources to cultural ecology was not explicitly noted by Smith, and did not receive adequate attention until it became an integral aspect of the thinking of various scholars (Ritchie 1959, 1965, 1969a, 1969b; Brennan 1962, 1903).

1974; Gramly 1977; Gwynne 1979; Wyatt 1977; Lavin 1988a; Lightfoot et al. 1987; Claassen 1991, 1994, 1995, 1996). Overlapping in time with Smith's explorations, but continuing into more recent decades, was the work of Ralph S. Solecki, now retired from Columbia University, on historic Indian forts and other sites on Long Island (Solecki 1947, 1950, 1985, 1994).

The most important research results during this period include: the further explication of the New York culture sequence, based on the excavation of sites located in all parts of the state representing occupation by diverse prehistoric groups; the adoption of a superior, more flexible new archaeological nomenclature proposed by Willey and Phillips (1958) in place of the outmoded McKern system; the refinement of absolute chronologies dependent on growing numbers of radiocarbon dates; the development of carefully constructed typologies for ceramics and projectile points; a burgeoning interest in understanding cultures in relation to their natural landscapes, as reflected in studies of subsistence and settlement patterns; and a growing acceptance that the Iroquoian tribes stemmed from prehistoric peoples long resident in the area, rather than migrants from the south and west in pre-contact times. Most of these advances must be credited to Ritchie, MacNeish, and a few others, but Smith's (1947, 1950) coastal New York research remains a major contribution.

The **Explanatory Period** (1960 to the present) was anticipated by some intellectual themes of the preceding period, including Walter Taylor's (1948) "conjunctive approach" and the interest in delineating settlement patterns. But after 1960, there were concerted attempts to make American archaeology more consciously scientific, as contrasted with a supposed prior tendency to historical particularism or "chronicling" (for a severe critique of the notion that pre-1960 archaeologists were somehow unscientific and were uninterested in or unable to test hypotheses (see Gibbon 1989). The focus was now on efforts to understand culture as a process, representing the adaptations of human groups to environmental contingencies. Culture was viewed in both systemic and evolutionary terms. There was a growing trend to interdisciplinary collaboration between archaeologists, cultural anthropologists, and natural scientists (e.g., Butzer 1971, 1982). Other characteristics of the period include the wide use of physical science techniques, statistical methods including quantitatively oriented site sampling approaches (Mueller 1975), computer-assisted analyses (Doran and Hodson 1975), functional studies, formal hypothesis testing, and the formulation of models. By 1965, the major school of thought was referred to as the "New Archaeology" or "Processual Archaeology" and its leading advocate was Lewis R. Binford (Binford 1962, 1965, 1972, 1983, 1989). By the mid-1980s, the "Post-Processual" school of archaeology was making itself heard, but so far as I can tell, it has not had a perceptible impact on how archaeology is being done in the Northeast.

University and museum departments of anthropology expanded considerably between 1960 and 1971,

producing a new and more numerous generation of archaeologists, but suffering some setbacks toward the end of that time. Another era of expansion began after 1971 when the effects of federal legislation (essentially, the National Historic Preservation Act of 1966, or NHPA, and the National Environmental Protection Act of 1969, or NEPA) designed to protect historical, archaeological, and natural resources began to be felt. Federally mandated survey and excavation programs, under the collective umbrella of public archaeology, today cost over 300 million dollars a year. Many state and local governments have their own cultural resource management (CRM) programs⁶. More archaeologists are employed than ever before. But recent economic trends have not been kind to most traditional archaeological research programs in university and museum settings.

Public archaeology (McGinsey 1972), or as it is often labeled, contract archaeology, is a major feature of archaeological endeavor that seems here to stay, barring major reversals in federal support, both statutory and fiscal. Such reversals would have a disastrous effect on state and local CRM programs. A number of contract operations have sprung up around New York State, some private, others at museums or on academic campuses. State agencies play important roles in the inventorying, evaluation, regulation, and investigation of both historic and prehistoric sites located on state lands or affected by government-funded or licensed projects on private property.

The New York State Museum's Anthropological Survey coordinates the state Cultural Resource Survey Program, with an average annual budget of about \$700,000. It was managed very successfully by Phil Lord, Jr. from 1974 to 1988, after which time he transferred to the Office of State History where he now concentrates on the study of historical archaeology

6 Ritchie's advocacy was crucial to the formulation and passage of New York State's first historic preservation legislation, known as Section 233 of the Education Law (1960). This law regulated the Collection of historic, archaeological, and paleontological objects on state land, (and Understate waters), gave the commissioner of Education the authority to issue permits for collecting such objects (it is a misdemeanor to collect on state lands without a permit), established the State Museum as the repository for collected materials, linked the State Museum's programs with the federal Department of Transportation's Archaeological Highway Salvage Act of 1959, and designated the Museum as the institution that would contract with the State Department of Transportation in order to perform archaeological survey, along state roads in advance of construction. Although some aspects of the law, such as protection of underwater shipwrecks, proved hard to enforce it provided the basis for the embryonic highway salvage program of 1962-1973, later to become the Anthropological Survey's Cultural Resource Survey Program.

and early canal systems of the state (Lord 1972, 1983, 1989, 1993a, 1993b). Barbara Ross took over management of the program (now called the Cultural Resources Survey Program) until John Hart was added to the staff in 1994. He now manages the entire program, which also involves non-highway contract archaeology projects. Reviews of highway construction projects are carried out by archaeologists Mary Ivey and Karen McCann, of the Environmental Review Office at the Department of Transportation in conjunction with the CRSP at the New York State Museum.

The Commissioner of another agency, the Office of Parks, Recreation, and Historic Preservation, is the federal liaison, or State Historic Preservation Officer (SHPO). He or she oversees a variety of cultural resource programs⁷, including the New York State National Historic Site Register Program, the state's own site register program, reviews of the eligibility of sites in contract reports for protection under the National Historic Preservation Act, and the Bureau of Historic Site Services which deals with cultural resources on the 35 Historic Trust properties (e.g., Sir William Johnson's mansion in Johnstown), owned and operated by the agency. Until 1995, the head of the Bureau was Paul R. Huey, who with a staff of four other archaeologists conducted a highly regarded survey, excavation, mitigation, and preservation program on Trust sites where archaeological remains (both historic and prehistoric) were threatened by construction (a partial bibliography is as follows: Huey et al. 1977; Huey 1974, 1980, 1981, 1983, 1984a, 1984b, 1986, 1987, 1988a, 1988b, 1990, 1994a, 1994b, 1996; Feister 1975, 1982, 1984a, 1984b, 1985, 1994; Feister and Huey 1985; Moody and Fisher 1989; Fisher 1976, 1982, 1984, 1986, 1987, 1993; Fisher and Buell 1978; Fisher and Hartgen 1983; Wentworth 1987; Goring 1980). Native American artifacts and features are sometimes encountered in deposits underlying historic deposits, although prehistoric

artifacts are also often found intermixed with the historic items. As described in a bibliography annotated by Huey (1996), the aboriginal materials have ranged in age from Middle Archaic to the Contact period.

Unfortunately, the reductions in state funding and the state workforce occasioned by the newly elected (in 1994) Republican administration of Governor George Pataki have had a disastrous effect on the Bureau, resulting in Paul Huey's reassignment to a low-level bureaucratic position and the loss of Charles Fisher, and leaving three full-time staff archaeologists to handle the entire work load (Fisher has transferred to the Cultural Resource Survey Program at the State Museum). The agency's project review archaeologist, Robert Kuhn, reviews contract archaeology proposals and reports, and makes recommendations for the survey of properties to be developed and for the preservation or mitigation of archaeological resources threatened by construction, whether on public or private lands.

From about 1977 to 1990, archaeologists at the Department of Environmental Conservation were called upon to evaluate the potential impacts of sewage plants, drainage projects, and similar actions regulated by D.E.C. on archaeological sites.⁸ The former team of four to five persons, headed by Louise Basa, has been disbanded, and those still employed have been reassigned to other duties (Basa retired from state service in mid-June, 1996).

Public archaeology survey and mitigation efforts have contributed substantially to our knowledge of prehistory (see, e.g., R. Kuhn 1994b). Site discovery and sampling techniques developed to deal with strictly bounded contract archaeology projects were strongly influenced by the methodological innovations associated with the "New Archaeology." The result is that large volumes of data are becoming available on the number, spatial distribution, ecological associations and internal structure of sites - data not ordinarily produced by the much more limited surveys permitted by museum and university budgets. Another consequence of professional concern for compliance by agencies and contractors in the management of cultural resources was the formation in 1972 of the New York Archaeological Council, now made up of about 120 professional archaeologists and graduate students scattered around the state. A major problem with CRM, however, is the woefully inadequate record of publication of data in standard scientific formats.

Researchers in traditional academic programs have continued their work while reaching varied forms of accommodation with the rise in public archaeology. Since the mid-1980s the

7 A major piece of legislation, the Historic Preservation Act of 1980, empowers the Commissioner of Parks, Recreation, and Historic Preservation to require other state agencies to inform OPRHP of proposed actions that may have an impact on historical and archaeological resources. This law also calls for the creation of a state site register. OPRHP therefore has a degree of regulatory control over the programs of other agencies. As might be expected, this has led to some jurisdictional conflicts and policy disagreements between OPRHP and the State Education Department, with its own preservation legislation (Section 233 of the Education Law), and also the Department of Environmental Conservation, with its State Environmental Quality Review Act (SEQRA). The latter encompasses a broad spectrum of environmental factors, including, archaeology, and is responsible for a great deal of archaeological survey, excavation, and conservation on the local or municipal levels, that would otherwise not be accomplished. Another OPRHP law - passed circa 1975 but never fully implemented and still awaiting the approval of draft legislations is supposed to protect and regulate the excavation of Native American burial sites on privately owned lands.

8 The statutory basis for reviewing impacts on historical and archaeological resources consists of Article 7 of the Conservation Law (c. 1966) and the State Environmental Quality Review Act (SEQRA, 1978).

programs at the New York State Museum have increasingly relied on funding from public archaeology sources, chiefly the Department of Transportation, to the detriment of the general research and service activities which were once the Anthropological Survey's chief claim to fame. Staff personnel are forced to seek external grants on a regular basis in order to fund their own research.

To backtrack a bit, the present writer was hired as William A. Ritchie's research assistant in June 1960. From 1960 to 1971, Ritchie produced numerous reports on topics that included settlement pattern research, Early Archaic sites in coastal New York, Late Archaic hunting and gathering adaptations, projectile point typology, early northeastern pottery, Adena influences in the Northeast, ground slate technology, and evidence for the Owasco-Iroquois developmental continuum (Ritchie 1961, 1962, 1965, 1968, 1969a, 1969b, 1971a, 1971b; Ritchie and Dragoon 1960; Ritchie and Funk 1971, 1973).

Ritchie's second major synthesis, *The Archaeology of New York State*, was published by Natural History Press in 1965; a revised edition was published in 1969 (Ritchie 1969a) and the book was reissued by Harbor Hill Books in 1980 and Purple Mountain Press in 1994. It is still the indispensable introduction to the prehistory of New York and some adjoining areas. Prior to his retirement in 1971, Ritchie worked several seasons on Martha's Vineyard, Massachusetts where he established the first major stratigraphically based prehistoric cultural sequence for southern New England, published as *The Archaeology of Martha's Vineyard* (1969b). He published a number of articles after his retirement, including two retrospectives (Ritchie 1974, 1976, 1979a, 1979b, 1985; Ritchie and Funk 1984).

From 1960 to 1970, my research activities consisted, first, of the excavation of Paleo-Indian, Early Woodland, Middle Woodland and Late Woodland sites (the latter including four Mohawk Iroquois village sites) under the aegis of Ritchie's settlement pattern project; second, the investigation of additional Paleo-Indian, Archaic, and Middle Woodland sites in the Hudson Valley that provided the basis for my doctoral dissertation (Funk 1966). Reports on most of the prehistoric sites and some of the Mohawk data were incorporated into Ritchie and Funk's *Aboriginal Settlement Patterns in the Northeast*, published as New York State Museum Memoir 20 (1973). In many respects, *Settlement Patterns* can be considered an update of Ritchie (1969a). The Hudson Valley data were synthesized in *Recent Contributions to Hudson Valley Prehistory*, State Museum Memoir 22 (Funk 1976). Probably the most useful aspect of Memoir 22 consisted of reports on the excavation of several stratified sites, the synthesis of settlement pattern data, and the acquisition of new radiocarbon dates, which together permitted the delineation of a well-

documented chronology of Late Archaic and Middle Woodland occupations in the valley.

Following Ritchie's retirement from State service in March 1971, I took over his duties and was designated State Archaeologist in 1973. From 1971 to 1984, I was overall director of fieldwork on some 25 prehistoric sites in the Upper Susquehanna Valley near Oneonta, New York. This project was of an interdisciplinary nature and emphasized the excavation of stratified flood plain sites, on which the remains of individual occupations were separated by alluvial deposits, rather than mixed as is often the case on shallow sites. The result was a detailed regional framework and settlement analysis of cultural complexes placed in time by means of over 100 radiocarbon dates (Funk et al. 1973, 1974; Funk and Rippeteau 1977; Funk and Wellman 1984). Volume 1 of a major monograph on *Archaeological Investigations in the Upper Susquehanna Valley, New York State*, was published by Persimmon Press (Funk 1993). This work features important contributions by several coauthors. Volume 2, consisting of the individual site reports, is currently undergoing editorial scrutiny.

The results of further field work in 1986-1989 at the Dutchess Quarry Caves, a cluster of unique sites in Orange county, were reported along with analyses of both old and new artifactual, faunal, and paleo-environmental materials by the writer and David W. Steadman, of the Biological Survey, New York State Museum, in *Archaeological and Paleoenvironmental Investigations in the Dutchess Quarry Caves, Orange County, New York*, published by Persimmon Press (1994). Perhaps the most important aspect of this work were 11 new tandem accelerator mass spectrometer dates that ranged from about 11,670 B.P. to 13,840 B.P. These dates led to the conclusion that the directly dated bones of caribou, giant beaver, and peccary may *not* have been associated with the fluted points found in the caves, but had been previously dragged in by animal predators and scavengers. The work at Cave No. 8 continued the research begun by J. S. Kopper of C. W. Post College after his discovery of the cave by resistivity surveys (Kopper et al. 1980), and followed his untimely death in 1984.

From 1985 to the present, the writer and John E. Pfeiffer of Wesleyan University have been engaged in a study of the culture history and cultural ecology of Fishers Island, coastal New York. A radiocarbon-dated sequence ranging from the Late Archaic through the contact period emerged from extensive surveys and the excavation of 18 sites. Les Sirkin, of the Department of Earth Sciences, Adelphi University, reconstructed the postglacial vegetation sequence from pollen analysis, and Gordon Tucker, of the Biological Survey, New York State Museum, inventoried contemporary flora. Other experts have analyzed the faunal and floral remains, chiefly

from shell middens, thus contributing to delineation of subsistence-settlement systems on the island. Preliminary reports have been published (Funk and Pfeiffer 1988, 1994) and a final monograph is in preparation. This project represents the State Museum's first venture into coastal New York archaeology since the early 1960s.

From 1969 to 1993, an important participant in the State Museum's research programs was Beth Wellman. She was a regular member, and on some occasions director, of State Museum survey and excavation projects in the Schoharie, Mohawk, Hudson, Delaware, and Genesee Valleys and in coastal New York. Her work with students in the field and laboratory, and her meticulous processing of collections, were indispensable to these campaigns, as was her development of analytical procedures (Wellman 1982, 1996; Wellman and Hartgen 1975; Funk and Wellman 1984; cf. Wellman, in Funk 1993).

Finally, since 1988, Lynne P. Sullivan of the New York State Museum and her colleagues have dedicated considerable time and effort to the reanalysis of State Museum collections from the Erie village and burial concentration at the Ripley Site, Chautauqua County, excavated near the turn of the century by Arthur C. Parker and others. They have also carried out field investigations of their own on and near the site, and a major monograph is in press.

The State Museum Anthropology Office underwent some important changes in the 1980s and 1990s. The evolution of the Cultural Resources Survey Program has previously been described. Charles E. Gillette retired in 1983 and his curatorial position remained vacant until 1986 when Lynne P. Sullivan was hired. The present writer retired in 1993 and Sullivan headed the office until summer 1996, at which time State Museum management was reorganized. Other permanent staff besides Sullivan and John Hart (see above) include Beth Wellman, Site File Manager, Lisa Anderson, Collections Manager, and since late 1995, Charles Fisher, now with the CRSP. The office is presently occupied with meeting the requirements of the federal law known as the Native American Graves Protection and Repatriation Act (1990), or NAGPRA, preparing detailed inventories of potentially sensitive parts of the collections, and notifying over 200 Native American groups and individuals of the Museum's holdings. At this writing, few or no replies have been received and no objects have been repatriated. Temporary staff hired for NAGPRA are led by physical anthropologist Brenda Baker.

NAGPRA is also a major concern of other museums, college and university repositories, and historical societies in New York State which house Native American collections and have received federal grant support. It represents one of the most important threats to the archaeological and ethnological collections amassed over the course of more than a century, and to the practice

of American archaeology as we approach the twenty-first century.

The Rochester Museum & Science Center is second only to the State Museum in the volume of material subject to NAGPRA. It continues a very long tradition in maintaining a very active archaeological program since 1960⁹ Former Curator of Anthropology. Charles F. Hayes III, later Research Director, excavated and reported on a major Archaic site in the Genesee drainage (Hayes and Bergs 1969), as well as a number of Seneca Iroquois sites in the Bristol Hills and has been general editor of the proceedings from several major conferences sponsored by the museum (Hayes 1960, 1962, 1963a, 1963b, 1965a, 1965b, 1966a, 1966b, 1967, 1980a, 1980b, 1983, 1985, 1992; Hayes and Ceci 1989; Hayes, Bodner, and Saunders 1994; Hayes and Prisch 1973). The conferences have been on topics as diverse as glass trade beads, shell beads, Iroquoian ceramics, trade guns, and tribal interaction. Several former or present staff members and resident researchers have also studied the Seneca and Cayuga including Daniel Barber, Betty Prisch, Martha Sempowski, Lorraine Saunders, Mary Ann Niemczycki and George Hamell. The Rochester Museum has possession of the large, magnificent and unique Seneca collection of the late Charles F. Wray. The Seneca Archaeology Research Project, established by Wray before his death (Saunders 1992), has produced a number of research reports (Sempowski et al. 1988; Sempowski 1986, 1989, 1994; Saunders 1994; Saunders and Sempowski 1991; Wray 1985a, 1985b; Wray et al. 1987, 1991). A third volume of the Charles F. Wray Series in Seneca Archaeology is now in preparation for publication. Prior to the founding of the Seneca Archaeology Research Project, Wray had published research reports as sole author (Wray 1948, 1963, 1964) and in conjunction with others (Wray and Schoff 1953, Wray and Graham 1966; Sublett and Wray 1970) and had supported the research of museum staff (Prisch 1982). Niemczycki (1984, 1986, 1987, 1988, 1991, 1995) conducted extensive studies of Seneca and Cayuga development, while Hamell, now Anthropology Exhibit Planner at the State Museum, has published a series of provocative papers on Iroquois ethnohistory, mythology, and symbolism, and has attempted to link Iroquoian ideological culture to the interpretation of archaeological materials (Hamell 1980, 1983, 1986, 1987, 1989, 1992).

The Rochester Museum & Science Center established the Cultural Resource Survey Program (CRSP) as part of the RMSC's Research Division in 1984. Current principals in the

9 The Rochester Museum has created a fine series of exhibits centered around New York Indian history, prehistory, and ethnology since Parker's day. The prehistory exhibits installed by Ritchie during his study there have since been revised and updated by later staff archaeologists including Charles F. Hayes III, Daniel Barber, Betty Prisch and others.

program are Brian Nagel, Connie Bodner and Mark Ewing. The RMSC/CRSP has conducted over 375 historical and archaeological investigations between 1984 and 1996. Many of these investigations have contributed valuable information concerning both Native American and Euroamerican utilization, settlement, and development of the region. Work at the Archibald Site along Oak Orchard Creek and in Selkirk Shores State Park along the Salmon River has provided valuable data regarding fishing activities on the lower Great Lakes during the Late Archaic, Woodland, and early Historic periods. Additional cultural resource investigations in the Genesee Valley have yielded considerable data on settlement patterns, land use, and resource exploitation in the region. Like many other CRM programs across the state, the RMSC/CRSP has collected and preserved archaeological and historical data that may have otherwise been lost to commercial and private development.

While at the Buffalo Museum of Science, R. Michael Gramly investigated several Paleo-Indian sites in western New York, including the Lamb and Are Sites (Gramly 1988b, 1988c) and the Potts Site (Gramly and Lothrop 1984). His research has also involved Paleo-Indian manifestations in Maine (Gramly 1982, 1984, 1988a) as well as Paleo-Indian and Early Archaic occupations in the southern and western United States (Gramly and Funk 1990, 1991; Gramly 1993) and early Contact period Iroquoian sites in New York (Gramly 1996). Now Director of the Great Lakes Artifact Repository in Buffalo, he continues to investigate archaeological sites in New York, Massachusetts, Illinois, and other areas. The position of Curator of Anthropology at the Buffalo Museum is now occupied by Kevin Smith. Also, from the mid-1980s to the present (1996), the museum has supported excavations (initially in cooperation with the Biological Survey, New York State Museum) at the very important Hiscock Site near Batavia. This small wetland contains abundant faunal remains, including those from a basal Pleistocene zone that has yielded bones of mastodon and California condor, and it is rich in pollen, so that it has produced crucial data on early environments. In addition, however, the Pleistocene levels contained fluted points, a scraper, chert flakes, and mastodon bones modified by humans (Laub 1994, 1995; Tomenchuk and Laub 1995; Laub et al. 1988; personal communications, Richard Laub 1992 and David W. Steadman 1995). The Hiscock Site represents the first confirmed association of Paleo-Indians and mastodons east of the Mississippi Valley.

Since the first half of the century, the American Museum of Natural History and the Museum of the American Indian have turned their attention away from northeastern prehistory. Until recently, coastal New York archaeology was also a major area of interest at the Nassau

County Museum of Natural History (Wyatt 1977) and the Staten Island Museum (as indicated by the latter's publication of numerous reports by Skinner and its support of some archaeological work in the 1960s). Archaeologists in some branches of the State University system (SUNY) and the City University of New York (CUNY) have been very active in the area, both in traditional research programs and in CRM. Both educational systems expanded greatly in size during the 1960s as a result of the impetus generated by the governorship of Nelson A. Rockefeller.

At CUNY, Queens, the late and much-missed Lynn Ceci studied the social and economic context of wampum from ethnological sources and archaeological sites (Ceci 1989). Her main research interest concerned evidence for the first appearance of maize horticulture and settled village life on Long Island; she hypothesized that the poor glacial soils of the island were not suitable for intensive food production, and that only with the advent of European agricultural techniques was it possible to raise surplus amounts of corn and support larger populations (Ceci 1979, 1980, 1982, 1990). This model has been challenged by Annette Silver (1980).

While at SUNY Purchase, Stuart Fiedel conducted excavations on sites at Croton Point, Rye Marshlands, and other places in Westchester County. These sites contributed to our knowledge of Late Archaic and Transitional adaptations in the tidewater area (Fiedel 1984, 1986, 1988, 1991 a). Fiedel has also published on possible correlations between linguistic patterns and archaeological complexes (Fiedel 1987, 1991b, 1994).

While at SUNY Stony Brook, R. Michael Gramly excavated a large, stratified Late Archaic to Late Woodland site at Pipestave Hollow, Mount Sinai Harbor, Long Island (Gramly 1977; Gramly and Gwynne 1979). Other workers associated with the school's archaeology program have conducted projects on the island (Gwynne 1979, 1984, 1985; Wisniewski and Gwynne 1982; Kalin 1983; Kalin and Lightfoot 1989). Kent Lightfoot and his associates carried out systematic surveys and excavations in the Mashomack Preserve on Shelter Island and proposed a settlement model for Late Woodland occupations (Lightfoot 1985, 1986; Lightfoot et al. 1985; Lightfoot, Kalin and Moore 1985, 1987). The archaeology research and CRM program at Stony Brook is currently directed by David Bernstein, following his work in Rhode Island (Bernstein 1990, 1992, 1993).

Beginning about 1960, the Department of Anthropology at the State University of Buffalo at Amherst played a major role in Iroquois archaeology through the leadership of Marian E. White (Figure 7) until her untimely death in 1975 (Engelbrecht and Grayson 1978; Bender 1992). Her classic study of Neutral-Erie ethnohistory, settlement patterns, and village movements influenced a generation of graduate stu-



Figure 7. Marian E. White at the Kleis Site, Erie Count, New York in 1958. Photograph courtesy of Judith Voelker, Anthropology Research Museum, SUNY Buffalo, Buffalo, New York.

dents (White 1961; Hunt 1986). She published many other reports on Native American sites and the historic tribal groups in western New York (White 1958, 1963a, 1963b, 1965, 1967a, 1967b, 1971, 1972, 1976, 1977, 1978a, 1978b; White et al. 1978; White and Tooker 1968). White was also instrumental in the advancement of public archaeology in New York State, deserves to be called the founder of the New York Archaeological Council (White 1974; Bender 1992), and advised the New York State Museum on planning for its highway salvage program. One of her Ph.D. Students, Neal Trubowitz, was Director of the SUNY Buffalo Archaeological Survey in the mid-1970s and supervised highway salvage surveys along the route of Interstate 390 in the Genesee Valley. Since the surveys were designed for maximum feasible site discovery, with extensive coverage of upland regions, his synthesis of the prehistoric settlement patterns, from Paleo-Indian to contact, was a milestone of research in western New York (Trubowitz 1977). He also reported on newly acquired data on Early Archaic manifestations (Trubowitz 1979) as well as Transitional stage (Frost Island phase) occupations of the area (Trubowitz 1978; Trubowitz and Snethkamp 1975). Audrey Sublett

(Sublett and Wray 1970) conducted osteological studies of human remains from several Iroquoian sites. Karen Noonan (1971) worked at sites in the Allegheny drainage. Jack Schock defined a Chautauqua phase of Iroquoian culture in Southwestern New York (Schock 1976). Joseph Granger's Ph.D. research was centered on the Meadowood phase; he published a comprehensive monograph on the phase which remains the standard reference (Granger 1978), and he remains interested in the broad implications of Lamoka, Meadowood, and other New York cultures for prehistoric adaptations in the greater Northeast including the Great Lakes (Granger 1988).

From the mid-1980s to 1995, Margaret Nelson was Director of the Anthropology Research Museum at SUNY Buffalo and Ben Nelson was Director of the Archaeological Survey; they have since left New York. Gloria McKenna and Elaine Herold have also worked as administrators in the survey program.

At Buffalo State College, William Engelbrecht has produced a number of distinguished publications on Iroquoian ceramics and settlement patterns, including attempts to delin-

cate clusters corresponding to the historically defined Five Nations tribal areas and an effort to determine the time of origin of the famed League of the Iroquois: he has also conducted excavations on the Eaton Site in Buffalo and at village sites in Jefferson county, considered aspects of Iroquoian demography, and speculated on the Paleo-Indian use of watercraft (Engelbrecht 1972, 1974a, 1974b, 1978, 1980, 1984, 1987, 1990, 1991, 1994, 1995; Engelbrecht et al. 1990; Engelbrecht and Seyfert 1994).

Archaeologists at SUNY Binghamton have contributed to New York prehistory since the mid-1960s. William Lipe directed field school excavations at the early Owasco Roundtop Site; his results have been reported by Ritchie (1969a) and Ritchie and Funk (1973). He was also instrumental in salvage operations at the large, multicomponent Engelbert Site near Nichols, with its major Lamoka, Owasco and Susquehannock occupations (Elliott and Lipe 1970; Stewart 1973; Dunbar and Ruhl 1974). He has since left New York to concentrate on southwestern archaeology. In the 1970s Albert Dekin and the late Fred Plog provided administrative support and research design for highway salvage surveys along Interstate 88; one outcome was an excellent overview of Susquehanna Valley prehistory by Edward Curtin (1978). (See also a discussion of small site analysis by Sterud 1977.) Curtin's Ph.D. research concerns Lamoka phase lithic technology and adaptive strategies, based partly on the I-88 surveys (Curtin 1996). Dolores Elliott conducted salvage excavations at the multicomponent Engelbert Site near Binghamton (Elliott and Lipe 1970) and at the eighteenth century refugee village of Otsiningo, and published a synthesis of data on the several other ethnically mixed Indian villages of that period (Elliott 1977). Susan Prezzano's graduate research focused on Owasco ceramics, agricultural development and settlement patterns (Prezzano 1988, 1996; Prezzano and Steponaitis 1990). For her dissertation research, Nina Versaggi, presently director of the Public Archaeology Facility at the university, proposed alternate models of Archaic subsistence-settlement systems in the Upper Susquehanna drainage, relying chiefly on the data acquired during the I-88 surveys (Versaggi 1987, 1996).

Since the early 1960s Peter Pratt of SUNY Oswego (now retired from that institution but still professionally active) and Marjorie Pratt have conducted research on the Oneida and St. Lawrence Iroquois (P. Pratt 1960, 1961a, 1961b, 1963, 1966, 1976, 1977, 1980, 1991; Burger and Pratt 1973; M. K. Pratt 1991). Volume 1 of Peter's major monograph on the *Archaeology of the Oneida Iroquois* was published in 1976 and Volume 2 is eagerly awaited by Iroquois scholars.

William A. Starna, of the State University College at Oneonta, directed excavations at Archaic, Middle Woodland and Iroquois sites in the Mohawk and Susquehanna Valleys (Starna 1976, 1977a, 1977b, 1978,

1979a, 1979b, 1980, 1992; Starna and Guldenzopf 1985; Starna and Gutierrez 1980; Snow and Starna 1989; Starna and Relethford 1985; Starna et al. 1984), but since the late 1970s has concentrated on early Dutch-Indian trade, Iroquoian ethnohistory and land claims (Starna 1986, 1991, 1994; Gehring and Starna 1988; Vecsey and Starna 1988; Doblin and Starna 1994) as well as issues of theory and method (Starna 1979b, 1981; Starna and Funk 1994; Starna and Katie 1983). His predecessor at Oneonta from 1972-1975, Bruce E. Rippeteau, was a major collaborator in the Susquehanna project (Rippeteau 1977, 1978; Funk, Rippeteau and Houck 1973, 1974; Funk and Rippeteau 1977; Funk 1993).

Ellis McDowell-Loudan of SUNY Cortland has excavated several Archaic, Woodland, and Historic sites in central New York (McDowell 1975; McDowell-Loudan 1979, 1984, 1993). At the time of his tragically early death in 1993 Leonard Eisenberg of SUNY New Paltz had excavated a number of sites in the middle Hudson Valley including the Old Fort (Eisenberg 1974), the multicomponent Datum Site (Eisenberg 1984), the Late Woodland Hendrickson Site (Eisenberg 1989), the Twin Fields Paleo-Indian Site which was the basis for his synthesis of Paleo-Indian cultural ecology and settlement in eastern New York (Eisenberg 1978), and the Mohonk Rockshelter with its major Middle Archaic component (Eisenberg 1991). His successor at SUNY New Paltz and former student, Joseph Diamond, is conducting his Ph.D. research on the relatively little-known Late Woodland and early Contact period ceramics and settlement patterns in the middle valley (Diamond 1995a, 1995b, 1996). At SUNY Brockport, Kenneth Tankersley continued his investigations into Paleo-Indian lithic technology that he began in the mid-western United States (Tankersley 1995). Unfortunately for New York Paleo-Indian research, he left SUNY in 1996 for a position at Kent State University in Ohio. John Ferguson, of the SUNY College at Cobleskill, has excavated Late Woodland and Contact period sites in the middle Schoharie Valley and most recently published a report on his investigations at a Subsurface Early Archaic component on the Cobleskill Creek floodplain (Ferguson 1995).

The largest single field research project of the 1980s, directed by Dean R. Snow of the SUNY Albany Department of Anthropology, was originally conceived as an inquiry into the origins of horticulture and village life among the Mohawk and their Late Woodland predecessors, but instead the emphasis shifted to the late prehistoric-early historic period Mohawk. Snow and his graduate students have produced a series of publications based on the project results (Snow 1984, 1989, 1991, 1994a, 1994b, 1995b, 1995c; Snow, ed. 1985; Kuhn and Snow 1986; Bamann et al. 1992). Snow's interests also included a survey and excavation project in the

Lake George and Upper Hudson basins (Snow 1977), Algonquian ethnology and linguistic distributions (Snow 1978), theoretical issues (Snow 1984, 1995a) and demography (Snow 1992; Snow and Lamphear 1988; Snow and Starna 1989). His *Archaeology of New England* (1980) was relevant to New York prehistory in several respects, including the treatment of the Hudson Valley as an extension of western New England. The New York archaeological community lost another active researcher and writer when Snow left SUNY in 1995 to accept the position of Head of the Anthropology Department at Pennsylvania State University.

One of Snow's former students, Robert Kuhn, is collaborating with the present writer on a monograph summarizing artifact and settlement pattern analyses of the Smith-Pagerie and Klock Sites, Mohawk villages excavated by the writer in 1968-1970 but never fully reported; preliminary statements have appeared (Kuhn et al. 1993; Kuhn and Funk 1994). Kuhn has published on other topics relating to the Mohawk (Kuhn 1986, 1994a, 1994b, 1996; Kuhn and Snow 1986; Kuhn and Bamann 1987). Despite the demands of his graduate studies and his present duties at the Office of Parks, Recreation, and Historic Preservation, Kuhn has also found the time to carry out trace element analyses of cherts and ceramics (Kuhn 1987, 1989; Kuhn and Lanford 1985). He also conducted a morphological analysis of Early Archaic bifurcated-base projectile points (Kuhn 1985).

Hetty Jo Brumbach, also on the faculty of SUNY Albany, has studied Middle and Late Woodland occupations in the Mohawk, Schoharie and Hudson Valleys (Brumbach 1975, 1979, 1985, 1995, Brumbach and Bender 1986), synthesized a large body of information on native fishing practices in the Hudson drainage (Brumbach 1978, 1986), and investigated Flint Mine Hill and other quarry-workshop sites in the valley (Brumbach 1987).

Faculty and graduate students at several private colleges and universities also continue to carry out research on New York Indians. For example, the anthropology departments at New York University and Columbia University have been active in coastal prehistory for decades. As previously noted, during and since his years at Columbia, Ralph Solecki (1947, 1950, 1985, 1994) has been involved with archaeology of the coastal area and New York City, including his research on historic forts. Bert Salwen, of New York University, was a major force in historic preservation in the Northeast. His investigations in coastal archaeology were wide-ranging in scope; he was perhaps the first northeastern archaeologist to recognize the potential effects of rising postglacial sea level on Indian settlement patterns (Salwen 1962, 1965, 1968, 1970, 1975). He was also an authority on the archaeology and ethnology of the coastal Algonquians (Salwen 1969, 1978). He directed excavations at historic Fort Shantok in Connecticut and at Fort Ninigret in Rhode Island; the data

from Fort Shantok were analyzed by one of his many students, Lorraine Williams (1972). Another student, Annette Silver (1980, 1991) has also conducted research in coastal prehistory and synthesized data on the Middle Woodland occupations of the coast and the Delaware Valley. Edward Rutsch (1970) studied Iroquoian pipe styles and analyzed the lithology of projectile points from coastal sites before going on to a career in historic archaeology. Nan Rothschild and Lucianne Lavin were also in the NYU program; the former has specialized in historic archaeology, while the latter has worked extensively in Connecticut prehistory. Some publications relevant to New York State prehistory are Rothschild and Lavin (1977); Rothschild (1983); Lavin (1980c, 1983a); Lavin and Morse (1985). The recent loss of Bert Salwen (1992) was a great setback for his many friends as well as to coastal research and to northeastern anthropology generally.

Large-scale excavations were conducted on Onondaga Iroquois village sites near Syracuse by James A. Tuck, who published an important synthesis on *Onondaga Iroquois Prehistory* based on his doctoral dissertation at Syracuse University, which had broad implications for the *in situ* theory of Iroquoian origins (Tuck 1971a, 1971b, 1978). Tuck has also contributed to our understanding of the still enigmatic Early Archaic period (Tuck 1974) and the Late Archaic Laurentian tradition (Tuck 1977). Since joining the faculty of the Memorial University of Newfoundland, Tuck has excavated and reported on numerous sites in Newfoundland and Labrador and described the Maritime Archaic, a major, wide-spread cultural tradition with links to cultural developments in northern New England and New York (Tuck 1975, 1976; McGhee and Tuck 1975). James Bradley's dissertation, also at Syracuse, was an excellent study of contact period Onondaga culture history, trade relations, and demography, and was published as *Evolution of the Onondaga Iroquois* (Bradley 1987). Susan Bender of Skidmore College has conducted excavations at several Late Woodland sites in the Hudson Valley, including a collaboration with Hetty Jo Brumbach at Winney's Rift on Fish Creek (Brumbach and Bender 1986).

The archaeological terra incognita of the lowermost Schoharie Valley was surveyed by Christopher Lindner for his doctoral dissertation at SUNY Albany; this project utilized archaeological data to support his model of land-use patterns as a factor in flooding and alluvial deposition in a stream valley (Lindner 1987, 1991). He has also conducted functional studies of Middle and Late Woodland stone artifacts (Lindner 1983; Lindner and Folb 1996). As a faculty member of Bard College, Annandale-on-Hudson, he is conducting survey and excavation projects in the Mid-Hudson Valley and Catskill Mountains, where he and the writer are also collaborating in a

search for deep, stratified rockshelter sites. He has devoted several seasons to the excavation of the stratified Grouse Bluff Site (Middle Archaic to Middle Woodland) on the Bard campus (Lindner 1992). A major focus of his research is the natural and cultural ecology of the Tivoli Bays region of the Mid-Hudson basin.

There is insufficient room in this paper to discuss the many contributions to New York archaeology by private CRM companies; a short and incomplete list of these firms includes such organizations as Hartgen Archaeological Associates, Joel Grossman Associates, Pratt and Pratt Archaeological Consultants, Louis Berger, Inc., Milner Associates, Garrow Associates, and Greenhouse Consultants. The same limitation prevents in-depth discussion of CRM programs at the Rochester Museum & Science Center, the New York State Museum, the SUNY and CUNY systems, private colleges and universities.

Archaeologists residing and usually employed outside New York State frequently make contributions to its archaeology, either through ongoing research projects or CRM contractual obligations. The work of Richard S. MacNeish (1952a, 1952b, 1980; Ritchie and MacNeish 1949) has already been mentioned (see also footnote 10). Others include Donald Cadzow, who worked briefly at the Frontenac Island Site in central New York (Cadzow 1925); John Witthoft, in particular his conceptualization of the Terminal Archaic Susquehanna tradition (Witthoft 1953) and his ground-breaking analysis of a major Paleo-Indian encampment, the Shoop Site in Pennsylvania (Witthoft 1952); Bob Whallon (University of Michigan, Ann Arbor) (1968, 1980), who used ceramic attribute analysis as a means of discerning changes in social organization within the Owasco-Iroquois continuum; Cheryl Claassen (Appalachian State University, Bootie, North Carolina), who from 1987-1993 undertook new excavations at the ancient Dogan Point oyster shell midden on the lower Hudson River, originally dug by Louis A. Brennan (Brennan 1972, 1974, 1977; Claassen 1991, 1994, 1995, 1996); Earnest Wiegand (Norwalk Community College, Norwalk, Connecticut), who has excavated Late Archaic, Early Woodland and Late Woodland Sites in Putnam and Westchester counties (Wiegand 1978, 1987); Lucianne Lavin (Archaeological Research Specialists, Meriden, Connecticut), whose doctoral research concerned chert sources and quarries and their utilization by prehistoric peoples in the Hudson and Delaware Valleys (Lavin 1983a, 1983b; Lavin and Prothero 1981) and who has published extensively on coastal prehistory including late ceramic industries which have strong relevance to coastal New York traditions (Lavin 1980a, 1980b, 1980c, 1984, 1986, 1988a, 1988b, 1991; Lavin, Gudrian and Miroff 1993, 1994; Lavin and Kra 1994; Lavin and Morse 1985; Lavin and Salwen 1983; Lavin et al. 1996; Rothschild and Lavin

1977); John E. Pfeiffer, of Wesleyan University and Old Lyme, Connecticut, whose work with the writer on Fishers Island, New York was mentioned earlier, and who has excavated a number of sites crucial to the developing picture of Connecticut and coastal New York prehistory (Pfeiffer 1980, 1983, 1984, 1986, 1990, 1992); Bob Hasenstab (1996), who has carried out detailed analysis of environmental variables relating to Late Woodland settlement; Phil La Porta, geoarchaeologist (Hunter College, New York faculty member residing in New Jersey), who has established a detailed predictive model for chert sources and chert extraction technology in the lithostratigraphic sequence of the Wallkill Valley in New Jersey and New York (La Porta 1989, 1994, 1996); Herbert C. Kraft (Seton Hall University, South Orange, New Jersey), whose research has primarily involved the Delaware Valley and adjacent parts of New Jersey but is relevant to the prehistory of southern New York State (Kraft 1970, 1973, 1975a, 1975b, 1976, 1977, 1978, 1989, 1991a, 1991b); Edward Lenik (Sheffield Archaeological Consultants, Butler, New Jersey) who has written about aboriginal petroglyphs (Lenik 1976a, 1976b, 1980, 1988, 1991; Lenik et al. 1993a, 1993b) as well as cultural resources of southeastern New York (Lenik 1975, 1987, 1989, 1992; Lenik and Fitzpatrick 1995); James B. Richardson and James Swauger (1996), whose research on petroglyphs suggests a long period of Iroquoian residence in the Northeast; Bruce G. Trigger (1970, 1978, 1981, 1985, 1991), whose numerous contributions to Iroquoian ethnology, ethnohistory, and archaeology cannot be adequately detailed in these pages; James F. Pendergast (1992, 1996) who has taught us so much about the St. Lawrence Iroquoians; James V. Wright (1966, 1978, 1984, 1990), whose research in Ontario and Quebec has touched on many areas relevant to New York archaeology, including the Archaic, Middle Woodland, and Iroquoian developmental patterns; and David Starbuck, who has devoted most of his career to historic archaeology but has also excavated prehistoric components in New York and New England- and published reports relevant to the New York Archaic (Starbuck and Bolian 1980; Starbuck 1982).

A great deal of other work in New England, New Jersey, Pennsylvania, other states, and Canada obviously has relevance to New York prehistory, but it is impossible for me to present an adequate sample of the enormous amounts of archaeological data thus acquired. One must be content to provide a few examples of the publications of New England archaeologists, apart from those mentioned above, who have not to my knowledge actually conducted archaeological investigations within New York's borders, but whose published research is very useful to those of us who toil within the state. Individually or in collaboration they are listed in the following citations: Willoughby (1935); Robbins (1960, 1968,

1980); Swigart (1974); McBride (1984); McBride and Dewar (1981); Sanger (1975, 1988); Sanger et al. (1977, 1992); Thomas and Robinson (1980); Thomas (1980, 1992); Robinson (1992, 1996); Bourque (1975, 1976, 1995); Cox (1972, 1991); Spiess (1983, 1992); Spiess et al. (1985); Spiess and Wilson (1987, 1989); Petersen (1991, 1995); Petersen and Power (1982); Petersen and Putnam (1992); Haviland and Power (1981); Grimes et al. (1984); Curran (1984); Bunker (1992); Bolian (1980); Moeller (1980, 1982, 1984, 1992); Nicholas (1987, 1991); Dincauze (1968, 1972, 1975, 1976); Dincauze and Mulholland (1977); Feder (1984); and a host of others not mentioned here for lack of space. An outstanding discussion of the history, nature, and results of cooperation and communication between Canadian and New York archaeologists is to be found in a recent paper by James F. Pendergast (1992).

Through the **Explanatory Period**, the Society for American Archaeology and state societies, the latter with their predominant amateur membership, have continued their contributions to the pursuit of archaeology. Other regional organizations have appeared, such as the Northeastern Anthropological Association and the Conference on New England Archaeology, which provide new opportunities for communication between scholars and for the wider dissemination of information.

Amateur Contributions: An All Too Brief Summary

I have previously mentioned the role of amateurs in state societies, and the present-day strains in amateur-professional relations. It would be impossible to enumerate all the contributions amateurs have made to New York archaeology through the years. Therefore, I must confine my remarks to a handful of amateurs whose work is known to me, most of whom have published journal articles or monographs. Charles F. Wray has already been mentioned. Louis A. Brennan will always be remembered as the individual who forced the archaeological world to take a close look at the "real potential of the lower Hudson Valley oyster shell middens. With his volunteers from all walks of life he excavated numerous sites, both shell and non-shell, and wrote reports on most of them. He offered a projectile point typology and many hypotheses and interpretations which either fascinated or annoyed professionals. Perhaps the most important of his sites were the stratified shell middens at Croton Point, Parham Ridge, Twombly Landing, Piping Rock, and Dogan Point (Brennan 1962, 1963, 1972, 1974, 1976, 1977). The other individuals include Donald Lenig (1965, 1977), whose research on the Mohawk Iroquois chronology, ceramics, and Iroquois-Dutch relations provided the springboard for later work in Mohawk Country: Don Rumrill (1985), who

also specialized in Mohawk studies; Ted Whitney (1965, 1967, 1971, 1972, 1974, 1975, 1977), who conducted extensive surveys and excavations in the Susquehanna drainage, chiefly in the Chenango Valley; Edward Kaeser (1963, 1968) and Julius Lopez (1957, 1958a, 1958b; Lopez and Latham 1960; Lopez and Wisniewski 1972), who carried out numerous excavations in the New York Metropolitan area; Roy Latham (1953; Lopez and Latham 1960), whose investigations were crucial to the definition of the Orient phase of Long Island; Max Schrabisch (1909, n.d.), who tested or excavated numerous sites, chiefly rockshelters, in Pennsylvania and in southwestern New York; James Burgraf, who competently excavated a number of sites in the middle and lower Hudson Valley, but never published site reports (his collections and data are integral to Joseph Diamond's doctoral research); Bill Ehlers, George Walters, Elizabeth Dumont and Lewis Dumont, who organized and directed surveys and excavations of the Orange County Chapter at several sites, including the very important Dutchess Quarry Cave No. 1, which contained evidence of Paleo-Indian occupation in possible association with caribou bones (Funk, Walters, and Ehlers 1969; Funk et al. 1969), the Sugar Loaf Mastodont (Dumont and Ehlers 1973), and the stratified Early Archaic Rocklein Site, New Jersey (Dumont and Dumont 1979); Stanley Vanderlaan (1962, 1965, 1975, 1980), who excavated several important Late Woodland sites in western New York, including the Oakfield village, and also discovered the Paleo-Indian component at the Arc Site; R. Arthur Johnson (Funk and Johnson 1962, 1964a, 1964b; Funk 1976), a key figure in the discovery and excavation of many prehistoric and historic sites in the Hudson Valley; Paul and Tom Weinman (P. Weinman 1965; P. Weinman and T. Weinman 1965, 1967, 1968, 1969a, 1969b, 1969c, 1970, 1977; Weinman, Weinman and Funk 1967; Funk, Weinman and Weinman 1965), who also found and excavated many sites, predominately Paleo-Indian and Late to Terminal Archaic, that proved important to the developing picture of Hudson Valley prehistory; Roger Ashton (1970, 1994), who has actively investigated Paleo-Indian and Archaic sites in Washington county; Jim Walsh (1977, 1995; Funk and Walsh 1988), who has surveyed, excavated, published and designed exhibits about some very informative early sites in the Saratoga Lake area; and Gordon De Angelo (1992, 1996), who has been so energetic in support of New York archaeology in so many ways, in so many places at so many times, especially in the assistance freely given to professionals, that he needs no further introduction here. The list could go on: Herb Rice, Bob Gorall (1996), Al LaFrance, Ray Decker, John McCashion, Dick McCarthy, Ken Mynter, Doc Hosbach, Stan Gibson, John Witek, Hans Schaper, Roberta and Dick Wingerson, Mike Laccetti, Jack and Donna Varao,

and many, many others. Given space limitations, I will not attempt to summarize the contributions of the 14 chapters of the New York State Archaeological Association, as contrasted with individual members.

Where We Stand

As this is written (1996), we are 36 years into Willey and Sabloff's **Explanatory Period**. We may be either in the middle of this period, or very close to the transition to another period filled with unguessable breakthroughs. Perhaps it will be called the **Explanatory II Period** by future historians of archaeology. Or, perhaps, as the primary resource base, the site, dwindles in quantity and researchers are forced to turn to old collections and previously recorded excavation data, the new era will be called the "Preservation and Reanalysis Period." Logically, then, this period would have actually begun in the mid-1970s. (Future historians of archaeology may have rather different ideas about the last few decades of the Twentieth Century!) Threats of massive reductions in federal, state, and local funding and a growing tide of anti-regulatory sentiment may, however, imperil even the gains made in Cultural Resource programs of the last 25 years.

It is of considerable interest to trace the evolution of our profession's understanding of northeastern prehistory by reading the published views of "outside observers." Such surveys were rare in the first half of the twentieth century (Parker's 1922 overview was cited by other writers as the definitive statement on New York prehistory, just as Willoughby's 1935 survey was considered to be definitive for New England antiquities), but began to appear more and more frequently after World War II and were primarily written for college and university students. Other examples include journal reviews by "out-of-staters" of monographs published by New York archaeologists. Pertinent reviews and surveys are, in chronological order, as follows: Griffin (1943); Johnson (1944, 1946); Griffin (1945, 1946); Martin, Quimby and Collier (1949); Griffin (1952); MacNeish (1952b)¹⁰; Willey and Phillips (1958); Griffin (1964); Willey (1966); Griffin (1967); Jennings (1968); Griffin (1978). These commentaries generally consider the New York cultural data in relation to larger frameworks that encompass all or part of the North American continent. Not surprisingly, J. B. Griffin, the most frequently represented author, has devoted his career to studying the prehistory of the Midwest and Great Lakes regions, as had

Quimby, while others such as Willey, Phillips, MacNeish and Jennings worked at sites in many areas of the New World and could properly claim an "Olympian" breadth of vision. A summary and evaluation of the "out of state" reviews could be material for a larger monograph and will not be pursued here.

Since 1960 the rate of growth in data accumulation and publication has been tremendous. We have achieved a rather refined knowledge of the trait content, geographic distribution, and chronology of prehistoric cultural complexes in many regions of New York and the broader Northeast. We have also learned to ask new questions which have required important theoretical and methodological changes. For example, some progress has been made toward the delineation of subsistence-settlement systems, within which individual sites occupy ecologically determined locations and are functionally interlocked with other sites; for example, an Archaic settlement system may consist of chert quarries, stone-flaking workshops, hunting camps, nut-harvesting camps, large base camps, and burial loci, all integrated into a patterned sequence of band movements by seasonally determined changes in the availability of food and other resources.

What is striking in any overview of archaeological research in New York is the overwhelming interest in "things Iroquoian" - the origin, development, adaptive patterns, social organization, ideological and symbolic subsystems, material culture, and post-contact changes in the culture of, the Five Nations and their Iroquoian-speaking neighbors. This understandable fascination is, at some time or another, manifested in the careers of the vast majority of archaeologists in New York, Ontario, and Quebec. It is also the one subject area concerning which prehistorians, ethnologists, ethnohistorians, linguists, physical anthropologists, and to a growing extent the modern Iroquois themselves are most likely to engage in regular, intensive communication, debate, and collaboration. This is not to deny, however, the sustained interest in the history of the Mahican, Esopus, and other Algonquian-speaking tribes of New York State and eastern Canada.

Some questions about particular time periods and complexes have been answered, while others remain problematical. Unlike the historic Iroquois, the earliest human occupations of North America are obscured by much intervening time. Thus we remain uncertain when prehistoric humans first arrived in the Americas, or when they first entered New York. But we have learned a great deal about the earliest *known* New Yorkers, the fluted point-using Paleo-Indians of c.10,000 - 11,000 B.P. (Ritchie 1969a; Ritchie and Funk 1973; Ellis and Deller 1990; Funk 1983; Gramly and Funk 1990). Nevertheless, although this chronology is now familiar to us, it is worth noting that as recently as 1957, it was still possible to postulate Paleo-Indian arrival in the Northeast as late as 5500 to 7000 years ago, on the basis of the available

10 Although MacNeish lived outside New York for his entire career, and worked extensively throughout the New World, he did spend considerable time working on prehistoric New York research problems, principally ceramic typology and the definition of Iroquoian tribal groupings according to their distinctive ceramic assemblages (Ritchie and MacNeish 1949; MacNeish 1952a, 1980).

geochronological data (Ritchie 1957). It took even longer to find convincing evidence of their immediate successors, the Early and Middle Archaic Indians (10,000-8000 B.P.), who may have descended from the Paleo-Indians and were forced to adapt to the changed environment that followed the retreat of the Wisconsin ice sheet. A relatively small, but growing number of sites of these elusive hunting and gathering peoples have been and are being discovered and excavated in New York and adjoining areas (Sterud, 1977; Starbuck and Bolian 1980; Funk 1983, 1993; Petersen 1995; Petersen and Putnam 1992; Robinson 1992, 1996; Thomas 1992; Ellis et al. 1990). In the mid 1960s there were only one or two reliable radiocarbon dates for the northeastern Archaic older than 5000 B.P. (Brennan 1962; Ritchie 1965), and there was some speculation that unfavorable early postglacial biotic and climatic conditions prevented hunters and gatherers from residing in New York until the time of the Lamoka phase, around 4500 B.P. (Ritchie 1971a, 1965). But archaeologists' persistence paid off as new sites were located and excavated, and radiocarbon dates continued to accumulate. By 1981 the Early Archaic in upstate New York had been extended back to 9000 B.P. (Funk 1977, 1979; Funk and Wellman 1984; Funk 1993). Therefore, although Iroquoian studies still hold first place in the hearts and minds of archaeologists, the second major theme of the Explanatory Period is the discovery and dating of the oldest human occupations in our area.

Much more is known about the Late Archaic Indians (6000-3500 B.P.), who flourished in a natural setting much like that seen by Europeans in the sixteenth century. This environment was rich in animal and plant resources exploitable by stone age technology; the number, size, and richness of the sites of some cultures attest to the success of Late Archaic hunter-gatherers in taking advantage of this bounty. During the Late Archaic period, there was rapidly increasing diversity in aspects of material culture as people improved their adaptations to local environments. There is reason to believe that populations had increased substantially over those of preceding Middle Archaic groups. Interaction between groups intensified in the form of trade, borrowing, and probably intermarriage.

Some Late Archaic sites, such as Lamoka Lake, are so large as to suggest a tendency toward a more settled way of life. Evidence from the Southeast suggests that squashes and other plants were being cultivated by around 4000 B.P., thus contributing to a more secure food supply. Evidence for Archaic cultigens is so far completely lacking in the Northeast (Funk 1983, 1993; Ellis et al. 1990). Space permits me to offer only a rather generalized three- or four period characterization of the Late Archaic in New York, which I believe still fits the facts since first published circa 1965. The oldest complex of around 6500 to 5000 B.P., I call "Proto-Laurentian" or "South Hill phase", but it is still sketchily known. From this complex

may have evolved the subsequent and better-known Laurentian expressions defined by Ritchie (1965). With further information, we may be able to subsume the South Hill phase under Laurentian (Funk 1988). By about 4500 years ago, the Laurentian groups were replaced by manifestations of the "Narrow Point" tradition, as represented in such complexes as Sylvan Lake, Lamoka, and River, and related complexes in adjoining areas (cf. Funk 1983, 1988, 1993). These occupations represent a very successful set of adaptations to regional environments, and in turn gave way to another widespread tradition, the Susquehanna or "Broad Point," which most archaeologists assign to the Terminal Archaic Period.

The Terminal Archaic or Transitional Period (I prefer the term "stage") of c. 3500-3000 B.P. is defined, first, by the use of soapstone cooking pots, then by the adoption of the first true pottery; it also manifests a higher level of exchange, in the form of the frequent use by local groups of lithic materials from exotic sources (Funk 1983; Pfeiffer 1990; Bourque 1995). This is also the time of an apparent florescence of burial ceremonialism, a phenomenon that has always fascinated archaeologists and is most readily observed as the placement of frequently elaborate artifacts, other furnishings, and red ocher in graves with the deceased. Such ceremonialism seems to have already appeared in well-developed form in Paleo-Indian times and was represented on the Anzick Site in Montana (Lahren and Bonnicksen 1974; Gramly personal communications 1992) and the Renier Site in Wisconsin (Mason and Irwin 1960), and has been suggested for the Lamb Site in western New York (Gramly 1988b) and the Crowfield Site in Ontario (Deller and Ellis 1984). Similar practices have been reported for certain Archaic complexes, but they seem to have reached a peak of elaboration in the Transitional, Early and Middle Woodland periods. Burial mounds were built by some Indians who lived in western New York in the first centuries A.D. and reflect connections with the Hopewell cultural tradition of the Ohio Valley. The Early and Middle Woodland periods (3000-1000 B.P.) are also characterized by the first regular use and increasing sophistication and elaboration of pottery, and a growing complexity in other aspects of material culture (Ritchie 1965, 1969a; Ritchie and Funk 1973; Funk 1983, 1993; Spence et al. 1990; Wright 1990).

Pottery not only represents a new food storage and cooking technology but along with other traits indicates a trend to sedentism. Sedentism is also reflected in the growing size of habitation sites in the late Middle Woodland period, c. A.D. 800-1000. These trends to larger site size, a more stable way of life, and presumably a larger overall population may have been induced by the spreading practice of maize cultivation (Fox 1990; Wright 1990; Ritchie and Funk 1973; Funk 1983). However, there is presently only meager evidence for corn in

New York prior to A.D. 1000: this evidence comes from a Middle and Late Woodland site excavated by Garrow Associates on the Iroquois Pipeline in the Hudson Valley (Daniel Cassidy, personal communication 1996). We know that by A.D. 1000 maize was present with beans and squashes on village sites of the Owasco tradition, representing the first major Late Woodland occupation of New York State; in western New York this stage of culture shows closer affiliations with the Early Ontario Iroquois tradition than with Owasco (Wright 1966; Tuck 1978; Niemczycki 1984). Endemic warfare, rapid population increase, and the near-absence of burial ritualism characterize this period. By A.D. 1400 the material culture and settlement patterns of Late Woodland occupations in New York and Ontario had evolved into forms that are recognizably Iroquoian.

The Iroquois bring to mind the historic five tribes of New York-the Seneca, Cayuga, Onondaga, Oneida, and Mohawk, and their brethren in Canada including the Huron and Petun. The Five Nations in New York (Six Nations after the Tuscarora were accepted into the League about 1722) are well known for their League of Peace; the Iroquois played major roles in the fur trade and in the conflicts between colonial powers. Since the League was apparently formed in the very early Historic period, archaeologists such as Bill Engelbrecht have been trying to discern the timing and underlying conditions of the League's organization, from the archaeological and ethnohistorical data (Engelbrecht 1972, 1974a, 1974b). Estimates usually agree at around A.D. 1500-1600.

After contact, with the rapid infusion of European trade goods, there was a short-lived revival of mortuary ceremonialism, as manifested in the abundance of grave goods of European manufacture: glass beads, brass and copper kettles, iron tools, and so forth.

What is usually referred to as culture-historical research helps us answer such questions as "what," "when," and "where" in dealing with prehistoric archaeological complexes. We are usually less confident about "who" (i.e., the ethnic identities of peoples far removed in time from historic tribes); and "how," which concerns the mechanisms by which culture change took place. The utility of the direct historical approach is generally confined to the late prehistoric predecessors of historic Iroquoians, Mahican, or other tribes. It is especially difficult to project ethnic and linguistic affiliations into the distant past, as some writers have tried to do with the Iroquoians-e.g., placing their entry into the Northeast c. 4500 years ago, 3800 years ago, 1000 years ago, and so on. Such efforts have so far proved unconvincing (Tuck 1977; Wright 1984; Snow 1980, 1984), as has the recent effort by Snow (1995a) to throw doubt on the validity of the *in-situ* hypothesis of Iroquoian origins. In their discussion of the theoretical and practical ramifications of the hypothesis, Starna and Funk (1994) pointed out that there was no necessary correlation

between linguistic, ethnic, and material aspects of culture. In other words, shifts through time in non-material culture may not be evident, for example, in continuously changing ceramic sequences. The Point Peninsula-Owasco developmental continuum is very strongly supported by the evidence and cannot be discounted simply by referring to ceramic assemblages of the terminal Point Peninsula Hunter's Home phase as a "fiction," based on mixed Point Peninsula and Owasco occupations, thereby creating an artificial break in the occupancy of central New York State!

The question of "how" change occurred obviously leads to much debate and is inextricably interwoven with "What happened to the culture under study?" Did a given cultural manifestation disappear because its people stayed in place but adopted new artifact styles and other traits from other groups, or did they go through purely internal change? Did they migrate out of the area where they originally resided, leaving a gap in the archaeological evidence? Or were they conquered by an immigrant group from elsewhere that rapidly submerged or obliterated their original customs and styles (Wright 1966, 1984, 1990)? There are some instances of prehistoric change in New York that, given the limitations of the data, seem most logically explained by migration or even conquest. In other cases, *in situ* transformation, either of traits invented locally or borrowed, perhaps diffused, from elsewhere, seems to be the most compelling scenario. Currently, one aspect of the migration-diffusion debate centers around the seemingly abrupt appearance of the Susquehanna tradition in the Northeast (Pfeiffer 1984, 1990; Funk 1993; Bourque 1995).

Demographic problems are prominent in the minds of many archaeologists, both as something to be explained and as something that may help to explain change. Population increases are generally assumed to result from either increases in naturally available food resources, or from technological innovations such as the domestication of plants or improved methods of food storage. Prior to the obvious indications of growth in Late Archaic and, much later, in Late Woodland times, changes in population size and distribution are notoriously hard to demonstrate from archaeological data. A case in point is the Early Archaic period, represented in the Northeast by sites which are usually small and very thinly distributed. The explanation favored by many workers (including the writer, with some qualification) is that the postglacial recovery of plant and animal species crucial to the food supply of hunters and gatherers was not complete until about 7000 years ago, implying that the biological carrying capacity of the Northeast was relatively limited before that time and therefore tended to limit population growth. But other researchers dispute the carrying capacity argument for the seeming lack of sites, based on recent work by paleoecolo-

gist', that suggests a relatively favorable environmental situation after about 9000 B.P. and on the occasional appearance of Early Archaic diagnostic artifacts in site and collection surveys in New York, New England and adjoining areas (Dincauze and Mullholland 1977; Wright 1978; Nicholas 1987; Ellis et al. 1990; Petersen 1995). The fact remains, however, that by any measure the physical evidence of Early Archaic occupation is meager when compared with the far more abundant Late Archaic (Funk 1977a, 1977b, 1978, 1979, 1983, 1991, 1993; Funk and Wellman 1984). One possibility is that, although Early Archaic occupations in the Southeast are chiefly recognized by the presence of diagnostic chipped stone projectile points, contemporaneous groups in some parts of the Northeast may have relied principally on points of perishable organic materials such as bone, antler, and wood that failed to survive the destructive effects of natural agencies (Funk and Wellman 1984; Funk 1993; Petersen 1995; Petersen and Putnam 1992).

Students of Iroquoian culture history have also devoted much thought to the effects of European intrusion, including disease, imported from the Old World, on New York Indian populations. Among the recent studies of Mohawk population, are those of Snow (1992), Snow and Lamphear (1988), Snow and Starna (1989), and Starna (1980). Other discussions that touch on the Northeast comprise Dobyns (1983), Engelbrecht (1987) and Ubelaker (1988).

Finally, this problem leads to the more general one of what causes culture change. The writer is something of an environmental determinist, favoring explanations based on the ecological effects of climatic, geomorphological, hydrological, biological, and other change, but I recognize that both internal change within a cultural tradition and external change imposed by contacts with surrounding cultures are also important causal factors. This theoretical orientation can be described as "techno-environmental determinism" (White 1949, 1959; Steward 1955; Harris 1968, 1980; Price 1982) and is shared by a rather large percentage of archaeologists known to the writer. These are merely some examples of the research issues that occupy the minds of contemporary New York archaeologists in the late 1990s.

Future Directions

Interdisciplinary approaches will doubtless continue to characterize archaeology well into the future, because so much is to be gained by input from specialists in other fields such as microbiology, genetics, physical anthropology, geomorphology, vertebrate paleontology, physics, statistics, history, and so on. The potential of relatively new methods such as DNA analysis and other chemical analyses of human (and non-human) skeletal remains is only beginning to be realized.

Experimental studies, for example, stone tool replication (Crabtree 1972; Callahan 1979), have proved useful in illuminating prehistoric manufacturing processes, as well as microwear studies of stone tools (Keeley 1980). Lithic source studies, especially the location and identification of cherts used by prehistoric peoples, have long been of interest to archaeologists. The technology available for such studies has become increasingly sophisticated (Wray 1948; Hammer 1976; Lavin 1983a, 1983b; Lavin and Prothero 1981; Kuhn and Lanford 1985; La Porta 1989, 1994, 1996).

More controversial are recent claims that blood residues can be preserved on ancient stone tools, presumably from killing and butchering game, working hides, etc., and that forensic methods can succeed in identifying the animal species involved. It will probably be some time before the validity of this approach is confirmed or perhaps refuted (because of recent unfavorable findings, I confess to being something of a skeptic at this time).

The radiocarbon dating method continues to evolve toward greater precision, and from an archaeologist's perspective, toward greater and more intimidating complexity (Taylor 1987). We now also have the benefit of other tried-and-true technical aids. With the realization that knowledge of past environments is essential to in-depth understanding of prehistoric adaptations, archaeologists now routinely employ the expertise of palynologists, pedologists, glacial and fluvial geomorphologists, and vertebrate paleontologists, in many cases as integral parts of research teams. Archaeologists themselves occasionally acquire expertise in those other fields (Evans 1978; Goodyear 1971; Tite 1972; Dimbleby 1978; Chaplin 1971; Gilbert 1973; Klein and Cruz-Urbe 1984; Hastorf and Popper 1988; Moeller 1982; McWeeney 1989; Schuldenrein 1995). From my own experience, interdisciplinary projects have benefited from the participation and input of natural scientists such as Les Sirkin (1965, 1977, 1986), Walt Newman (1967, 1974, 1977; Newman and Fairbridge 1992; Newman et al. 1969), Bob Dineen (1993, 1996), Jim Kirkland (1993; Kirkland and Funk 1979), David W. Steadman (Steadman 1988a, 1988b, Steadman et al. 1993; Steadman and Funk 1987; Funk and Steadman 1994), and Don Lewis (Lewis and Funk 1993). We can expect to see such collaborations increase or intensify into the twenty-first century, with the caveat that much depends on available funding, as well as advances in the specialists' own disciplines.

As Paul Huey points out in the companion article, this issue, research on underwater sites poses one of the major challenges of future research. This applies to precontact native sites as well as historic sites including shipwrecks. It may seem farfetched to imagine discoveries of northeastern Indian watercraft lying offshore in the sediments of the Atlantic Seaboard's continental shelf. Nevertheless, the possi-

bility cannot be discounted out of hand. Early European voyagers of the sixteenth century reported seeing large dugout canoes carrying up to 40 men off the Atlantic coast. Presumably, more ancient precontact peoples were capable of making similar canoes. A few scholars have speculated concerning the possibility that as far back as Archaic and even Paleo-Indian times aboriginal groups were able to build watercraft in order to traverse rivers and lakes and perhaps even the tidewater areas (Engelbrecht and Seyfert 1994). Therefore we should be willing to entertain the possibility that Native American "shipwrecks" may await discovery along Atlantic beaches or on the continental shelf.

Occasionally dugouts are found on the bottoms or in the banks of fresh water lakes, ponds and streams. In the great majority of cases there is no conclusive evidence that they are prehistoric in age and, in fact, most appear to have been made and used by eighteenth and nineteenth-century Euroamerican farmers, traders, and woodsmen (Plane 1991).

More exciting perhaps is the potential for precontact Indian sites lying offshore. On the eastern seaboard, the implications of postglacial sea level rise for the distribution of archaeological sites have been considered for some time (Salwen 1962, 1965, 1970, 1975; Brennan 1962, 1963, 1972, 1976; Braun 1974; Edwards and Emery 1977; Edwards and Merrill 1977; Wyatt 1977; Gordon 1983; Bloom 1983a, 1983b; McWeeney 1986; Oldale 1985, 1986; Custer 1988; H. Kraft 1977; J. Kraft 1977; Lavin 1988a; Sanger 1988; Reitz 1988; Stright 1990). Artifacts, including especially Late to Terminal Archaic projectile points, are occasionally dredged up from near-shore sediments along the Connecticut coast and probable late Paleo-Indian items have been recovered from the sea bottom in the Gulf of Maine (Glynn 1953; McWeeney 1986; Sanger 1988; J. Pfeiffer, personal communications 1983-1989). It remains to be established, however, that actual sites, not merely isolated artifacts, remain intact on or just below the sea floor, including that of Long Island Sound. Bloom (1983a) asserts that this is an unlikely scenario, since wave action during the sea's encroachment on the land would presumably have thoroughly eroded and mixed bottom deposits to depths of over 10-20 meters, destroying the in-round context of artifacts and features and adversely affecting perishable objects of bone, antler, shell, wood, and charcoal.

There is, however, a real possibility that some underwater sites survived in unusually well protected situations.¹¹ Examples might include locations within the lower basins of estuaries, on island margins close to and facing the mainland in embayments shielded from the full force of high tides and Atlantic storms, or in former upland valleys and depressions

where thick alluvial and colluvial sediments had accumulated that buffered the sites from the action of wind and water. Not to be overlooked are caves and rockshelters, which given proper size, depth (of the sheltered area or chamber), and orientation to the shoreline would presumably have been resistant to forces that would devastate open-air soil and midden deposits (they might, however, be buried under thick sediments derived from reworked shoreline deposits). Conceivably also, large burial mounds, fortifications, and other types of sites not usually found in the Northeast may have survived the rising sea.

Inland fresh water lakes, ponds, and streams in New York State rarely produce Native American artifacts, in contrast to the relative abundance of historic Euroamerican artifacts such as bateaux, cannon, etc. The scarcity of genuine Indian dugout canoes (or, for that matter, bark canoes) has previously been mentioned. I am personally aware of three instances of whole Middle and Late Woodland pottery vessels being found by divers in New York waters: two from the St. Lawrence River, one from Lake Champlain (Lewis 1994). In 1982, dredging of a former meander of the Mohawk River near Schenectady, now blocked by an artificial beach, spewed dozens of stone netsinkers, hammerstones, chert bifaces, and other artifacts into a waste pile. These objects were apparently from a prehistoric campsite, destroyed by the dredging, which was submerged under about a meter of water.

Late Woodland encampments have been found intact on sand and gravel bars situated less than a meter below the usual level of Fish Creek a short distance west of Schuylerville, Saratoga County; these appear to be alternately flooded and exposed by seasonal variations in the creek's level. The Hudson River's estuarial portions are at sea level and subject to tides as far north as Troy: therefore it can be considered to offer the same challenge as salt water archaeology, except that north of its mouth at Sandy Hook the limited wave action would have had relatively little impact on archaeological deposits. There is a distinct possibility, if not probability, that prehistoric (and even historic) sites still exist on ancient benches, terraces, and floodplain deposits below the Hudson's average modern low tide level (Brennan 1962, 1963, 1972, 1974, 1976, 1977; Funk 1991; Claassen 1994, 1995). An example of this potential is Esopus Meadows, a lobe of land extending out into the river near Newburgh, Orange County, which is presently under about two meters of water. Aerial photographs show evidence of stone walls that indicate the area was dry and habitable in early colonial times. There may well be Native American sites on this submerged land mass (Eisenberg 1984).

Native American sites, as such, have not been reported under New York lakes with the exception of some known to me only about half a meter below the surface of Lake

11. I am reminded of a personal communication from Richard Gould (1990), who informed me of a most unusual site off the coast of Florida, where a historic shipwreck overlies a PaleoIndian encampment!

George. These sites may have been periodically inundated prehistorically by naturally changing water volume, but this is hard to prove and the lake level is presently controlled by a dam at its outlet.

The changing levels of proglacial lakes, including Lake Algonquin, a precursor of the present Upper Great Lakes, have been well delineated by various researchers: Paleo-Indian sites have been found along Lake Algonquin's former banks in southern Ontario, now located above low-lying farmlands and marshes, and it seems clear that the sites were occupied when the lake was full (Storck 1979, 1984; Deller and Ellis 1982, 1988, 1992). A different terminal Pleistocene history has been described for Lake Ontario by Roberts (1980, 1984). Between c. 10,750 and 10,450 years before present, the water level was significantly lower than at present, exposing large areas to the sky along the lake margins. This would have afforded an opportunity for Paleo-Indians to occupy these areas, presumably rich in fish and other food resources. Since wave action is relatively mild on Lake Ontario, there seems a good chance that at least some inundated sites, if they existed, would have remained intact.

Reconnaissance for, and the excavation of, underwater habitation, workshop and burial sites is a notoriously expensive, high-technology enterprise and requires the use of some techniques not ordinarily employed in the investigation of shipwrecks. Discovery could be achieved accidentally by dredging, bridge construction, pipeline trenching, and other construction activities, or intentionally by means of coring, scuba diving, or submersible exploratory craft. Remote sensing or geophysical explorations are also possibilities, but this would doubtless apply only to sites with substantial structures, large features or intense magnetic anomalies (hearths or metallic objects). It is difficult to imagine underwater archaeologists performing systematic surveys, given not only the practical difficulties, but the probably tremendous obliteration of undersea sites in the manner described by Bloom (1983a).

Nevertheless, with technical advances and adequate funding, one may conceive of a program of systematic exploration of selected areas of ocean, lake, and riverbeds. It would begin with a detailed assessment of potential disturbances, taking into account local geomorphology, wave action, stream erosion, underwater currents, burial by sedimentation, and human construction activities, and proceeding with surveys of those areas where sites are believed to have survived the destructive agents. Those surveys could be "stratified" by carefully modeled environmental zones, as frequently employed by archaeologists in dry terrain situations, followed by either systematic or random subsea "walkovers." Geophysical sensing and the use of robots could be important approaches preceding actual human activity.

A related, and equally important, theme is the investigation of wetlands (also often referred to as "peatlands"), both fresh water and salt water. Some wetlands contain relatively thick sediments in which pollen and other plant remains are well preserved and provide invaluable information to palynologists, paleontologists, and other scientists interested in reconstructing and radiocarbon dating prehistoric environments. But there is considerable evidence that prehistoric Indian settlement systems tended to center around fresh water wetlands, especially where large ones existed within band territories (Nicholas 1991; Funk 1992). Some authorities have speculated that salt marshes offered an unusual abundance of food resources to native groups (e.g., Gwynne 1979; Lavin 1988a), but this is hard to evaluate given the known high potential of tidewater regions such as estuaries, even in the absence of salt marshes (Reitz 1988).

Although they offered abundant and diverse animal and plant food resources to ancient peoples, and have the potential for excellent preservation of organic remains, wetlands are rarely subject, in any systematic way, to archaeological survey. Objects of wood, shell, bone, plant remains, and other organic substances are often preserved in such contexts in Europe and North America (Coles 1984; Coles and Coles 1989; Purdy 1988, 1991). Although even human flesh in the form of "bog bodies" is often recovered in surprisingly good condition in European peatlands, such finds have yet to be reported in the Americas. Wetlands offer an unparalleled opportunity to acquire a broad spectrum of data on prehistoric lifeways, data that are usually lacking on dry land sites, where with few exceptions organic materials (food remains, ecofacts, clothing, tools, ornaments and ceremonial items of perishable materials) generally fail to survive into the present.

As the principal category of cultural resource, the archaeological site, continues to diminish in number through the onslaught of modern civilization, one can envision a time in the not too distant future when scholars will be forced to turn most of their attention to the restudy of old collections previously excavated, analyzed, and published, and also to the study of other collections acquired over long periods of time, reposing in various institutions but never formally studied or published. Unfortunately, great volumes of recovered materials and associated data from the CRM investigations of the past 25 years fall into the latter class.

Barring the severe impairment or complete reversal of Historic Preservation programs as a consequence of government downsizing and deregulation, we can anticipate that CRM survey and excavation projects will continue to add great quantities of information to our store of archaeological knowledge. It is to be hoped that this new information will be 1) acquired in the context of regional research designs, and 2) studied, evaluated, synthesized and (at long last) published in a timely fashion.

References Cited

- Ashton, R. L.
 1970 The Oatman Site: A Single Component of the Late Archaic in Washington County, New York. *The Bulletin*, The New York State Archaeological Association 48:15-19.
 1994 Evidence of Paleo-Indian to Early Archaic Occupations in Washington County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 107:20-24.
- Bailey, J. H.
 1937 A Rock Shelter at Fort Ticonderoga. *Bulletin of the Champlain Valley Archaeological Society* 1(1):5-16. Fort Ticonderoga.
 1938 An Analysis of Iroquoian Ceramic Types. *American Antiquity* 3:332-338.
 1939 A Ground Slate Producing Site Near Vergennes, Vermont. *Bulletin of the Champlain Valley Archaeological Society* 1 (2). Fort Ticonderoga.
 1940 A Stratified Rock Shelter in Vermont. *Bulletin of the Champlain Valley Archaeological Society* 2(1). Fort Ticonderoga.
- Bamann, S., R. Kuhn, J. Molnar, and D. Snow
 1992 Iroquoian Archaeology. *Annual Review of Anthropology* 21:435-460.
- Bartram, J.
 1751 Observations on the Inhabitants, Climate, Soil, Rivers, Production, Animals, and Other Matters Worthy of Notice, In His Travels from Pennsylvania to Onondaga, Oswego, and the Lake Ontario in Canada. London. (Reprinted Geneva, New York 1895.)
- Beauchamp, W. M.
 1892 *The Iroquois Trail: or Footprints of the Six Nations in Custom, Tradition, and History*. H. C. Beauchamp, Fayetteville.
 1894 The Origin of the Iroquois. *American Antiquarian* 16 (2):61-69.
 1897a *Aboriginal Chipped Stone Implements of New York*. New York State Museum Bulletin 16. Albany.
 1897b *Polished Stone Articles Used by the New York Aborigines*. New York State Museum Bulletin 18. Albany.
 1898 *Earthenware of the New York Aborigines*. New York State Museum Bulletin 22. Albany.
 1900a *Aboriginal Occupation of New York*. New York State Museum Bulletin 32. Albany.
 1900b Iroquois Women. *Journal of American Folklore* 13 (69):81-91.
 1901 *Wampum and Shell Articles Used by the New York Indians*. New York State Museum Bulletin 41. Albany.
- 1902a *Horn and Bone Implements of the New York Indians*. New York State Museum Bulletin 50. Albany
 1902b *Metallic Implements of the New York Indians*. New York State Museum Bulletin 55. Albany.
 1903 *Metallic Ornaments of the New York Indians*. New York State Museum Bulletin 73. Albany.
 1905a *Aboriginal Use of Wood in New York*. New York State Museum Bulletin 89. Albany.
 1905b *A History of the New York Iroquois*. New York State Museum Bulletin 78. Albany.
 1905c *Perch Lake Mounds*. New York State Museum Bulletin 87. Albany.
 1907 *Aboriginal Place Names of New York*. New York State Museum Bulletin 108. Albany.
 1908 *Past and Present of Syracuse and Onondaga County*. S. J. Clark Company, New York.
 1916 *Moravian Journals Relating to Central New York 1745-1766*. Onondaga Historical Association, Syracuse.
 1921 *The Founders of the New York- Iroquois League and Its Probable Date*. Researches and Transactions of the New York State Archeological Association 3 (1).
 1925 *The Life of Conrad Weiser; as It Relates to His Services as Official Interpreter Between New York and Pennsylvania and as Envoy Between Philadelphia and the Onondaga Councils*. Onondaga Historical Association, Syracuse.
- Bender, S. J.
 1992 Marian E. White: Pioneer in New York Archaeology. *The Bulletin*, Journal of the New York State Archaeological Association 104:14-20.
- Benedict, AL.
 1891 An Indian Grave in Western New York. *The American Naturalist* 25(290):119-121 .
- Bernstein, D. J.
 1990 Trends in Prehistoric Subsistence on the Southern New England Coast. *North American Archaeologist* 11 (4):321-352.
 1992 Prehistoric Use of Plant Foods in the Narragansett Bay Region. *Man in the Northeast* 44:1-13.
 1993 *Prehistoric Subsistence on the Southern New England Coast*. Academic Press, New York.
- Binford, L.
 1962 Archaeology as Anthropology. *American Antiquity* 28 (2):217-225.
 1965 Archaeological Systematics and the Study of Culture Process. *American Antiquity* 31:203-210.
 1972 *An Archaeological Perspective*. Seminar Press, New York.
 1983 *In Pursuit of the Past. Decoding the Archaeological Record*. Thames and Hudson, New York.
 1989 *Debating Archaeology*. Academic Press, New York.

- Bloom, A. L.
 1983a Sea Level and Coastal Morphology of the United States through the Late Wisconsin Glacial Maximum. In *Late-Quaternary Environments of the United States, Vol. 1: The Late Pleistocene*, edited by S. C. Porter, pp. 215-229. University of Minnesota Press, Minneapolis.
 1983b Sea Level and Coastal Changes. In *Late-Quaternary Environments of the United States, Vol. 2: The Holocene*, edited by H. E. Wright, Jr., pp. 42-51. University of Minnesota Press, Minneapolis.
- Bolian, C. E.
 1980 The Early and Middle Archaic of the Lakes Region, New Hampshire. In *Early and Middle Archaic Cultures in the Northeast*, edited by D. R. Starbuck and C. E. Bolian, pp. 115-134. Occasional Publications in Northeastern Anthropology 7. George's Mills, New Hampshire.
- Bolton, R. P.
 1909 The Indians of Washington Heights. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 77-109. Anthropological Papers of the American Museum of Natural History No. 3. New York.
- Bourque, B. J.
 1975 Comments on the Late Archaic Populations of Central Maine: The View from the Turner Farm. *Arctic Anthropology* 12 (2):35-45.
 1976 The Turner Farm Site: A Preliminary Report. *Man in the Northeast* 11:21-30.
 1995 *Diversity and Complexity in Prehistoric Maritime Societies*. Plenum Press, New York.
- Bradley, J.
 1987 *Evolution of the Onondaga Iroquois*. Syracuse University Press, Syracuse.
- Brasser, T. J.
 1974 *Riding on the Frontier's Crest: Mahican Indian Culture and Culture Change*. Ethnology Division, National Museum of Man, Paper No. 13, Mercury Series. Ottawa.
 1978 Mahican. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 198-212. Smithsonian Institution, Washington, D.C.
- Braun, D. P.
 1974 Explanatory Models for the Evolution of Coastal Adaptations in Prehistoric Eastern New England. *American Antiquity* 39 (4):582-596.
- Brennan, L. A.
 1962 A Beginning in Chronology for the Croton River Area. *Pennsylvania Archaeologist* 32 (3-4):138-156.
 1963 A 6000 Year Old Midden of Virginia Oyster Shell at Croton Point, Lower Mid Hudson. *The Bulletin*, The New York State Archaeological Association 29:14-18.
 1972 The Implications of Two Recent Radiocarbon Dates from Montrose Point on the Lower Hudson River. *Pennsylvania Archaeologist* 42 (1-2):1-14.
 1974 The Lower Hudson: A Decade of Shell Middens. *Archaeology of Eastern North America* 2 (1):81-93.
 1976 Coastal Adaptation in Prehistoric New England. *American Antiquity* 41 (1):112-113.
 1977 The Lower Hudson: The Archaic. In *Amerinds and their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:411-430.
- Brumbach, H. J.
 1975 "Iroquoian" Ceramics in "Algonkian" Territory. *Man in the Northeast* 10:17-28.
 1978 Middle Woodland Fishing Economics: The Upper Hudson River Drainage. Ph.D. Dissertation, State University of New York at Albany. University Microfilms, Ann Arbor.
 1979 Early Ceramics and Ceramic Technology in the Upper Hudson Valley. *The Bulletin and Journal of Archaeology for New York State* 76:21-26.
 1985 Ceramic Analysis and the Investigation of Matrilocalities at the Smith Mohawk Village Site. *North American Archaeologist* 6 (4):341-355.
 1986 Anadromous Fish and Fishing: A Synthesis of Data from the Hudson River Drainage. *Man in the Northeast* 32:35-66.
 1987 A Quarry/Workshop and Processing Station on the Hudson River in Pleasantdale, New York. *Archaeology of Eastern North America* 15:59-84.
 1995 Algonquian and Iroquoian Ceramics in the Upper Hudson Drainage. *Northeast Anthropology* 49:55-66.
- Brumbach, H. J. and S. J. Bender
 1986 Winney's Rift: A Late Woodland Village Site in the Upper Hudson River Drainage. *The Bulletin and Journal of Archaeology for New York State* 92:1-8.
- Bunker, V.
 1992 Stratified Components of the Gulf of Maine Archaic Tradition at the Eddy Site, Amoskeag Falls. In *Early Holocene Occupation of Northern New England*, edited by B. S. Robinson, J. B. Petersen, and A. K. Robinson, pp. 135-148. Occasional Publications in Maine Archaeology 9. Augusta.

- Burger, M. K. and P. Pratt.
1973 SUNY-Oswego Excavations in Ontario Related to the Disappearance of the St. Lawrence Iroquois. *Eastern States Archaeological Federation Bulletin* 32:14-15.
- Butterfield, H.
1957 *The Origins of Modern Science*. Free Press, New York.
- Butzer, K.
1971 *Environment and Archaeology*. Aldine Press, New York.
1982 *Archaeology as Human Ecology*. Cambridge University Press, New York.
- Cadzow, D.
1925 Prehistoric Algonkian Burial Site in Cayuga County, New York. *Indian Notes and Monographs*, Museum of the American Indian, Heye Foundation, 2 (1).
- Callahan, E.
1979 The Basics of Biface Knapping in the Eastern Fluted Point Tradition: A Manual for Flint Knappers and Lithic Analysts. *Archaeology of Eastern North America* 7:1-179.
- Ceci, L.
1979 Maize Cultivation in Coastal New York: The Archaeological, Agronomical, and Documentary Evidence. *North American Archaeologist* 1 (1):45-74.
1980 Locational Analysis of Historic Algonquian Sites in Coastal New York: A Preliminary Study. *Proceedings of the Conference on Northeastern Archaeology*, edited by James Moore, pp. 71-91. Department of Anthropology, University of Massachusetts, Amherst Research Report 19. Amherst.
1982 Method and Theory in Coastal New York Archaeology: Paradigms of Settlement Pattern. *North American Archaeologist* 3 (1):5-36.
1989 Tracing Wampum's Origins: Shell Bead Evidence from Archaeological Sites in Western and Coastal New York. In *Proceedings of the 1986 Shell Bend Conference*, edited by C. F. Hayes III and L. Ceci, pp. 1-6. Research Records No. 20, Rochester Museum & Science Center, Rochester.
1990 Radiocarbon Dating "Village" Sites in Coastal New York: Settlement Pattern Change in the Middle to Late Woodland. *Man in the Northeast* 39:1-28.
- Chaplin, R. E.
1971 *The Study of Animal Bones from Archaeological Sites*. Seminar Press, New York.
- Chilton, E.
1992 Archaeological Investigations at the Goat Island Rockshelter: New Light from an Old Legacy. *The Hudson Valley Regional Review* 9 (1):47-76.
- Claassen, C.
1991 New Excavations at Dogan Point. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 23-26. Occasional Publications in Northeastern Anthropology No. 11. Archaeological Services, Bethlehem, Connecticut.
1994 Summary of the Results of Research at the Archaic Dogan Point Site, Westchester County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 107:26-37.
1995 *Dogan Point: A Shell Matrix Site on the Hudson River*, edited by C. Claassen. Occasional Papers in Northeastern Anthropology No. 14. Archaeological Services, Bethlehem, Connecticut.
1996 The Shell Matrix at Do-an Point. In *A Golden Chronograph, for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 99-108. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Clinton, D. W.
1818 *A Memoir on the Antiquities of the Western Parts of the State of New York*. I. W. Clark, Albany.
- Cohen, I. B.
1985 *Revolution in Science*. Harvard University Press, Cambridge.
- Coles, B. and J. B. Coles
1989 *People of the Wetlands*. Thames and Hudson, New York.
- Coles, J. B.
1984 *The Archaeology of Wetlands*. Edinburgh University Press, Edinburgh.
- Cox, S.
1972 *A Reanalysis of the Shoop Site*. The Smithsonian Institution, Washington, D. C.
1991 Site 95.20 and the Vergennes Phase in Maine. *Archaeology of Eastern North America* 14:135-162.
- Crabtree, D. E.
1972 *An Introduction to Flintworking*. Occasional Papers of the Idaho State University Museum, No. 28. Pocatello.

- Curran, M.
1984 The Whipple Site and Paleo-Indian Tool Assemblage Variation: A Comparison of Intersite Structuring. *Archaeology of Eastern North America* 12:5-40.
- Curtin, E.V.
1978 Prehistoric Sites, Sequence, and Settlement in the Upper Susquehanna Drainage. In *The Salvage Excavation of PINs 9357.08 and 9357.12*, 1-88 *Cultural Resources Sunset Report*, edited by A. Dekin. Submitted to New York State Education Department by the State University of New York at Binghamton.
1996 Late Archaic Period Technology and Land Use Patterns: Lessons Learned from the Mattice No. 2 Site. In *A Golden Chronography for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp.119-128. Occasional Papers in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Cushing, F. H.
1874 *Antiquities of Orleans County, New York*. Annual Report for 1874, Bureau of American Ethnology, pp. 375-377. Washington, D. C.
1922 The Shelby Earthworks. In *The Archeological History of New York*, by A. C. Parker, pp. 313-315. New York State Museum Bulletins 235-236. Albany.
- Custer, J. F.
1988 Coastal Adaptations in the Middle Atlantic Region. *Archaeology of Eastern North America* 16:121-136.
- De Angelo, G.
1992 Avocational Archaeology in New York State. *The Bulletin*, Journal of the New York State Archaeological Association 104:28-30.
1996 Archaeology in the Future: The Role of the Avocational. In *A Golden Chronograph for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 4548. Occasional Papers in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Deller, D. B. and C. J. Ellis
1982 *Archaeological Investigations at Thedford II Crowfield, and Other Paleo-Indian Sites in Southwestern Ontario, 1981*. Report submitted to Ontario Ministry of Culture and Recreation.
1984 Crowfield: A Preliminary Report on a Probable Paleo-Indian Cremation in Southwestern Ontario. *Archaeology of Eastern North America* 12:41-71.
1988 Early Paleo-Indian Complexes in Southwestern Ontario. In *Late Pleistocene and Early Holocene Paleoecology and Archaeology in the Upper Great Lakes Region*, edited by R. S. Laub, N. G. Miller, and D. W. Steadman, pp. 251-263. Bulletin of the Buffalo Society of Natural History Vol. 33. Buffalo.
- 1992 The Early Paleo-Indian Parkhill Phase in Southwestern Ontario. *Man in the Northeast* 44:15-54.
- Diamond, J.
1995a The Brandt Farm Rockshelter, Dutchess County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 109:1-7.
1995b The Catskill Rockshelter, Town of Olive, Ulster County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 110:16-25.
1996 Terminal Late Woodland - Early Contact Period Settlement Patterns in the Mid-Hudson Valley. *Journal of Middle Atlantic Archaeology* 12:95-112.
- Dillehay, T.D. and D. J. Meltzer, editors
1991 *The First Americans: Search and Research*. CRC Press. Boca Raton.
- Dimbleby, G.
1978 *Plants and Archaeology*. Granada Publishing. London.
- Dincauze, D. F.
1968 *Cremation Cemeteries in Eastern Massachusetts*. Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University, 59 (1). Cambridge.
1972 The Atlantic Phase: A Late Archaic Culture in Massachusetts. *Man in the Northeast* 4:40-61.
1975 The Late Archaic Period in Southern New England. *Arctic Anthropology* 12 (2):23-34.
1976 *The Neville Site: 8000 Years at Amoskeag*. Peabody Museum Monographs, No. 4. Cambridge.
- Dincauze, D. F. and M. T. Mulholland
1977 Early and Middle Archaic Site Distributions and Habitats in Southern New England. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:439-456.
- Dineen, R.
1993 Postglacial Terrace Formation. Lateral River Migration, and Prehistoric Settlement Patterns. In *Archaeological Investigations in the Upper Susquehanna Valley New York State*, by R. E. Funk, pp. 100-114. Persimmon Press, Buffalo.
1996 Holocene Environments in the Hudson Valley. In *A Golden Chronograph for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 57-72. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.

- Doblin, H. and W. A. Starna
1994 *The Journals of Christian Daniel Claus and Conrad Weiser: A Journey to Onondaga, 1750*. Transactions of the American Philosophical Society 84 (2). Philadelphia.
- Dobyns, H. F.
1983 *Their Number Became Thinned: Native American Population Dynamics in Eastern North America*. University of Tennessee Press, Knoxville.
- Doran, J. E. and F. R. Hodson
1975 *Mathematics and Computers in Archaeology*. Harvard University Press, Cambridge.
- Dumont, E. M. and L. A. Dumont
1979 Of Paradigms and Projectile Points: Two Perspectives on the Early Archaic in the Northeast. *The Bulletin*, The New York State Archaeological Association 75:38-52.
- Dumont, E. M. and W. F. Ehlers, Jr.
1973 The Sugar Loaf Mastodon. *The Bulletin*, The New York State Archaeological Association 59:1-6.
- Dunbar, H. R. and K. C. Ruhl
1974 Copper Artifacts from the Engelbert Site. *The Bulletin*, The New York State Archaeological Association 61:1-10.
- Edwards, R. L. and K. O. Emery
1977 Man on the Continental Shelf. In *Amerinds and their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:245-256.
- Edwards, R. L. and A. S. Merrill
1977 A Reconstruction of the Continental Shelf Areas of Eastern North America for the Times 9500 B.P. and 12,500 B.P. *Archaeology of Eastern North America* 5:1-42.
- Eiseley, L.
1961 *Darwin's Century*. Doubleday Anchor, New York.
- Eisenberg, Leonard
1974 Excavation at Old Fort II. *The Bulletin*, The New York State Archaeological Association 60:29-43.
1978 *Paleo-Indian Settlement Pattern in the Hudson and Delaware River Drainages*. Occasional Papers in Northeastern Anthropology No. 4. Franklin Pierce College.
1984 A Preliminary Analysis of the Datum: A Multicomponent Prehistoric Site Near the Hudson River. Ulster County, New York. *Man in the Northeast* 24:1-36.
- 1989 The Hendrickson Site: A Late Woodland Indian Village in the City of Kingston, Ulster County, New York. *Man in the Northeast* 38:21-53.
- 1991 The Mohonk Rockshelter: A Major Neville Site in New York State. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 155-176. Occasional Publications in Northeastern Anthropology No. 11. Archaeological Services. Bethlehem, Connecticut.
- Elliott, D.
1977 Otsiningo, an Example of an Eighteenth Century Settlement Pattern. In *Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes 111, pp. 93-105. Researches and Transactions, New York State Archeological Association 17 (1). Albany and Rochester.
- Elliott, D. and W. D. Lipe
1970 *The Engelbert Site*. State University of New York at Binghamton, Vestal.
- Ellis, C. J., and D. B. Deller
1990 Paleo-Indians. In *The Archaeology of Southern Ontario to A. D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 37-64. Occasional Publication of the London Chapter, Ontario Archeological Society, No. 5. London.
- Ellis, C. J., I. T. Kenyon, and M. W. Spence
1990 The Archaic. In *The Archeology of Southern Ontario to A. D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 65-124. Occasional Paper of the London Chapter, Ontario Archeological Society, No. 5. London.
- Emerson, E.
1898 *Our Country and Its People: A Descriptive Work on Jefferson County, New York*. Boston History Company, Boston.
- Engelbrecht, W.
1972 The Reflection of Patterned Behavior in Iroquois Pottery Decoration. *Pennsylvania Archaeologist* 42(3):1-15.
1974a The Iroquois: Archaeological Patterning on the Tribal Level. *World Archaeology* 6 (1):52-56.
1974b Cluster Analysis: A Method for the Study of Iroquois Prehistory. *Man in the Northeast* 7:57-70.
1978 Cayuga. (Coauthor with M. E. White and E. Tooker.) In *Handbook of North American Indians*, Vol. 15,

- 1980 Northeast, edited by B. G. Trigger, pp. 500-504. Smithsonian Institution, Washington, D. C.
- 1980 Methods and Aims of Ceramic Description. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, pp. 27-29. Research Records No. 13. Rochester Museum & Science Center, Rochester.
- 1984 The Kleis Site Ceramics: An Interpretive Approach. In *Extending the Rafters: Interdisciplinary Approaches to Iroquoian Studies*, edited by M. K. Foster, J. Campisi, and M. Mithun, pp. 325-339. State University at Albany Press, Albany.
- 1987 Factors Maintaining Low Population Density among the Prehistoric New York Iroquois. *American Antiquity* 52 (1):13-27.
- 1990 The Jefferson County Iroquoians. *Man in the Northeast* 39:65-77.
- 1991 Erie. *The Bulletin*, Journal of the New York State Archaeological Association 102:1-12.
- 1994 The Eaton Site: Preliminary Analysis of the Iroquoian Component. *The Bulletin*, Journal of the New York State Archaeological Association 107:1-8.
- 1995 The Case of the Disappearing Iroquoians: Early Contact Period Superpower Politics. *Northeast Anthropology* 50:35-59.
- Engelbrecht, W. and D. K. Grayson
1978 *Essays in Anthropology in Memory of Marian E. White*, edited by W. Engelbrecht and D. K. Grayson. Occasional Publications in Northeastern Anthropology No. 5. Rindge. New Hampshire.
- Engelbrecht, W. and C. K. Seyfert
1994 Paleoindian Watercraft: Evidence and Implications. *North American Archaeologist* 15 (3):221-234.
- Engelbrecht, W., E. Sidler, and M. Walko
1990 The Jefferson County Iroquoians. *Man in the Northeast* 39:65-77.
- Evans, J. G.
1978 *An Introduction to Environmental Archaeology*. Cornell University Press, Ithaca.
- Feder, K.
1984 Pots, Plants, and People: The Late Woodland Period of Connecticut. *Bulletin of the Archaeological Society of Connecticut* 47:99-111.
- Feister, L. M.
1975 Analysis of the Ceramics Found at the Vereberg Tavern Site, Albany County, New York. *Man in the Northeast* 10:2-16.
- 1982 Indian-Dutch Relations in the Upper Hudson Valley: A Study of Baptism Records in the Dutch Reformed Church, Albany, New York. *Man in the Northeast* 24:89-115.
- 1984a Building Materials Indicative of Status Differentiation at the Crown Point Barracks. *Historical Archaeology* 18 (1):103-107.
- 1984b Material Culture of the British Soldier at "His Majesty's Fort of Crown Point" on Lake Champlain 1759-1783. *Journal of Field Archaeology* 11 (2):123-132.
- 1985 Archaeology in Rensselaerswyck: Dutch 17th Century Domestic Sites. In *New Netherland Studies: An Inventory of Current Research and Approaches*. *Bulletin Koninklijke Nederlandse Oudheidkundige Bond* 84:(2-3):100-112.
- 1994 Archaeological and Documentary Investigations of a Mysterious Underground Chamber Found at John Jay State Historic Site, Westchester County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 108:1-10.
- Feister, L. M. and P. Huey
1985 Archaeological Testing at Fort Gage, A Provincial Redoubt of 1758 at Lake George, New York. *The Bulletin and Journal of Archaeology for New York State* 90:40-59.
- Fenton, W. N.
1940 Problems Arising from the Historic Northeastern Position of The Iroquois. *Smithsonian Miscellaneous Collections* 100:159-251.
- 1968 Introduction. In *Parker on the Iroquois*, edited by W. N. Fenton, pp. 1-47. Syracuse University Press, Syracuse.
- Ferguson, J. P.
1995 The Haviland Site: The Early Archaic in Schoharie County. *The Bulletin*, Journal of the New York State Archaeological Association 110:1-15.
- Fiedel, S. J.
1984 A Late Archaic Cache from the Ossining Rockshelter. *The Bulletin and Journal of Archaeology for New York State* 88:9-14.
- 1986 The Ossining Rockshelter. *The Bulletin and Journal of Archaeology for New York State* 90:32-45.
- 1987 Algonquian Origins: A Problem in Archaeological Linguistic Correlation. *Archaeology of Eastern North America* 15:1-12.
- 1988 Orient Fishtail Points from the Rye Marshlands Conservancy. *Bulletin of the Archaeological Society of Connecticut* 51:111-125.

- 1991a Archaic and Woodland Occupations Lit Teller's Point. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 141-152. Occasional Papers in Northeastern Anthropology No. 11. Archaeological Services, Bethlehem, Connecticut.
- 1991b Correlating Archaeology and Linguistics: The Algonquian Case. *Man in the Northeast* 41:9-32.
- 1994 Some Inferences Concerning Proto-Algonquian Economy and Society. *Northeast Anthropology* 48: 1-11.
- Finch, J. K.
1909 Aboriginal Remains on Staten Island. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 65-73. Anthropological Papers of the American Museum of Natural History No. 3. New York.
- Fisher, C. L.
1976 A Preliminary Report on the Prehistoric Resources of the Onesquethaw Creek Historic District. *The Bulletin*, The New York State Archeological Association 68:7-17.
- 1982 Projectile Points from the First Avenue Site, Sleightsburg, New York. Implications from Multivariate Analysis. *Man in the Northeast* 23:61-65.
- 1984 Archaeological Survey and Historic Preservation at the Site of a Revolutionary War Cantonment in New Windsor, New York. *North American Archaeologist* 6 (1):25-39.
- 1986 The Temple of Virtue: An Artifact of Social Conflict at the Last Cantonment of the Continental Army. *Man in the Northeast* 32:95-108.
- 1987 The Ceramics Collection from the Continental Army Cantonment at New Windsor, New Windsor, New York. *Historical Archaeology* 21 (1):48-57.
- 1993 Catlinite and Red Slate Ornaments from the Enders House Site, Schoharie Crossing State Historic Site, Montgomery County, New York. *The Bulletin*, Journal of the New York State Archaeological Association 106:17-23.
- Fisher, C. L. and C. Buell
1978 Some Radiocarbon Dates and Settlement Studies from the Mohawk River Valley. *The Bulletin*, The New York State Archaeological Association 74:28-32.
- Fisher, C. L. and K. Harigen
1983 Glass Trade Beads from Waterford, New York. *Pennsylvania Archaeologist* 53 (1-2):47-52.
- Fox, W. A.
1990 The Middle to Late Woodland Transition. In *The Archaeology of Southern Ontario to A. D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 171-188. Occasional Publication of the London Chapter, Ontario Archaeological Society No. 5. London.
- Frey, S. L.
1898 *The Mohawks, an Enquiry into Their Origin, Migrations, and Influence upon the White Settlers*. Oneida Historical Society Transactions No. 8.
- Funk, R. E.
1966 An Archaic Framework for the Hudson Valley. Ph. D. Dissertation, Department of Anthropology, Columbia University. University Microfilms, Ann Arbor.
- 1971 William A. Ritchie: A Valediction. *The Bulletin*, The New York State Archaeological Association 52:13-21.
- 1976 *Recent Contributions to Hudson Valley Prehistory*. New York State Museum and Science Service Memoir 22. Albany.
- 1977a Early Cultures in the Hudson Drainage Basin. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:316-332.
- 1977b Early to Middle Archaic Cultures in Upstate New York. In *Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 21-29. Researches and Transactions of the New York State Archeological Association 17 (1). Albany and Rochester.
- 1977c An Archeologist for All Seasons: A Biographical Sketch of William A. Ritchie. In *Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. xiii-xxv. Researches and Transactions of the New York State Archeological Association 17 (1). Albany and Rochester.
- 1978 Post-Pleistocene Adaptations. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 16-27. Smithsonian Institution, Washington.
- 1979 The Early and Middle Archaic in New York as Seen from the Upper Susquehanna Valley. *The Bulletin*, The New York State Archaeological Association 75:23-28.
- 1983 The Northeastern United States. In *Ancient North Americans*, edited by J. D. Jennings, pages 302-371. W. H. Freeman and Company, San Francisco.
- 1988 The Laurentian Concept: A Review. *Archaeology of Eastern North America* 16:1-42.
- 1991 Late Pleistocene and Early Holocene Adaptations. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in*

- Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 49-68. Occasional Papers in Northeastern Anthropology No. 11. Archaeological Services. Bethlehem, Connecticut.
- 1992 Some Major Wetlands in New York State; A Preliminary Assessment of Their Biological and Cultural Potential. *Man in the Northeast* 43:25-41.
- 1993 *Archaeological Investigations in the Upper Susquehanna Valley, New York State*. Vol. 1. Persimmon Press, Buffalo.
- Funk, R. E. and R. A. Johnson
- 1962 Preliminary Report of Excavations at Taghkanick Rock Shelter. *The Bulletin*, The New York State Archaeological Association 25:9-12.
- 1964a A Probable Paleo-Indian Component in Greene County, New York. *Pennsylvania Archaeologist* 34 (1):43-46.
- 1964b Excavations at Fish Club Cave (Cox 6), Albany County, New York. *The Bulletin*, The New York State Archaeological Association 30:23-25.
- Funk, R. E. and J. E. Pfeiffer
- 1988 Archaeological and Paleoenvironmental Investigations on Fishers Island, New York. A Preliminary Report. *Bulletin of the Archaeological Society of Connecticut* 51:69-110.
- Funk, R. E., G. R. Walters, and W. F. Ehlers, Jr.
- 1969 A Radiocarbon Date for Early Man from the Dutchess Quarry Cave. *The Bulletin*, The New York State Archaeological Association 46:19-21.
- Funk, R. E., G. R. Walters, W. F. Ehlers, Jr., J. E. Guilday, and G. G. Connally
- 1969 The Archeology of Dutchess Quarry Cave, Orange County, New York. *Pennsylvania Archaeologist* 39 (1-4):7-22.
- Funk, R. E., P. L. Weinman and T. P. Weinman
- 1965 A Stratified Site at Lake George. *Pennsylvania Archaeologist* 35 (1):4-18.
- Funk, R. E. and B. Wellman
- 1984 Evidence of Early Holocene Occupations in the Upper Susquehanna Valley, New York State. *Archaeology of Eastern North America* 12:81-109.
- Funk, R. E. and B. E. Rippeteau
- 1977 *Adaptation, Continuity, and Change in Upper Susquehanna Prehistory*. Occasional Paper No. 3, Man in the Northeast. George's Mills, New Hampshire.
- Funk, R. E., B. E. Rippeteau and R. M. Houck
- 1973 A Preliminary Cultural Framework for the Upper Susquehanna Valley. *The Bulletin*, The New York State Archaeological Association 57:11-27.
- 1974 Recent Researches in the Upper Susquehanna Valley, New York State. *Pennsylvania Archaeologist* 44 (3): 131.
- Funk, R. E. and D. W. Steadman
- 1994 *Archaeological and Paleoenvironmental Investigations in the Dutchess Quarry Caves, Orange County, New York*. Persimmon Press, Buffalo.
- Funk, R. E. and J. Walsh
- 1988 Evidence of Late Paleo-Indian Occupation at Saratoga Lake, New York. *The Bulletin*, Journal of the New York State Archaeological Association 96:1-4.
- Furman, G.
- 1875 *Antiquities of Long Island*. Edited by F. Moore. J. W. Bouton, New York.
- Gehring, C. T. and W. A. Starna
- 1988 *A Journey into Mohawk and Oneida Country, 1634-1635. The Journal of Harmen Meynderts van den Bogaert*. (Translated, edited, and annotated by the authors.). Syracuse University Press, Syracuse.
- 1994 Prehistoric Adaptations on Fishers Island, New York: A Progress Report. *Northeast Historical Archaeology* 21-22:11-43.
- Gibbon, G.
- 1989 *Explanation in Archaeology*. Blackwell, New York.
- Gilbert, B. M.
- 1973 *Mammalian Osteo-Archaeology: North America*. Missouri Archaeological Society, University of Missouri, Columbia.
- Gillette, C. and R. E. Funk
- 1993 Europeans Come to the Upper Susquehanna. In *Archaeological Investigations in the Upper Susquehanna Valley*, New York State, by R. E. Funk with collaborating authors, pp. 85-91. Persimmon Press, Buffalo.
- Glynn, F.
- 1953 The Pilots Point Submerged Sites. *Bulletin of the Archaeological Society of Connecticut* 27:11-29.
- Goodyear, F. H.
- 1971 *Archaeological Site Science*. American Elsevier, New York.

- Gorall, R.
1996 A Vital Connection: Avocational Archaeologists and the NYSAA. In *A Golden Chronograph, for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 41-44. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Gordon, R. B.
1983 History of Sea Level Changes along the Connecticut Shore. In *Connecticut Archaeology Past, Present, and Future*, edited by R. E. Dewar, K. Feder and D. Poirier, pp. 67-84. Occasional Papers in Anthropology No. 1. Department of Anthropology. University of Connecticut, Stows.
- Goring, R.
1980 European Ceramics in 17th and 18th Century New York. *The Bulletin and Journal of Archaeology for New York State* 80-81:1-18.
- Gramly, R. M.
1977 Archaeological Investigations at Pipestave Hollow, Mount Sinai Harbor, Long Island: A Preliminary Report. *Anthropology* 1 (1):20-32.
1982 *The Vail Site: A Paleo-Indian Encampment in Maine*. Bulletin of the Buffalo Society of Natural Sciences, Vol. 30. Buffalo.
1984 Kill Sites, Killing Ground and Fluted Points at the Vail Site. *Archaeology of Eastern North America* 12:110-121.
1988a *The Adkins Site: A Paleo-Indian Habitation and Associated Stone Structure*. Persimmon Press Monographs in Archaeology, Buffalo.
1988b Discoveries at the Lamb Site, Genesee County, New York, 1986-1987. *Ohio Archaeologist* 38 (1):4-10.
1988c Paleo-Indian Sites South of Lake Ontario Western and Central New York State. In *Late Pleistocene and Early Holocene Paleocology and Archaeology of the Eastern Great Lakes Region*, edited by R. S. Laub, N. G. Miller, and D. W. Steadman, pp. 265-280. Bulletin of the Buffalo Society of Natural Sciences 33. Buffalo.
1993 *The Ritchey Clovis Cache*. Persimmon Press, Buffalo.
1996 *Two Early Historic Iroquoian Sites in Western New York*. Persimmon Press, Buffalo.
- Gramly, R. M. and R. E. Funk
1990 What is Known and Not Known About the Human Occupation of the Northeastern United States Until 10,000 B.P. *Archaeology of Eastern North America* 18:5:32.
1991 Olive Branch: A Large Dalton and Pre-Dalton Encampment Lit Thebes Gap, Alexander County, Illinois. In *The Archaic Period in the Mid-South*, edited by C. H. McNutt, pp. 23-33. Occasional Papers No. 16, Anthropological Research Center, Memphis State University.
- Gramly R. M. and G. A. Gwynne
1979 Two Late Woodland Sites on Long Island Sound. *Massachusetts Archaeological Society Bulletin* 40:5-19.
- Gramly, R. M. and J. Lothrop
1984 Archaeological Investigations of the Potts Site, Oswego County, New York. *Archaeology of Eastern North America* 12:122-158.
- Granger, J. E., Jr.
1978 *Meadowood Phase Settlement Pattern in the Niagara Frontier Region of Western New York State*. Anthropological Papers, Museum of Anthropology, University of Michigan, No. 65. Ann Arbor.
1988 "Parts Is Parts": An In Situ Hypothesis for Late Archaic to Middle Woodland Development in the Lower Great Lakes. *The Bulletin, Journal of the New York State Archaeological Association* 97:1-16.
- Greenhalgh, W.
1849 Observations of Wentworth Greenhalgh, in a Journey from Albany to Ye Indians, Westward; Begun May 20th, 1677, and Ended July Ye Following. In *The Documentary History of the State of New York*, edited by E. B. O'Callaghan, 1:11-14. Albany.
- Griffin, J. B.
1943 The Iroquois in American Prehistory. *Papers of The Michigan Academy of Science, Arts and Letters* 29:357-374. Ann Arbor.
1945 *Review of The Pre-Iroquoian Occupations of New York State*, by W. A. Ritchie. *American Antiquity* 10:401-407.
1946 Culture Change and Continuity in Eastern United States Prehistory. In *Man in Northeastern North America*, edited by F. Johnson, pp. 37-95. Andover.
1952 Culture Periods in Eastern United States Archaeology. In *Archeology of Eastern United States*, edited by J. B. Griffin, pp. 352-364. The University of Chicago Press, Chicago.
1964 The Northeast Woodlands Area. In *Prehistoric Man in the New World*, edited by J. D. Jennings and E. Norbeck, pp. 223-258. Rice University Semi-centennial Publications. University of Chicago Press, Chicago.
1967 Eastern North American Archaeology: A Summary. *Science* 156 (3772):801-812.
1978 The Midlands and the Northeastern United States. In *Ancient Native Americans*, edited by J. D. Jennings, pp. 221-280. W. H. Freeman and Company, San Francisco.

- Grimes, J., W. Eldridge, A. Vaccaro, F. Vaccaro, J. Vaccaro, N. Vaccaro, and A. Orsini
 1984 Bull Brook II. *Archaeology of Eastern North America* 12:150-183.
- Guthe, A. K.
 1958 *The Late Prehistoric Occupation of Southwestern New York: An Interpretive Analysis*. Researches and Transactions, New York State Archeological Association 14 (1).
- Gwynne, G. A.
 1979 Prehistoric Archaeology at Mount Sinai Harbor, Suffolk County, New York. *The Bulletin and Journal of Archaeology for New York State* 77:14-24.
 1984 A Late Archaic House Pattern on Long Island. *The Bulletin and Journal of Archaeology for New York State* 88:1-8.
 1985 The Rudge-Breyer Site: A Late Archaic Long Island Base Camp? *The Bulletin and Journal of Archaeology for New York State* 91:1-12.
- Hamell, G. R.
 1980 Gannagaro State Historic Site: A Current Perspective. In *Studies on Iroquois Culture*, edited by N. Bonvillain, pp. 91-107. Occasional Publications in Northeastern Anthropology No. 6. Rindge, New Hampshire.
 1983 Trading in Metaphors: The Magic of Beads. In *Proceedings of the 1982 Glass Trade Bead Conference*, edited by C. F. Hayes III, pp. 5-28. Research Records No. 16, Rochester Museum & Science Center, Rochester.
 1986 Strawberries, Floating Islands, and Rabbit Captains: Mythical Realities and European Contact in the Northeast During the Sixteenth and Seventeenth Centuries. *Journal of Canadian Studies* 21 (4):72-94.
 1987 Mythical Realities and European Contact in the Northeast During the Sixteenth and Seventeenth Centuries. *Man in the Northeast* 33:63-87.
 1989 Life's Immortal Shell: Wampum Among the Iroquois (abstract). In *Proceedings of the 1986 Shell Bead Conference*, edited by C. F. Hayes III and L. Ceci, p. 205. Research Records No. 20, Rochester Museum & Science Center, Rochester.
 1992 The Iroquois and the World's Rim: Speculations on Color, Culture, and Contact. *The American Indian Quarterly* 16 (4):451-470.
- Hammer, J.
 1976 Identification and Distribution of Some Lithic Raw Materials from New York State. *Man in the Northeast* 11:39-62.
- Hammond, L. M.
 1872 *History of Madison County*. Truair, Smith and Company, Syracuse.
- Harrington, M.
 1909a The Rock-shelters of Armonk, New York. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 123-138. Anthropological Papers of the American Museum of Natural History. New York.
 1909b Ancient Shell Heaps near New York City. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 167-179. Anthropological Papers of the American Museum of Natural History. New York.
 1922a A Mid-Colonial Seneca Site in Erie County. In *The Archeological History of New York*, by A. C. Parker, pp. 207-237. New York State Museum Bulletins 235-236. Albany.
 1922b Double Wall Fort. In *The Archeological History of New York*, by A. C. Parker, pp. 237-246. New York State Museum Bulletins 235-236. Albany.
 1922c Notes on an Ancient Semicircular Earthwork in Chautauqua County. In *The Archeological History of New York*, by A. C. Parker, pp. 307-310. New York State Museum Bulletins 235-236. Albany.
 1922d Prehistoric Iroquois Sites in Northern New York. In *The Archeological History of New York*, by A. C. Parker, pp. 315-339. New York State Museum Bulletins 235-236. Albany.
 1924 An Ancient Village Site of the Shinnecock Indians. *Anthropological Papers of the American Museum of Natural History* 22: part 5. New York.
 1925 Indian Occupation of Croton Neck and Point. *Bulletin of the Westchester County Historical Society* 1(4):3-19. 1926 Alanson Skinner. *American Anthropologist* 28:275-280.
 n. d. Two Mohawk Strongholds: An Account of Archeological Explorations in the Mohawk Valley, 1905. Manuscript on file at the Peabody Museum of Archaeology and Ethnology, Harvard University. Cambridge.
- Harris, M.
 1968 *The Rise of Anthropological Theory*. Thomas Y. Crowell Company, New York.
 1980 *Cultural Materialism*. Vintage Books, New York.
- Hasenstab, R. J.
 1996 Aboriginal Settlement Patterns in Late Woodland Upper New York State. *Journal of Middle Atlantic Archaeology* 12:17-26.

- Hastorf, C. A. and V. S. Popper
1988 *Current Paleoethnobotany*. The University of Chicago Press, Chicago.
- Haviland, W. and M. Power
1981 *The Original Vermonters: Native Inhabitants Past and Present*. The University Press of New England, Hanover.
- Hayes, C. F. III
1960 Museum Excavation Reveals Iroquois Palisade. Rochester Museum of Arts and Sciences, *Museum Service* 33 (10):160-161, 172. Rochester.
1962 Another Prehistoric Iroquois Site in the Bristol Hills, New York. Rochester Museum of Arts and Sciences, *Museum Service* 35 (1):6-9.
1963a The Excavation of Two Iroquois Structures. Rochester Museum of Arts and Sciences, *Museum Service* 36 (10):168-171.
1963b Prehistoric Iroquois Studies in the Bristol Hills, New York. Rochester Museum of Arts and Sciences, *Museum Service* 33 (1-2):29-34. Rochester.
1965a The Late Woodland in Central New York. *Pennsylvania Archaeologist* 35 (1):19-25
1965b A Regional Approach to Archeology -A Cultural Sample from the Cornish Site. Rochester Museum of Arts and Sciences. *Museum Service* 38 (5-6):45-54.
1966a Excavating an Early Historic Seneca Longhouse. Rochester Museum of Arts and Sciences, *Museum Service* 39 (5-6):76-81.
1966b Pits of the Archaic Stage Salvaged from the Farrell Farm. Rochester Museum of Arts and Sciences, *Museum Service* 39 (9-10):167-175.
1967 A Prehistoric Iroquois Longhouse at the Reed Fort Site. Rochester Museum of Arts and Sciences, *Museum Service* 40 (1-2):25-31.
1980a *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III. Research Records No. 13, Rochester Museum & Science Center. Rochester.
1980b An Overview of the Current Status of Seneca Ceramics. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, pp. 87-94. Research Records No. 13, Rochester Museum & Science Center. Rochester.
1983 *Proceedings of the 1982 Glass Trade Bend Conference*, edited by C. F. Hayes III. Research Records No. 16, Rochester Museum & Science Center. Rochester.
1985 *Proceedings of the 1984 Trade Gun Conference*, edited by C. F. Hayes III. Research Records No. 18, Rochester Museum & Science Center. Rochester.
1992 The History of the New York State Archaeological Association: A Summary. *The Bulletin*, Journal of the New York State Archaeological Association 104:44-48.
- Hayes, C. F. III and L. Bergs
1969 A Progress Report on an Archaic Site on the Farrell Farm: The Cole Gravel Pit. *The Bulletin*, The New York State Archaeological Association 47:1-12.
- Hayes, C. F. III, C. C. Bodner, and L. P. Saunders, editors
1994 *Proceedings of the 1992 People to People Conference*. Research Records No. 23, Rochester Museum & Science Center. Rochester.
- Hayes, C. F. III and L. Ceci
1989 *Proceedings of the 1986 Shell Bead Conference*, edited by C. F. Hayes III and L. Ceci. Research Records No. 20, Rochester Museum & Science Center. Rochester.
- Hayes, C. F. III and B. Prisch
1973 A Prehistoric Iroquois Site on the Farrell Farm. *The Bulletin*, The New York State Archaeological Association 59:19-29.
- Holmes, W. H.
1903 *Aboriginal Pottery of the Eastern United States*. Annual Report of the Bureau of American Ethnology, No. 20. Washington, D. C.
- Hough, F. B.
1850 Notice of Several Ancient Remains of Art in Jefferson and St. Lawrence Counties. *Documents of the Senate of the State of New York*. Seventy-third Session. Volume 2, Document No. 75. Albany.
1851 Notice of Ancient Remains of Art in Jefferson and St. Lawrence Counties. *Documents of the Senate of the State of New York*. Seventy-fourth Session. Volume 2, Document No. 30. Albany.
1854 *A History of Jefferson County in the State of New York from the Earliest Period to the Present Time*. John Munsell, Albany.
- Houghton, F.
1912 The Seneca Nation from 1655-1687. *Bulletin of the Buffalo Society of Natural Sciences* 10 (2).
1916 The Characteristics of Iroquoian Villages of Western New York. *American Anthropologist* 18:508-520.
1922 The Archaeology of the Genesee Country. *Researches and Transactions of the New York State Archaeological Association* 3 (11):39-66.
- Huey, P. R.
1974 Reworked Pipe Stems: A 17th Century Phenomenon from the Site of Fort Orange, Albany, New York. *Historical Archaeology* 8:105-111.
1980 The Albany Glassworks from 1790 to 1800: A Study of American Industry During the Federal Period. *Journal of Glass Studies* 22:36-52.

- 1981 Archaeological Exploration of the Louw-Bogardus Site, Kingston, New York. *The Bulletin and Journal of Archaeology for New York State* 82:4-24.
- 1983 Glass Trade Beads from Fort Orange, Albany New York c. 1624-1676. In *Proceedings of the 1982 Glass Trade Bead Conference*, edited by C. F. Hayes III, pp. 83-110. Research Records No. 16. Rochester Museum & Science Center. Rochester.
- 1984a Dutch Sites of the 17th Century in Rensselaerswyck. In *The Scope of Historical Archaeology*, edited by D. G. Crozier, pp. 63-85. Laboratory of Anthropology, Temple University. Philadelphia.
- 1984b Old Slip and Cruger's Wharf at New York: An Archaeological Perspective of the Colonial American Waterfront. *Historical Archaeology* 18 (1):15-37.
- 1986 The Beginnings of Modern Historical Archaeology in the Northeast and the Origins of the Conference on Northeast Historical Archaeology. *Northeast Historical Archaeology* 15:2-15.
- 1987 Archaeological Evidence of Dutch Wooden Cellars and Perishable Wooden Structures at Seventeenth and Eighteenth Century Sites in the Upper Hudson Valley. In *New World Dutch Studies: Dutch Arts and Culture in Colonial America, 1609-1776*, edited by R. H. Blackburn and N. A. Kelley, pp. 13-35. Albany Institute of History and Art, Albany.
- 1988a The Archaeology of Colonial New Netherland. In *Colonial Dutch Studies: An Interdisciplinary Approach*, edited by E. Nooter and P. Bonomi. New York University Press, New York.
- 1988b Aspects of Continuity and Change in Colonial Dutch Material Culture at Fort Orange, 1624-1664. Ph.D. Dissertation, Department of American Civilization, University of Pennsylvania. University Microfilms, Ann Arbor.
- 1990 The History and Archaeology of Crown Point. *Fortress: The Castles and Fortifications Quarter*/r 5:44-54.
- 1994a Archaeological Testing for an Electrical Line at Ganondagan State Historic Site, July 12, 1994. *The Bulletin*, Journal of the New York State Archaeological Association 108:11-17.
- 1994b The Mahicans, the Dutch, and the Schodack Islands in the 17th and 18th Centuries. *Northeast Historical Archaeology* 21-22:96-118.
- 1996 Bibliography of Books, Reports, and Articles Produced in 1995 Relating to Archeology at New York State Historic Sites and State Parks, annotated by P. R. Huey. New York State Office of Parks, Recreation and Historic Preservation, Bureau of Historic Site Services, Waterford.
- Huey, P. R., L. M. Feister and J. E. McEvoy
1977 Archaeological Investigations in the Vicinity of "Fort Crailo" During Sewer Line Construction Under Riverside Avenue in Rensselaer, New York. *The Bulletin*, The New York State Archaeological Association 69:19-41.
- Hunt, E. D.
1986 Marian E. White: Researching the Settlement Patterns of the Niagara Frontier. *North American Archaeologist* 7(4):313-328.
- Jennings, J. D.
1968 *Prehistory of North America*. McGraw-Hill Book Company, New York.
- Jett, S. C.
1983 Precolumbian Transoceanic Contacts. In *Ancient North Americans*, edited by J. D. Jennings, pp. 557-614. W. H. Freeman and Company, San Francisco.
- Johnson, F.
1944 Review of *The Pre-Iroquoian Occupations of Near York State*, by W. A. Ritchie. *American Anthropologist* 46:530-535.
- 1946 *Man in Northeastern North America*, edited by F. Johnson. Papers of the R. S. Peabody Foundation for Archaeology, Vol. 3. Andover.
- Jones, P.
1875 *Annals and Recollections of Oneida County*. Pomroy Jones, Rome.
- Kaeser, E. J.
1963 The Morris Estate Club Site. *The Bulletin*, The New York State Archaeological Association 27:13-21.
- 1968 The Middle Woodland Placement of Steubenville-like Points in Coastal New York's Abbott Complex. *The Bulletin*, The New York State Archaeological Association 44:8-26.
- Kalin, R. J.
1983 Archaeology of Glacial Kettles in Northeastern Suffolk County: A Preliminary Report. *The Bulletin and Journal of Archaeology for New York State* 86:31-36.
- Kalin, R. J. and K. Lightfoot
1989 The Remsen Hill Site, Mount Sinai, Long Island, New York: A Preliminary Report. *The Bulletin*, Journal of the New York State Archaeological Association 99:14-24.

- Keeley, L. H.
1980 *Experimental Determination of Stone Tool Uses*. University of Chicago Press. Chicago.
- Kirkland, J. T.
1993 Models of Alluvial Deposition, Channel Stability, and Overbank Accumulation: Revised Interpretations. In *Archaeological Investigations in the Upper Susquehanna Valley, New York State* by R. E. Funk, pp. 95-99. Persimmon Press, Buffalo.
- Kirkland, J. T. and R. E. Funk
1979 Archaeological Chronology and Postglacial Alluvial Regimes in the Upper Susquehanna River Valley, New York. *Northeastern Geology* 1 (1):60-68.
- Klein, R. G. and K. Cruz-Urbe
1984 *The Analysis of Animal Bones from Archeological Sites*. University of Chicago Press, Chicago.
- Koch, A. and C. Reden
1944 *The Life and Selected Writings of Thomas Jefferson*. New York.
- Kopper, J. S., R. E. Funk, and L. A. Dumont
1980 Additional Paleo-Indian and Archaic Materials from the Dutchess Quarry Cave Area, Orange County, New York. *Archaeology of Eastern North America* 8:125-137.
- Kraft, H. C.
1970 *The Miller Field Site, Warren County, New Jersey, Part I: The Archaic and Transitional Stages*. Seton Hall University Press. South Orange.
1973 The Plenge Site: A Paleo-Indian Occupation Site in New Jersey. *Archaeology of Eastern North America* 1:56-117.
1975a *Archaeology of the Tocks Island Area*. Seton Hall University Press, South Orange.
1975b The Late Woodland Pottery of the Upper Delaware Valley: A Survey and Reevaluation. *Archaeology of Eastern North America* 3:101-140.
1976 The Rosencrans Site, an Adena-related Mortuary Complex in the Upper Delaware Valley, New Jersey. *Archaeology of Eastern North America* 4:9-50.
1977 The Paleo-Indian Sites at Port Mobil, Staten Island. In *Current Perspectives in Northeastern Archaeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 1-19. Researches and Transactions of the New York State Archaeological Association 17 (1).
1978 *The Minnisink Site*. Seton Hall University Press, South Orange.
- 1989 Sixteenth and Seventeenth Century Indian/White Trade Relations in the Middle Atlantic and Northeast Regions. *Archaeology of Eastern North America* 17:1-30.
- 1991a European Contact and Trade in the Lower Hudson Valley. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 193-221. Occasional Publications in Northeastern Anthropology No. 11. Archaeological Services, Bethlehem, Connecticut.
1991b The Minisink Indians. In *The People of Minisink*, edited by D. G. Orr and D. V. Campana, pp. 21-46. National Park Service, Philadelphia.
1992 A Tribute to William A. Ritchie and Louis A. Brennan. *The Bulletin*, Journal of the New York State Archaeological Association 104:9-13.
- Kraft, J. C.
1977 Late Quaternary Paleogeographic Changes in the Coastal Environments of Delaware, Middle Atlantic Bight, Related to Archaeological Settings. In *Amerinds and their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. *Annals of the New York Academy of Sciences* 288:35-69.
- Kuhn, R.
1985 A Morphological Analysis of Bifurcated-Base Projectile Points in the Northeastern United States. *Man In the Northeast* 29:55-69.
1986 Indications of Interaction and Acculturation through Ceramic Analysis. In *The Mohawk Valley Project: 1983 Jackson-Everson Excavations*, edited by R. Kuhn and D. Snow, pp. 75-92. Institute for Northeast Anthropology. State University of New York at Albany, Albany.
1987 Trade and Exchange among the Mohawk-Iroquois: A Trace Element Analysis of Ceramic Smoking Pipes. *North American Archaeologist* 8 (4):305-315.
1989 The Trace Element Analysis of Hudson Valley Clays and Ceramics. *The Bulletin*, Journal of the New York State Archaeological Association 99:25-30.
1994a The Cromwell Site (NYSM 1121) Including A Brief Treatise on Early Seventeenth-Century Mohawk Pottery Trends. *The Bulletin*, Journal of the New York State Archaeological Association 108:29-38.
1994b Recent CRM Contributions to Iroquoian Archaeology in New York State. *Archaeology of Eastern North America* 21:73-88.
1996 A Comparison of Mohawk and Onondaga Projectile Point Assemblages. *Journal of Middle Atlantic Archaeology* 12:27-34.

- Kuhn, R. and S. Bamann
1987 A Preliminary Report on the Attribute Analysis of Mohawk Ceramics. *The Bulletin and Journal for New York State Archaeology* 94:40-46.
- Kuhn, R. and R. E. Funk
1994 Mohawk Interaction Patterns During the Late Sixteenth Century. In *Proceedings of the 1992 People to People Conference*, edited by C. F. Hayes III, C. C. Bodner, and L. P. Saunders, pp. 77-84. Research Records No. 23, Rochester Museum & Science Center. Rochester.
- Kuhn, R., R. E. Funk and J. E. Pendergast
1993 The Evidence for a Saint Lawrence Iroquoian Presence on Sixteenth Century Mohawk Sites. *Man in the Northeast* 45:77-86.
- Kuhn, R. and W. A. Lanford
1985 Sourcing Hudson Valley Cherts from Trace Element Analysis. *Man in the Northeast* 34:57-69.
- Kuhn, R. and D. R. Snow (editors)
1986 *The Mohawk Valley Project: 1983 Jackson-Everson Excavations*. Institute for Northeast Anthropology, State University of New York at Albany. Albany.
- Kuhn, T. S.
1970 *The Structure of Scientific Revolutions*. Second Edition. University of Chicago Press, Chicago.
- Lahren, L. and R. Bonnicksen
1974 Bone Foreshafts from a Clovis Burial in Southwestern Montana. *Science* 186:147-150.
- La Porta, P.
1989 The Stratigraphic Relevance and Archaeological Potential of the Chert-Bearing Carbonates of the Cambro-Ordovician Kittatinny Supergroup. *New York State Geological Association, Field Guide Handbook*, October 1989.
1994 Lithostratigraphic Models and the Geographic Distribution of Prehistoric Chert Quarries within the Cambro-Ordovician Lithologies of the Great Valley Sequence, Sussex County, New Jersey. In *Recent Research into the Prehistory of the Delaware Valley*, edited by C. A. Bergman and J. F. Doershuk, pp. 476-66. Journal of Middle Atlantic Archaeology Vol. 10. Archaeological Services. Bethlehem, Connecticut.
1996 Lithostratigraphy as a Predictive Tool for Prehistoric Quarry Investigations: Examples from the Dutchess Quarry Cave Site, Orange County, New York. In *A Golden Chronograph for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 73-84. Occasional Papers in Northeastern Anthropology No. 15. Archaeological Services. Bethlehem, Connecticut.
- Latham, R.
1953 Notes on the Orient Focus of Eastern Long Island, New York. *Pennsylvania Archaeologist* 23 (3-4):108-110.
- Laub, R. S.
1994 The Pleistocene/Holocene Transition in Western New York State: Fruits of Interdisciplinary Studies at the Hiscock Site. In *Great Lakes Archaeology and Paleocology: Exploring Interdisciplinary Initiatives for the Nineties*, edited by R. I. MacDonald, pp. 155-167. Quaternary Sciences Institute, Waterloo.
1995 The Hiscock Site (Western New York): Recent Developments in the Study of the Late Pleistocene Component. *Current Research in the Pleistocene* 12:27-28.
- Laub, R. S., N. G. Miller, and D. W. Steadman, editors
1988 *Late Pleistocene and Early Holocene Paleocology and Archaeology of the Eastern Great Lakes Region*. Bulletin of the Buffalo Society of Natural Sciences, Vol. 33. Buffalo.
- Laughlin, W. S. and A. B. Harper
1979 *The First Americans: Origins, Affinities, and Adaptations*. Gustav Fischer, New York.
- Lavin, L.
1980a Analysis of Ceramic Vessels from the Ben Hollister Site. *Bulletin of the Archaeological Society of Connecticut* 43:3-41.
1980b Analysis of Ceramic Pipes from the Ben Hollister Site. *Bulletin of the Archaeological Society of Connecticut* 43:42-46.
1980c Harik's Sandy Ground: A Report of the 1967 Salvage Excavations. *The Bulletin and Journal of Archaeology for New York State* 78:17-30.
1983a Patterns of Chert Acquisition among Woodland Groups within the Delaware River Valley: A Lithologic Approach. Ph.D. Dissertation, Department of Anthropology, New York University. University Microfilms, Ann Arbor.
1983b Heat-Treatment and Its Effects on Chert Color: The Results of Thermal Experimentation on Some Hudson and Delaware Valley Chert Types. *The Bulletin and Journal of Archaeology for New York State* 87:1-12.
1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Bulletin of the Archaeological Society of Connecticut* 47:5-40.
1986 Pottery Classification and Cultural Models in Southern New England Prehistory. *North American Archaeologist* 7 (1):1-14.

- 1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America* 16:101-120.
- 1988b The Morgan Site, Rocky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-22.
- 1991 A Re-examination of the Old Lyme Shell Heap. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 69-94. Occasional Papers in Northeastern Archaeology No. 11. Archaeological Services, Bethlehem, Connecticut.
- Lavin, L., F. W. Gudrian and L. Miroff
- 1993 Prehistoric Pottery from the Morgan Site, Rocky Hill, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 56:63-100.
- 1994 Pottery Production and Cultural Process: Prehistoric Ceramics from the Morgan Site. *Northeast Historic Archaeology* 21-22:44-63.
- Lavin, L. and R. Kra
- 1994 Prehistoric Pottery Assemblages from Southern Connecticut: A Fresh Look at Ceramic Classification in Southern New England. *Bulletin of the Archaeological Society of Connecticut* 57:35-52.
- Lavin, L. and B. F. Morse
- 1985 Ceramic Assemblages from the Rye Marshland Area of Southern New York. *The Bulletin and Journal of Archaeology for New York State* 91:13-25.
- Lavin, L., M. E. Mozzi, J. W. Bouchard, and K. Hartgen
- 1996 The Goldkrest Site: An Undisturbed, Multi-component Woodland Site in the Heart of Mahikan Territory. *Journal of Middle Atlantic Archeology* 12:113-130.
- Lavin, L. and D. Prothero
- 1981 Microscopic Analysis of Cherts within and Adjacent to the Delaware River Watershed. *Man in the Northeast* 21:3-17.
- Lavin, L. and B. Salwen
- 1983 The Fastener Site: A New Look at the Archaic/Woodland Transition in the Lower Housatonic Valley. *Bulletin of the Archaeological Society of Connecticut* 46:15-43.
- Lenig, D. J.
- 1965 *The Oak Hill Horizon and Its Relation to the Development of Five Nations Iroquois Culture*. Researches and Transactions of the New York State Archeological Association 15 (1). Buffalo.
- 1977 Of Dutchmen, Beaver Hats, and Iroquois. In *Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 71-84. Researches and Transactions of the New York State Archeological Association 17(1). Albany and Rochester.
- Lenik, E.
- 1975 The Riddle of the Prehistoric Walls, Ramapo, New York. *The Bulletin*, The New York State Archaeological Association 63:1-13.
- 1976a Two Petroglyph Sites-The Indian Rock Petroglyphs: Fact or Forgery. *The Bulletin*, The New York State Archaeological Association 66:1-2.
- 1976b The Jericho, New York Petroglyph. *The Bulletin*, The New York State Archaeological Association 66:3-8.
- 1980 Aboriginal Rock Art/Early Interpretations and New Perspectives. *The Bulletin and Journal of Archaeology for New York State* 78:2-9.
- 1987 The Sharrott Estates Prehistoric Site. *The Bulletin and Journal of Archaeology for New York State* 94:26-33.
- 1988 A Turtle Petroglyph on the Bronx River. *The Bulletin*, Journal of the New York State Archaeological Association 97:17-20.
- 1989 New Evidence of the Contact Period in Northeastern New Jersey and Southeastern New York. *Journal of Middle Atlantic Archaeology* 5:103-120.
- 1991 Native American Rock Art in the Lower Hudson Valley and Coastal New York. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan*, edited by H. C. Kraft, pp. 177-192. Occasional Publications in Northeastern Anthropology No. 11. Archaeological Services, Bethlehem, Connecticut.
- 1992 Native American Archaeological Resources in Urban America: A View from New York City. *The Bulletin*, Journal of the New York State Archaeological Association 103:20-29.
- Lenik, E. and T Fitzpatrick
- 1995 The Old Kakiat Trail Rockshelter. *The Bulletin*, Journal of the New York State Archaeological Association 109:20-27.
- Lenik, E., T. Fitzpatrick and N. L. Gibbs
- 1993a An Indian Petroglyph on the Hemlock Hill Trail. *The Bulletin*, Journal of the New York State Archaeological Association 105:1-2.
- 1993b A Twentieth Century Petroglyph on Horse Pond Brook. *The Bulletin*, Journal of the New York State Archaeological Association 105:3-5.

- Lewis, D.
1994 An Intact Prehistoric Ceramic Pot from Cumberland Bay, Lake Champlain. *The Bulletin*, Journal of the New York State Archaeological Association 107:25.
- Lewis, D. M. and R. E. Funk
1993 Prehistoric Vegetation Change in the Upper Susquehanna Drainage. In *Archaeological Investigations in the Upper Susquehanna Valley, New York State*, by R. E. Funk, pp. 115-124. Persimmon Press, Buffalo.
- Lightfoot, K. G.
1985 Shell Midden Diversity: A Case Example from Coastal New York. *North American Archaeologist* 6 (4):289-323.
1986 Regional Surveys in the Eastern United States: The Strengths and Weaknesses of Implementing Subsurface Testing Programs. *American Antiquity* 51 (3):484-504.
- Lightfoot, K. G., R. Kalin, O. Lindauer, and L. Wicks
1985 Coastal New York Settlement Patterns: The View from Shelter Island. *Man in the Northeast* 30:59-82.
- Lightfoot, K. G., R. Kalin and J. Moore
1985 Interior Resources Exploitation: A Woodland Settlement Model for Long Island, New York. *Anthropology* 8:15-40.
1987 *Prehistoric Hunter-Gatherers of Shelter Island, New York: An Archaeological Study of the Mashomack Preserve*. Contributions of the University of California Research Facility, No. 46. Department of Anthropology, University of California at Berkeley.
- Lindner, C.
1983 Evidence Against Prehistoric Digging Tools of Sandstone in Central New York State. *Man in the Northeast* 26:55-73.
1987 Geoarchaeology of Culturally Induced Flood Impacts: Schoharie Valley, Eastern New York. Ph.D. dissertation, State University at Albany. University Microfilms, Ann Arbor.
1991 Archaeological Sites and Historical Floods in the Schoharie Valley, Eastern New York. *The Hudson Valley Regional Review* 8:104-138.
1992 Grouse Bluff: An Archaeological Introduction. *The Hudson Valley Regional Review* 9 (1):25-46.
- Lindner, C. and L. Folb
1996 Chert Microdrills from Eastern New York: Use-wear on Bushkill Tools That Might Have Made Middlesex Beads. In *A Golden Chronograph, for Robert E. Funk*, edited by C. Lindner and E. V. Curtin, pp. 141-154. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Lopez, J.
1957 Some Notes on Interior Cord-Marked Pottery from Coastal New York. *Pennsylvania Archaeologist* 27 (1):23-32.
1958a Curvilinear Design Elements in the New York Coastal Area. *Bulletin of the Archaeological Society of Connecticut* 28:3-11.
1958b The Milo Rock Site, Pelham Bay Park, Bronx County, New York. *Pennsylvania Archaeologist* 28 (3-4):3-18.
- Lopez, J. and R. Latham
1960 Faces on Sebonac Pottery from Eastern Long Island, New York. *Pennsylvania Archaeologist* 30 (2):58-62.
- Lopez, J. and S. Wisniewski
1972 The Ryders Pond Site 11. *The Bulletin*, The New York State Archaeological Association 55:6-20.
- Lord, P. Jr.
1972 Two Stratified Alluvial Sites in the Upper Hudson Valley. (Senior author R. Funk.) *Pennsylvania Archaeologist* 42 (1-2):27-61.
1983 *Mills on the Tsatsawassa* The State Education Department, New York State Museum, Albany.
1989 *War Over Walloonzscoick: Land Use and Settlement Pattern on the Bennington Battlefield-1777*. New York State Museum Bulletin 473. Albany.
1993a The Wing Dam at Snouk's Rapid: A Proto-Lock on the Mohawk River. *The Bulletin*, Journal of the New York State Archaeological Association 106:1-7.
1993b *The Necks on Mohawk's River: New York's First Canal*. The Canal Society of New York State.
- Luther, D. D.
1910 *Nun-du-wa'-o, the Oldest Seneca Village*. New York State Museum Bulletin 140. Albany.
- MacNeish, R. S.
1952a *Iroquois Pottery Types, A Technique for the Study of Iroquois Prehistory*, National Museum of Canada, Bulletin 124. Ottawa.
1952b The Archeology of the Northeastern United States. In *Archeology of the Eastern United States*, edited by J. B. Griffin, pp. 46-58. University of Chicago Press, Chicago.
1980 Iroquois Pottery Types 32 Years Later. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, pp. 1-6. Research Records No. 13, Rochester Museum & Science Center, Rochester.

- Martin, P. S., G. I. Quimby, Jr., and D. Collier
1949 *Indians Before Columbus*. University of Chicago Press, Chicago.
- Mason, R. J. and C. Irwin
1960 An Eden-Scottsbluff Burial in Northeastern Wisconsin. *American Antiquity* 26 (1):43-57.
- McBride, K. A.
1984 Middle and Late Archaic Periods in the Connecticut River Valley: A Reexamination. *Bulletin of the Archaeological Society of Connecticut* 47:55-72.
- McBride, K. A. and Dewar
1981 Prehistoric Settlement in the Connecticut River Valley. *Man in the Northeast* 22:37-66.
- McDowell, E.
1975 Some Thoughts on the Cortland County Archeological Survey. *The Bulletin, The New York State Archaeological Association* 64:26-27.
- McDowell-Loudan, E.
1979 The Krauklis Site, Village of McGraw, Cortland County, New York. *The Bulletin and Journal of Archaeology, for New York State* 77:25-30.
1984 Sheep Pen Site, Erie Canal Village. *The Bulletin and Journal of Archaeology for New York State* 89:43-50.
1993 Dryden Lake Recreation Area Project. *The Bulletin, Journal of the New York State Archaeological Association* 106:8-16.
- McGhee, R. and J. A. Tuck
1975 *An Archaic Sequence, from the Strait of Bell Isle, Labrador*. Archaeological Survey of Canada, Paper No. 34. National Museum of Man Mercury Series, Ottawa.
- McGimsey, C. R., III
1972 *Public Archeology*. Seminar Press, New York.
- McKern, W. C.
1939 The Midwestern Taxonomic Method as an Aid to Archaeological Culture Study. *American Antiquity* 4 (4):310-313.
- McWeeney, L.
1986 Sea Level Rise and the Submergence of Archaeological Sites in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:53-60.
1989 What Lies Lurking Below the Soil: Beyond the Archaeological View of Flotation Samples. *North American Archaeologist* 10:227-238.
- Meinig, D. W.
1977 The Colonial Period. In *Geography of New York State*, edited by J. H. Thompson, pp. 121-139. Syracuse University Press, Syracuse.
- Moeller, R. W.
1980 *6FL21: A Paleo-Indian Site in Western Connecticut*. Occasional Paper No. 2. American Indian Archaeological Institute. Washington, Connecticut.
1982 *Practicing Environmental Archaeology: Methods and Interpretations*. Occasional Paper No. 3, American Indian Archaeological Institute. Washington, Connecticut.
1984 Paleo-Indian and Early Archaic Occupations of Connecticut. *Bulletin of the Archaeological Society, Connecticut* 47:41-54
1992 *Analyzing and Interpreting Late Woodland Features*. Occasional Publications in Northeastern Anthropology No. 12. Archaeological Services. Bethlehem, Connecticut.
- Moody, K. and C. L. Fisher
1989 Archaeological Evidence of the Colonial Occupation at Schoharie Crossing State Historic Site. Montgomery County, New Historic Site. Montgomery County, New York. *The Bulletin, Journal of the New York State Archaeological Association* 99:1-13.
- Morgan, L. H.
1851 *The League of the Ho-Do-No-Sau-Nee, or Iroquois*. Sage and Brother, Rochester.
1871 *Systems of Consanguinity and Affinity of the Human Family*. Smithsonian Institution Contributions to Knowledge 17. Washington. D. C.
1877 *Ancient Society*. World Publishing Company. N.Y.
1881 *Houses and House-Life of the American Aborigines*. U. S. Geological Survey Contributions to North American Ethnology 4:1-281.
- Morrison, S. E.
1971 *The European Discovery of America: The Northern Voyages*. Oxford University Press, New York.
- Mueller, J. W., editor
1975 *Sampling in Archaeology*. The University of Arizona Press. Tucson.
- Newman, W. S.
1967 Late Pleistocene History of the Lower Hudson River Estuary. *The Bulletin, The New York State Archaeological Association* 40:1-2.
1974 A Comment on Snow's "Rising Sea Level and Prehistoric Cultural Ecology in Northern New England." *The Bulletin, The New York State Archaeological Association* 60:28-29.

- 1977 Late Quaternary Paleoenvironmental Reconstruction: Some Contradictions from Northwestern Long Island. New York. In *Amerinds and their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. *Annals of the New York Academy of Sciences* 288:545-570.
- Newman, W. S. and R. W. Fairbridge
1962 Post Glacial Sea Level, Coastal Subsidence and Littoral Environments in the Metropolitan New York City Area. *Proceedings of the First National Coastal and Shallow Water Research Conference*, pp. 188-190. National Science Foundation and Office of Naval Research, Tallahassee.
- Newman, W. S., D. H. Thurber, H. S. Zeiss, A. Rokach, and L. Musich
1969 Late Quaternary Geology of the Hudson River Estuary: A Preliminary Report. *Transactions of the New York Academy of Sciences* 31 (5):548-570.
- Nicholas, G. P.
1987 Rethinking the Early Archaic. *Archaeology of Eastern North America* 15:99-124.
1991 Putting Wetlands into Perspective. *Man in the Northeast* 42:29-38.
- Niemczycki, M.
1984 *The Origin and Development of the Seneca and Cayuga Tribes of New York State*. Research Records No. 17, Rochester Museum & Science Center, Rochester.
1986 The Genesee Connection: The Origins of Iroquois Culture in West-Central New York. *North American Archaeologist* 7 (1):15-44.
1987 Late Woodland Settlement in the Genesee. *The Bulletin*, Journal of the New York State Archaeological Association 95:32-38.
1988 Seneca Tribalization: An Adaptive Strategy. *Man in the Northeast* 36:77-87.
1991 Cayuga Archaeology: Where Do We Go From Here? *The Bulletin*, Journal of the New York State Archaeological Association 102:27-33.
1995 Ceramics and Ethnicity in West-Central New York: Exploring Owasco-Iroquois Connections. *Northeast Anthropology* 49:43-54.
- Noonan, K.
1971 Witch's Walk No. 1: A Preliminary Site Report. *The Bulletin*. The New York State Archaeological Association 52:22-38.
- Oldale, R. N.
1985 Late Quaternary Sea Level History of New England: A Review of the Published Sea Level Data. *Northeastern Geology* 7 (3-4):192-200.
1986 Late-glacial and Postglacial Sea-Level History of New England: A Review of Available Sea-Level Curves. *Archaeology of Eastern North America* 14:89-100.
- Parker, A. C.
1907 *Excavations in an Erie Village and Burial Site tit Ripley, Chautauqua County*. New York. New York State Museum Bulletin 117. Albany.
1910 *Iroquois Uses of Maize and Other Fond Plants*. New York State Museum Bulletin 144. Albany.
1916 The Origin of the Iroquois as Suggested by Their Archeology. *American Anthropologist* 18:479-507.
1918 *A Prehistoric Iroquoian Site on the Reed Farm, Richmond Mills, Ontario County, New York*. Researches and Transactions of the New York State Archeological Association 1 (1).
1919 *A Contact Period Seneca Site Situated at Factory Hollow, Ontario County, New York*. Researches and Transactions of the New York State Archeological Association 1(2).
1922 *The Archaeological History of New York*. Parts 1 and 2. New York State Museum Bulletins 235- 238. Albany.
1924 *The Great Algonquian Flint Mines at Cocksackie*. Researches and Transactions of the New York State Archeological Association 4 (4). Rochester.
1926 *An Analytical History of the Seneca Indians*. Researches and Transactions of the New York State Archeological Association 7 (1-4).
- Pendergast, J. F.
1992 Some Notes on Cross-Border Archaeology in This Region. *The Bulletin*, Journal of the New York State Archaeological Association 104:31-43.
1996 Problem Orientation for St. Lawrence Iroquoian Archaeological Research. *Journal of Middle Atlantic Archaeology* 12:53-60.
- Petersen, J. B.
1991 Archaeological Testing at the Sharrow Site: A Deeply Stratified Early to Late Holocene Cultural Sequence in Central Maine. *Occasional Publications in Maine Archaeology* 8. Augusta.
1995 Preceramic Archaeological Manifestations in the Far Northeast: A Review of Current Research. *Archaeology of Eastern North America* 23:207-229.

- Petersen, J. B. and M. Power
1982 *The Winooski Site and the Middle Woodland Period in the Northeast*. Report Submitted to the Interagency Archaeological Service, Mid-Atlantic Region, National Park Service. Philadelphia.
- Petersen, J. B. and D. E. Putnam
1992 Early Holocene Occupation in the Gulf of Maine Region. In *Early Holocene Occupation of Northern New England*, edited by B. S. Robinson, J. B. Petersen, and A. K. Robinson, pages 13-62. Occasional Publications in Maine Archaeology 9. Augusta.
- 1963 A Heavily Stockaded Late Prehistoric Oneida Iroquois Settlement. *Pennsylvania Archaeologist* 33 (1-2):56-92.
- 1966 Archaeology of the Oneida Iroquois as Related to Early Acculturation and to the Location of the Champlain-Iroquois Battle of 1615. Ph.D. Dissertation, University of Michigan. University Microfilms, Ann Arbor.
- 1976 *Archaeology of the Oneida Iroquois, Vol. 1*. Occasional Papers in Northeastern Anthropology No. 1. George's Mills, New Hampshire.
- 1977 A Perspective on Oneida Archaeology. In *Current Perspectives in Northeastern Archaeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 51-69. Researches and Transactions of the New York State Archaeological Association 17 (1). Albany and Rochester.
- 1980 Oneida Iroquois Pottery Typology. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, G. R. Hamell, and B. M. Koenig, pp. 35-50. Research Records No. 13, Rochester Museum & Science Center, Rochester.
- 1991 Oneida Archaeology: The Last Quarter Century. *The Bulletin*, Journal of the New York State Archaeological Association 102:40-42.
- 1990 The Late and Terminal Archaic Periods of Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Terminal Archaic of the Middle Atlantic Region*, edited by R. W. Moeller, pp. 85-104. Archaeological Services, Bethlehem, Connecticut.
- 1992 Late and Terminal Archaic Cultural Adaptations of the Lowest Connecticut Valley. Ph. D. Dissertation, State University of New York at Albany. University Microfilms, Ann Arbor.
- Plane, A. M.
1991 New England's Logboats: Four Centuries of Watercraft. *Bulletin of the Massachusetts Archaeological Society* 52 (1):8-17.
- Pratt, M. K.
1991 The St. Lawrence Iroquois of Northern New York. *The Bulletin*, Journal of the New York State Archaeological Association 102:43-46.
- Pratt, P.
1960 A Criticism of MacNeish's Iroquois Pottery Types. *Pennsylvania Archaeologist* 30:106-110.
- 1961a Oneida Iroquois Glass Trade Bead Sequence 1585-1745. *Indian Glass Trade Beads, Color Guide Series, No. 1*. The Fort Stanwix Museum, Rome.
- 1961b The Bigford Site, Late Prehistoric Oneida. *Pennsylvania Archaeologist* 32(1):49-59.
- Pfeiffer, J. E.
1980 The Griffin Site: A Susquehanna Cremation Burial in Southern Connecticut. *Man in the Northeast* 19:129-133.
- 1983 Bashan Lake: 4500 Years of Prehistory. *Bulletin of the Archaeological Society of Connecticut* 46:45-53.
- 1984 The Late and Terminal Archaic Periods of Connecticut Prehistory. *Bulletin of the Archaeological Society of Connecticut* 47:73-88.
- 1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern New England. *Bulletin of the Archaeological Society of Connecticut* 49:19-35.
- Prezzano, S.
1988 Spatial Analysis of Post Molds at the Sackett Site, Ontario County, New York. *Man in the Northeast* 35:27-45.
- 1996 Household and Community: The Development of Iroquoian Agricultural Village Life. *Journal of Middle Atlantic Archaeology* 12:7-17.
- Prezzano, S. and V. Steponaitis
1990 *Excavations at the Boland Site, 1984-1987: A Preliminary Report*. Research Report 8, Research Laboratories of Anthropology, University of North Carolina, Chapel Hill.
- Price, B. J.
1982 Cultural Materialism: A Theoretical Overview. *American Antiquity* 47 (4):709-744.
- Prisch, B.
1982 *Aspects of Change in Seneca Iroquois Ladles A.D. 1600-1900*. Research Records No. 15, Rochester Museum & Science Center, Rochester.
- Purdy, B.
1988 *Wet Site Archaeology*. The Telford Press, New Jersey.
- 1991 *The Art and Archaeology of Florida's Wetlands*. CRC Press, Boca Raton.

- Reitz, E. J.
1988 Evidence for Coastal Adaptations in Georgia and South Carolina. *Archaeology of Eastern North America* 16:137-158.
- Richardson, J. D. and J. L. Swauger
1996 The Petroglyphs Speak: Rock Art and Iroquois Origins. *Journal of Middle Atlantic Archaeology* 12:43-52.
- Rippeteau, B. E.
1977 New Data and Models for 8000 Years of Archaic Societies and Their Environments in the Upper Susquehanna Valley of New York State. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:392-399.
1978 The Upper Susquehanna Iroquois: An Iroquoian Enigma. In *Essays in Northeastern Anthropology in Memory of Marian E. White*, edited by W. Engelbrecht and D. Grayson, pp. 123-151. Occasional Publications in Northeastern Anthropology No. 5. Rindge, New Hampshire.
- Ritchie, W. A.
1932 *The Lamoka Lake Site, the Type Station of the Archaic Algonkin Period in New York*. Researches and Transactions of the New York State Archeological Association 7 (4):79-134. Rochester.
1936 *A Prehistoric Fortified Village at Canandaigua, Ontario County, New York*. Research Records No. 3, Rochester Museum of Arts and Sciences, Rochester.
1937 Culture Influences from Ohio in New York Archeology. *American Antiquity* 2 (3):182-194.
1938 A Perspective of Northeastern Archaeology. *American Antiquity* 4:94-112.
1939 Excavations in a Prehistoric Village Site Near Bainbridge, New York. *Museum Service*, April-May, pp. 86-90. Rochester Museum of Arts and Sciences, Rochester.
1940 *Two Prehistoric Village Sites at Brewerton, New York*. Research Records No. 5, Rochester Museum of Arts and Sciences, Rochester.
1944 *The Pre-Iroquoian Occupations of New York State*. Memoir No. 1, Rochester Museum of Arts and Sciences, Rochester.
1945 *An Early Site in Cayuga County, New York. The Station of the Frontenac Focus, Archaic Aspect*. Research Records No. 7, Rochester Museum of Arts and Sciences, Rochester.
1946 *A Stratified Prehistoric Site at Brewerton, New York*. Researches and Transactions of the New York State Archeological Association 11 (1). Rochester Museum of Arts and Sciences, Rochester.
- 1947 *Archeological Evidence, for Ceremonialism in the Owasco Culture*. Researches and Transactions of the New York State Archeological Association 11 (2). Rochester.
1949 *The Bell-Philhower Site in Sussex County, New Jersey*. Prehistory Research Series 3 (2). Indiana Historical Society, Indianapolis.
1951 A Current Synthesis of New York Prehistory. *American Antiquity* 17 (2):130-136.
1952 *The Chance Horizon: An Early Stage in the Development of Mohawk Iroquois Culture*. Circular 29. New York State Museum, Albany.
1953 A Probable Paleo-Indian Site in Vermont. *American Antiquity* 18 (3):249-258.
1954 *Dutch Hollow, an Early Historic Period Seneca Site in Livingston County, New York*. Researches and Transactions of the New York State Archeological Association 13 (1). Rochester Museum of Arts and Sciences, Rochester.
1955 *Recent Discoveries Suggesting an Early Woodland Burial Cult in the Northeast*. Circular No. 40, New York State Museum, Albany.
1956 Each to the Other. *American Antiquity* 22 (2):169-170.
1957 *Traces of Early Man in the Northeast*. New York State Museum and Science Service Bulletin 358, Albany.
1958 *An Introduction to Hudson Valley Prehistory*. New York State Museum and Science Service Bulletin 367. Albany.
1959 *The Stony Brook Site and its Relation to Archaic and Transitional Cultures on Long Island*. New York State Museum and Science Service Bulletin 372, Albany.
1961 *A Typology and Nomenclature for New York Projectile Points*. New York State Museum and Science Service Bulletin 384. Albany.
1962 The Antiquity of Pottery in the Northeast. *American Antiquity* 27 (4):583-584.
1965 *The Archaeology of New York State*. Natural History Press, Garden City.
1968 The KI Site, the Vergennes Phase, and the Laurentian Tradition. *The Bulletin*, The New York State Archeological Association 42:1-5.
1969a *The Archaeology of New York State*. Revised Edition. Natural History Press, Garden City.
1969b *The Archaeology of Martha's Vineyard*. Natural History Press, Garden City.
1971a The Archaic in New York. *The Bulletin*, The New York State Archeological Association 52:2-12.
1971b *A Typology and Nomenclature for New York Projectile Points*. Revised Edition. New York State Museum and Science Service Bulletin 384. Albany.
1974 Reminiscences of a Prehistorian. *The Bulletin*, The New York State Archeological Association 61:11-19.

- 1976 Prehistoric Man in the Pine Bush. In Pine Bush, Albany's Lost Frontier, edited by D. Rittner, pp. 211 - 215. Pine Bush Historic Preservation Project, Albany.
- 1979a The Otter Creek No. 2 Site in Rutland County, Vermont. *The Bulletin and Journal of Archaeology for New York State* 76:1-2 1.
- 1979b Some Regional Ecological Factors in the Prehistory of Man in the Northeast. *The Bulletin*, The New York State Archaeological Association 75:14-23.
- 1985 Archaeology in the Northeast. *American Antiquity* 50 (2):412-420.
- Ritchie, W. A. and D. W. Dragoo
1960 *The Eastern Dispersal of Adena*. New York State Museum and Science Service Bulletin 379. Albany.
- Ritchie, W. A. and R. E. Funk
1971 Evidence for Early Archaic Occupations on Staten Island. *Pennsylvania Archaeologist* 41 (3):45-59.
- 1973 Aboriginal Settlement Patterns in the Northeast. New York State Museum and Science Service Memoir 20, Albany.
- 1984 Paleo-Indians in New Perspective: Comments on the Assembled Papers. *Archaeology of Eastern North America* 12:1-4.
- Ritchie, W. A. and R. S. MacNeish
1949 The Pre-Iroquoian Pottery of New York State. *American Antiquity* 15 (2):97-124.
- Robbins, M.
1960 *Wapanucket No. 6: An Archaic Village in Middleboro, Massachusetts*. Cohannet Chapter, Massachusetts Archaeological Society, Attleboro.
- 1968 *An Archaic Ceremonial Complex at Assawompsett*. Massachusetts Archaeological Society, Attleboro.
- 1980 *Wapanucket, An Archaeological Report*. Massachusetts Archaeological Society, Attleboro.
- Roberts, A.
1980 A Geographic Approach to Southern Ontario Archaic. *Archaeology of Eastern North America* 8:28-45.
- 1984 Paleo-Indian on the North Shore of Lake Ontario. *Archaeology of Eastern North America* 12:248-265.
- Robinson, B. S.
1992 Early and Middle Archaic Occupation of the Gulf of Maine Region: Mortuary and Technological Patterning. In *Early Holocene Occupation in Northern New England*, edited by B. S. Robinson. J. B. Petersen, and A. K. Robinson, pp. 63-116. Occasional Publications in Maine Archaeology 9. Augusta.
- 1996 A Regional Analysis of the Moorehead Burial Tradition: 8500-3700 B.P. *Archaeology of Eastern North America* 24:95-148.
- Rothschild, N.
1983 The Recognition of Leadership in Egalitarian Societies of the Northeast. In *The Development of Political Organization in Native North America*, edited by E. Tooker, pp. 165-182. Proceedings of the American Ethnological Society, Washington, D. C.
- Rothschild, N. and L. Lavin
1977 The Kaeser Site: A Stratified Shell Midden in the Bronx. New York. *The Bulletin*, The New York State Archaeological Association 70:1-27.
- Rowe, J. H.
1961 Stratigraphy and Seriation. *American Antiquity* 26:324-330.
- Rumrill, D.
1985 An Interpretation and Analysis of the Seventeenth Century Mohawk Nation: Its Chronology and Movements. *The Bulletin and Journal of Archaeology for New York State* 90:1-39.
- Rutsch, E.
1970 An Analysis of the Lithic Materials Used in the Manufacture of Projectile Points from Coastal New York. *The Bulletin*, The New York State Archaeological Association 49:1-12.
- Ruttenber, E. M.
1872 *History of the Indian Tribes of Hudson's River*. J. Munsell. Albany.
- Salwen, B.
1962 Sea Levels and Archaeology in the Long Island Sound Area. *American Antiquity* 28:46-55.
- 1965 Sea Levels and the Archaic Archaeology of the Northeastern Coast of the United States. Ph.D. Dissertation, Columbia University, New York. University Microfilms, Ann Arbor.
- 1968 Muskeeta Cove 2: A Stratified Woodland Site on Long Island. *American Antiquity* 33 (3):322-340.
- 1969 A Tentative "In Situ" Solution to the Mohegan-Pequot Problem. In *An Introduction to the Archaeology and History of the Connecticut Valley Indian*, edited by W. R. Young, pp. 81-88. Springfield Museum of Science Publications 1(1).
- 1970 Cultural Inferences from Faunal Remains: Examples from Three Northeast Coastal Sites. *Pennsylvania Archaeologist* 40 (1-2):1-8.

- 1975 Post-Glacial Environments and Cultural Change in the Hudson River Basin. *Man in the Northeast* 10:43-70.
- 1978 Indians of Southern New England and Long Island: Early Period. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 160-176. Smithsonian Institution, Washington, D. C.
- Sanger, D.
- 1975 Culture Change as an Adaptive Process in the Maine-Maritimes Region. *Arctic Anthropology* 12 (2):60-75.
- 1988 Maritime Adaptations in the Gulf of Maine. *Archaeology of Eastern North America* 16:81-100.
- Sanger, D., W. R. Belcher and D. C. Kellogg
- 1992 Early Holocene Occupation at the Blackman Stream Site, Central Maine. In *Early Holocene Occupation of Northern New England*, edited by B. S. Robinson, J. B. Petersen, and A. K. Robinson. pp. 149-162. Occasional Publications in Maine Archaeology 9. Augusta.
- Sanger, D., R. B. Davis, R. G. McKay, and H. W. Borns
- 1977 The Hirundo Archaeological Project - An Interdisciplinary Approach to Central Maine Prehistory. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W. Newman and B. Salwen. Annals of the New York Academy of Sciences 288:457-471.
- Saunders, L. P.
- 1992 Charles F. Wray: The View from the Hill. *The Bulletin*, Journal of the New York State Archaeological Association 104:21-27.
- 1994 A Consideration of Local Origins for Epidemic Disease in Certain Native American Populations. In *Proceedings of the 1992 People to People Conference*, edited by C. F. Hayes III, C. C. Bodner, and L. P. Saunders. pp. 105-114. Research Records No. 23, Rochester Museum & Science Center, Rochester.
- Saunders, L. P. and Sempowski, M.
- 1991 The Seneca Site Sequence and Chronology: The Baby or the Bath Water? *The Bulletin*, Journal of the New York State Archaeological Association 102:13-26.
- Saville, F. H.
- 1920 *A Montauk Cemetery at Easthampton, Long Island*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation 2(3).
- Schoolcraft, H.
- 1847 *Notes on the Iroquois*. Bartlett and Weford, New York.
- 1851 *Historical and Statistical Information Respecting the History, Condition, and Prospects of the Indian Tribes of the United States*. Philadelphia.
- Schock, J.
- 1976 Southwestern New York: The Chautauqua Phase and Other Late Woodland Occupations. In *The Late Prehistory of the Lake Erie Basin*, edited by D. S. Brose, pp. 89-109. The Cleveland Museum of Natural History, Cleveland.
- Schrabisch, M.
- 1909 Indian Rockshelters in Northern New Jersey and Southern New York. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler. Anthropological Papers of the American Museum of Natural History No. 8. New York.
- n.d. The Archeology of Southeastern New York. Manuscript on file at the New York State Museum. Albany.
- Schuldenrein, J.
- 1995 Prehistory and the Changing Holocene Geography of Dogan Point. In *Dogan Point: A Shell Matrix Site in the Lower Hudson Valley*, edited by C. Claassen, pp. 39-64. Occasional Publications in Northeastern Anthropology No. 14. Archaeological Services. Bethlehem, Connecticut.
- Sempowski, M.
- 1986 Differential Mortuary Treatment of Seneca Women: Some Social Inferences. *Archaeology of Eastern North America* 14:35-44.
- 1989 Fluctuations Through Time in the Use of Marine Shell at Seneca Iroquois Sites. In *Proceedings of the 1986 Shell Bead Conference*, edited by C. F. Hayes III and L. Ceci, pp. 81-96. Research Records No. 20, Rochester Museum & Science Center, Rochester.
- 1994 Early Historic Exchange Between the Seneca and the Susquehannock. In *Proceedings of the 1992 People to People Conference*, edited by C. F. Hayes III, C. C. Bodner, and L. P. Saunders, pp. 51-64. Research Records No. 23, Rochester Museum & Science Center, Rochester.
- Sempowski, M., L.P. Saunders, and G. C. Cervone
- 1988 The Adams and Culbertson Sites: A Hypothesis for Village Formation. *Man in the Northeast* 35:95-108.
- Silver, A.
- 1980 Comment on Maize Cultivation in Coastal New York. *North American Archaeologist* 2:117-130.
- 1991 The Abbott Interaction Sphere: A Consideration of the Middle Woodland Period in Coastal New York and a Proposal for a Middle Woodland Exchange System. Ph.D. Dissertation, New York University. University Microfilms, Ann Arbor.

Sirkin, L. A.

- 1965 Late Pleistocene Pollen Stratigraphy of Western Long Island and Eastern Staten Island, New York. *Adelphi University Science Journal*, Institute of Science and Mathematics. No. 15.
- 1977 Late Pleistocene Vegetation and Environments in the Middle Atlantic Coastal Region. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. *Annals of the New York Academy of Sciences* 288:206-217.
- 1986 Pleistocene Stratigraphy of Long Island, New York. In *The Wisconsin Stage of the First Geological District*, edited by D. Cadwell, pp. 6-21. New York State Museum Bulletin 455. Albany.

Skinner, A.

- 1903a Recent Excavations in Indian Camp Sites at Mariner's Harbor. *Proceedings of the Natural History Association of Staten Island* 8:58.
- 1903b List of Indian Villages and Camp Sites on Staten Island. *Proceedings of the Natural History Association of Staten Island* 8:59-60.
- 1903c Recent Excavations in Indian Camp Sites at Mariner's Harbor. *Proceedings of the Natural History Association of Staten Island* 8, March 14.
- 1903d Iroquoian Influence on the Staten Island Indians. *Proceedings of the Natural History Association of Staten Island* 8, May 9.
- 1904a A Short Account of the Algonkian Indians of Staten Island. *Proceedings of the Natural History Association of Staten Island* 9, January 6.
- 1904b Trade Articles Used by the Staten Island Indians. *Proceedings of the Natural History Association of Staten Island* 9, March 14.
- 1904c Indian Skeletons at Mariner's Harbor. *Proceedings of the Natural History Association of Staten Island* 9, March 14.
- 1905a Food Materials Used by the Staten Island Indians. *Proceedings of the Natural History Association of Staten Island* 9, March 18.
- 1905b An Attempt at the Translation of Some Staten Island Indian Names. *Proceedings of the Natural History Association of Staten Island* 9, April 15.
- 1906a An Indian Skeleton from Mariner's Harbor. *Proceedings of the Staten Island Association of Arts and Sciences* 1, May 19.
- 1906b A List of Collections of Staten Island Archeologic Material now Extant. *Proceedings of the Staten Island Association of Arts and Sciences* 1:89-91.
- 1908a The Massacre of the Lenape Indians in 1643. *Proceedings of the Staten Island Association of Arts and Sciences* 2, February 15.
- 1908b A Massachusetts Steatite Quarry. *American Anthropologist* 10 (4).

- 1909a Some Remarks on the Culture of Eastern Near-Arctic Indians. *Science* 23 (734).
- 1909b The Lenape Indians of Staten Island. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 3-62. Anthropological Papers of the American Museum of Natural History 3. New York.
- 1909c Archaeology of Manhattan Island. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 113-121. Anthropological Papers of the American Museum of Natural History 3. New York.
- 1909d Archaeology of the New York Coastal Algonkian. In *The Indians of Greater New York and the Lower Hudson*, edited by C. Wissler, pp. 213-235. Anthropological Papers of the American Museum of Natural History 3. New York.
- 1909e *The Indians of Manhattan Island and Vicinity*. Guide Leaflets, American Museum of Natural History. No. 29.
- 1912a *The Manhattan Indians*. New York State Museum Bulletin 158. Albany.
- 1912b Traces of the Stone Age Among the Eastern and Northern Tribes. *American Anthropologist* 14 (2).
- 1912c Indian Camp or Village Sites in the Southern Part of Staten Island and Adjacent Parts of New Jersey. *Proceedings of the Staten Island Association of Arts and Sciences* 4:90-98.
- 1913 A Collection of Indian Relics from Watchogue. *Proceedings of the Staten Island Association of Arts and Sciences* 4:102-104.
- 1915a *The Indians of Manhattan Island and Vicinity*. Guide Leaflet of the American Museum of Natural History No. 4 1.
- 1915b *The Indians of Greater New York*. Cedar Rapids. Iowa.
- 1917 Chronological Relations of Coastal Algonkian Culture. *Proceedings of the 19th International Congress of Americanists*, pp. 52-58.
- 1918 A Collection of Indian Relics Personally Collected at Mariner's Harbor. *Proceedings of the Staten Island Association of Arts and Sciences* 7, February 16.
- 1919a Exploration of Aboriginal Sites at Throgs Neck and Clasons Point, New York City. *Contributions of the Museum of the American Indian, Heye Foundation* 5(4).
- 1919b *The Pre-Iroquoian Algonkian Indians of Central and Western New York*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation, 2(1).
- 1919c *An Ancient Algonkian Fishing Village at Cayuga, New York*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation, 2 (2).

- 1920a *An Antique Tobacco-Pouch of the Iroquois*. Indian Notes and Monographs. Museum of the American Indian. Heye Foundation, 2 (4).
- 1920b *An Iroquois Antler Figurine*. Indian Notes and Monographs. Museum of the American Indian, Heye Foundation 2 (5).
- 1920c *Archaeological Investigations on Manhattan Island, New York City*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation 2 (6).
- 1920d *Two Lenape Stone Masks from Pennsylvania and Near Jersey*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation 3 (10).
- 1920e *Notes on Iroquois Archeology*. Indian Notes and Monographs, Museum of the American Indian, Hove Foundation Miscellaneous No. 18.
- 1921 *Notes on the Iroquois*. Indian Notes and Monographs. Museum of the American Indian, Heye Foundation.
- 1922 *General Archaeological Criteria of Early Algonkian Culture*. Researches and Transactions of the New York State Archeological Association. Rochester.
- 1924 *Two Archaic Algonkian Jars*. Indian Notes and Monographs. Museum of the American Indian, Heye Foundation 1 (4).
- 1925a *Another Indian Village Site on Staten Island*. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation 2 (4).
- 1925b *Notes on Mahican Ethnology*. Bulletin of the Public Museum of the City of Milwaukee 2 (3).
- Skinner, A. and M. Schrabisch
- 1913 *A Preliminary Report on the Archaeological Survey of the State of New Jersey*. Geological Survey of the State of New Jersey, Bulletin 9. Trenton.
- Smith, C. S.
- 1947 *An Outline of the Archeology of Coastal New York*. *Bulletin of the Archaeological Society of Connecticut* 21:3-9.
- 1950 *The Archaeology of Coastal New York*. Anthropological Papers of the American Museum of Natural History 43 (2).
- Snow, D. R.
- 1977 *Archeology and Ethnohistory in Eastern New York*. In *Current Perspectives in Northeastern Archeology: Essays In Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 107-112. Researches and Transactions of the New York State Archeological Association 17 (1). Albany and Rochester.
- 1978 *Late Prehistory of the East Coast*. In *Handbook of North American Indians*. Vol. 15, *Northeast*. edited by B. G. Trigger, pp. 58-69. Smithsonian Institution. Washington, D.C.
- 1980 *The Archaeology of New England*. Academic Press, New York.
- 1984 *Iroquois Prehistory*. In *Extending the Rafters: Interdisciplinary Approaches to Iroquoian Studies*, edited by M. K. Foster, J. Campisi, and M. Mithun, pp. 241-257. State University of New York Press, Albany.
- 1985 *The Mohawk Valley Project: 1982 Field Season Report*, edited by D. R. Snow. The Institute for Northeastern Anthropology, State University of New York, Albany.
- 1989 *The Evolution of Mohawk Households A.D. 1400-1800*. In *Households and Communities: Proceedings of the 21st Annual Chacmool Conference*. The Archaeological Association of the University of Calgary.
- 1991 Mohawk. *The Bulletin*, Journal of the New York State Archaeological Association 102:34-39.
- 1992 *Disease and Population Decline in Northeastern North America*. In *Disease and Demography in the Americas: Changing Patterns Before and After 1492*, edited by J. W. Verano and D. H. Ubelaker, pp. 177-186. Smithsonian Institution Press, Washington, D.C.
- 1994a *Recent Archaeological Research in the Northeastern United States and Eastern Canada*. *Journal of Archaeological Research* 2 (3):199-220.
- 1994b *Paleoecology and the Prehistoric Incursion of Northern Iroquoians into the Lower Great Lakes Region*. In *Great Lakes Archaeology and Paleoecology: Exploring Interdisciplinary Initiatives for the Nineties*, edited by R. I. MacDonald, pp. 283-293. Quaternary Studies Institute, University of Waterloo. Waterloo.
- 1995a *Migration in Prehistory: The Northern Iroquoian Case*. *American Antiquity* 60 (1):59-79.
- 1995b *Mohawk Valley Archaeology: The Collections*. The Institute for Archaeological Studies, State University of New York, Albany.
- 1995c *Mohawk Valley Archaeology: The Sites*. The Institute for Archaeological Studies, State University of New York, Albany.
- Snow, D. R. and K. M. Lamphear
- 1988 *European Contact and Indian Depopulation in the Northeast: The Timing of the First Epidemics*. *Ethnohistory* 35 (1):15-33.
- Snow, D. R. and W. A. Starna
- 1989 *Sixteenth Century Depopulation: A View from the Mohawk Valley*. *American Anthropologist* 91:142-149.
- Solecki, R. S.
- 1947 *An Indian Burial at Aqueduct, Long Island*. *Bulletin of the Archaeological Society of Connecticut* 21:44-49.

- 1950 The Archaeological Position of Historic Fort Corchaug Long Island, and its Relation to Contemporary Forts. *Bulletin of the Archaeological Society of Connecticut* 24:3-40.
- 1985 Recent Field Inspections of Two Seventeenth Century Indian Forts on Long Island, Forts Massapeag and Corchaug. *The Bulletin and Journal of Archaeology for New York State* 91:26-31.
- 1994 Indian Forts of the Mid-17th Century in the Southern New England-New York Coastal Area. *Northeast Historical Archaeology* 21-22:64-78.
- Spence, M. W., R. H. Pihl and C. Murphy
1990 Cultural Complexes of the Early and Middle Woodland Periods. In *The Archaeology of Southern Ontario to A. D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 125-170. Occasional Publication of the London Chapter, Ontario Archaeological Society No. 5. London.
- Spiess, A.
1983 Early and Middle Archaic Site Distribution in Western Maine. *North American Archaeologist* 4 (3):225-244.
1992 Archaic Period Subsistence in New England and the Atlantic Provinces. In *Early Holocene Occupation of Northern New England*, edited by B. S. Robinson, J. B. Petersen, and A. K. Robinson, pp. 163-186. Occasional Publications in Maine Archaeology 9. Augusta.
- Spiess, A., M. L. Curran, and J. R. Grimes
1985 Caribou (*Rangifer tarandus* L.) Bones from New England Paleoindian Sites. *North American Archaeologist* 6 (2):145-159.
- Spiess, A., and D. Wilson
1987 Michaud, A Paleoindian Site in the New England-Maritimes Region. Occasional Publications in Maine Archaeology 6. Augusta.
1989 Paleoindian Lithic Distribution in the New England-Maritimes Region. In *Eastern Paleoindian Lithic Resource Use*, edited by C. J. Ellis and J. C. Northrop, pp. 75-97. Westview Press, Boulder.
- Squier, E. G.
1849 *Aboriginal Monuments of the State of New York*. Smithsonian Institution Contributions to Knowledge 2 (9):9-188.
1851 *Antiquities of the State of New York*. George H. Derby and Company, Buffalo.
- Stafford, C.
1873 *History of Yates County*. Cleveland, Ohio.
- Starbuck, D.
1982 *A Middle Archaic Site in Belmont, New Hampshire*. University of New Hampshire Archaeological Research Service.
- Starbuck, D. and C. Bolian, editors
1980 *Early and Middle Archaic Cultures in the Northeast*. Occasional Publications in Northeastern Anthropology No. 7. George's Mills, New Hampshire.
- Starna, W. A.
1976 Late Archaic Lifeways in the Middle Mohawk Valley: A Framework for Further Studies. Ph.D. Dissertation. State University of New York at Albany. University Microfilms, Ann Arbor.
1977a Late Archaic Lifeways and Archaeological Variation. In *Archaeology and Geochronology of the Susquehanna and Schoharie Regions*, edited by J. R. Cole and L. R. Godfrey, pp. 74-83. Hartwick College, Oneonta. 1977b On Some Paleolithic Tools from Northeastern North America. *Current Anthropology* 18 (3):545.
1978 Comment on Temporal Models on Prehistory: An Example from Eastern North America. *Current Anthropology* 19 (4):737.
1979a Late Archaic Chronology for the Middle Mohawk Valley, New York State: A Review of the Type Concept and Cross-Dating. *Man in the Northeast* 17:3-18.
1979b The Archaic Concept: Its Development in North American Prehistory. *The Bulletin*, The New York State Archaeological Association 75:67-77.
1980 Mohawk Iroquois Populations: A Revision. *Ethnohistory* 27 (4):371-382.
1981 Old Data and New Models: Bridging the Gap. In *Foundations of Northeastern Archaeology*, edited by D. R. Snow, pp. 136-173. Academic Press, New York.
1986 Seventeenth Century Dutch-Indian Trade: A Perspective from Iroquoia. *De Halve Maen* 59 (3):5-8, 21.
1989 Sixteenth Century Depopulation: A View from the Mohawk Valley. (with D. R. Snow.) *American Anthropologist* 91 (1):142-149.
1991 Indian-Dutch Frontiers. *De Halve Maen* 64 (2):21-25.
1992 The Biological Encounter: Disease and the Ideological Domain. *The American Indian Quarterly* 14 (4):511-519.
1994 Onondaga, Cayuga, Iroquois Confederacy, Brothertown. In *Native America in the Twentieth Century: An Encyclopedia*, edited by M. B. Davis. Garland Publishing Company, New York.
- Starna, W. A. and R. E. Funk
1994 The Place of the In-Situ Theory in American Archaeology. *Northeast Anthropology* 47:45-54.

- Starna, W. A. and D. Guldenzopf
 1985 Seriation and Temporal Placement of the Ceramic Vessel Assemblage of the Elwood Site. In *The Mohawk Valley Project: 1982 Field Season*, edited by D. R. Snow, pp. 41-46. The Institute for Northeast Anthropology, State University of New York at Albany.
- Starna, W. A. and H. Gutierrez
 1980 Excavations at the Street Site, Otsego County, New York: A Preliminary Report. *The Bulletin and Journal of Archaeology for New York State* 79:1-6.
- Starna, W. A., G. R. Hamell, and W. L. Butts
 1984 Northern Iroquoian Horticulture and Insect Infestation: A Case for Village Removal. *Ethnohistory* 31 (3):197-207.
- Starna, W. A. and D. A. Kane, Jr.
 1983 Phytoliths, Archaeology and Caveats: A Case Study from New York State. *Man in the Northeast* 26:21-32.
- Starna, W. A. and J. H. Relethford
 1985 Deer Densities and Population Dynamics: A Cautionary Note. *American Antiquity* 50 (4):825-832.
- Steadman, D. W.
 1988a Prehistoric Birds of New York State. In *The Atlas of Breeding Birds of New York State*, edited by R. F. Andrie and J. R. Carroll, pp. 19-24. Cornell University Press, Ithaca.
 1988b Vertebrates From the Late Quaternary Hiscock Site, Genesee County, New York. *Bulletin of the Buffalo Society of Natural Sciences* 33:95-113.
- Steadman, D. W., L. J. Craig and T. Engel
 1993 Late Pleistocene and Holocene Vertebrates from Joralemon's (Fish Club) Cave, Albany County, New York. *The Bulletin, Journal of the New York State Archaeological Association* 105:9-15.
- Steadman, D. W. and R. E. Funk
 1987 New Paleontological and Archaeological Investigations at Dutchess Quarry Cave No. 8, Orange County, New York. *Current Research in the Pleistocene* 4:118-120.
- Steward, J. H.
 1942 The Direct Historical Approach to Archeology. *American Antiquity* 6:337-344.
 1955 *Theory of Culture Change*. University of Illinois Press, Urbana.
- Sterud, E. L.
 1977 The Application of Small Site Methodology to the New York Archaic. In *Archaeology and Geochronology of the Susquehanna and Schoharie Regions*, edited by J. R. Cole and L. R. Godfrey, pp. 53-73. Hartwick College, Oneonta.
- Stewart, M. C.
 1973 A Proto-Historic Susquehannock Cemetery Near Nichols, Tioga County, New York. *The Bulletin, The New York State Archaeological Association* 58:1-2 1.
- Storck, P.
 1979 *A Report on the Banting and Hussey Sites: Two Paleo-Indian Campsites in Simcoe County, Southern Ontario*. National Museum of Man, Mercury Series, Archaeological Survey of Canada 93. Ottawa.
 1984 Glacial Lake Algonquin and Early Paleo-Indian Settlement Patterns in Southcentral Ontario. *Archaeology of Eastern North America* 12:286-298.
- Stright, M. J.
 1990 Archaeological Sites on the North American Continental Shelf. In *Archaeological Geology of North America*, edited by N. Lasca and J. Donahue, pp. 439-465. Centennial Special Volume 4. Geological Society of America. Boulder.
- Sublett, A. J. and C. F. Wray
 1970 Some Examples of Accidental and Deliberate Human Skeletal Modification in the Northeast. *The Bulletin, New York State Archaeological Association* 50:14-26.
- Swigart, E. K.
 1974 *The Prehistory of the Indians of Western Connecticut*. Occasional Paper No. 1, American Indian Archaeological Institute. Inc. Washington, Connecticut.
- Tankersley, K. B.
 1995 Seasonality of Stone Procurement: An Early Paleo-Indian Example in Northwestern New York State. *North American Archaeologist* 16 (1):1-16.
- Taton, R.
 1964 *The Beginnings of Modern Science*. Two volumes. Basic Books, New York.
- Taylor, J.
 1850 Journal of Reverend John Taylor's Missionary Tour through the Mohawk and Black River Countries in 1802. In *The Documentary History of the State of New York*, edited by E. B. O'Callaghan, pp. 1105-1150. Weed, Parsons, Albany.

- Taylor, R. E.
1987 *Radiocarbon Dating: An Archaeological Perspective*. Academic Press, New York.
- Taylor, W.
1948 *A Study of Archeology*. American Anthropological Association, Memoir 69. Menasha.
- Thomas, P.
1980 The Riverside District, the WMECO Site, and Suggestions for Archaeological Modeling. In *Early and Middle Archaic Cultures in the Northeast*, edited by D. R. Starbuck and C. E. Bolian, pp. 73-96. Occasional Publications in Northeastern Anthropology 7.
1992 The Early and Middle Archaic Periods as Represented in Western Vermont. In *Early Holocene Occupation of Northern New England*, edited by B. S. Robinson, J. B. Petersen, and A. K. Robinson, pp. 187-203. Occasional Publications in Maine Archaeology 9. Augusta.
- Thomas, P., and B. Robinson
1980 *The John's Bridge Site: VT-FR-69, An Early Archaic Period Site in Northwestern Vermont*. Vermont Archaeological Society, Burlington.
- Tite, M. S.
1972 *Methods of Physical Examination in Archaeology*. Seminar Press, New York.
- Tomenchuk, J. and R. S. Laub
1995 New Insights into Late-Pleistocene Bone Technology at the Hiscock Site, Western New York State. *Current Research in the Pleistocene* 12:71-74.
- Trigger, B. G.
1970 The Strategy of Iroquoian Prehistory. *Ontario Archaeology* 14:3-48.
1978 Early Iroquoian Contacts with Europeans. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 344-356. Smithsonian Institution, Washington, D.C.
1981 Prehistoric Social and Political Organization: An Iroquoian Case Study. In *Foundations of Northeast Archaeology*, edited by D. R. Snow, pp. 1-50. Academic Press, New York.
1985 *Natives and Newcomers: Canada's "Heroic Age" Reconsidered*. McGill-Queen's University Press, Montreal.
1991 Early Native North American Responses to European Contact: Romantic Versus Rationalistic Interpretations. *The Journal of American History* 77(4):1195-1215.
- Trubowitz, N. L.
1977 *Highway Archaeology and Settlement Study in the Genesee Valley*. Occasional Publications in Northeastern Anthropology No. 8. George's Mills. New Hampshire.
1978 The Persistence of Settlement in a Cultivated Field. In *Essays in Memory of Marian E. White*, edited by W. Engelbrecht and D. K. Grayson, pp. 41-66. Occasional Publications in Northeastern Anthropology No. 5. Rindge, New Hampshire.
1979 The Early Archaic in Western New York. *The Bulletin*, The New York State Archaeological Association 75:52-58.
- Trubowitz, N. L. and P. Snethkamp
1975 New Evidence of the Frost Island Phase in the Lower Genesee Valley. *The Bulletin*, The New York State Archaeological Association 65:19-26.
- Tuck, J. A.
1971a *Onondaga Iroquois Prehistory*. Syracuse University Press, Syracuse.
1971b An Archaic Cemetery at Port au Choix, Newfoundland. *American Antiquity* 36 (3):343-358.
1974 Early Archaic Horizons in Eastern North America. *Archaeology of Eastern North America* 2 (1):72-80.
1975 The Northeast Maritime Archaic Continuum: 8000 Years of Cultural Development in the Far Northeast. *Arctic Anthropology* 12 (2):139-147.
1976 *Ancient People of Port au Choix: The Excavation of an Archaic Indian Cemetery in Newfoundland*. Newfoundland Social and Economic Studies No. 17. Memorial University, St. Johns.
1977 A Look at Laurentian. In *Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 31-40. Researches and Transactions, New York State Archaeological Association 17 (1). Albany and Rochester.
1978 Northern Iroquoian Prehistory. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 322-333. Smithsonian Institution, Washington, D. C.
- Ubelaker, D. H.
1988 North American Indian Population Size, A. D. 1500 to 1985. *American Journal of Physical Anthropology* 77:289-294.
- Vanderlaan, S.
1962 The NOK Site. *The Bulletin*, The New York State Archaeological Association 26:15-18.
1965 The Ganshaw Site. *The Bulletin*, The New York State Archaeological Association 35:3-19.

- 1975 The Woeller Site. *The Bulletin*, The New York State Archaeological Association 65:30-41.
- 1980 The Oakfield Phase: Western New York State. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, pp. 95-98. Research Records No. 13, Rochester Museum & Science Center. Rochester.
- Vecsey, C. and W. A. Starna. editors
- 1988 Iroquois *Land Claims*. Syracuse University Press, Syracuse.
- Versaggi, N.
- 1987 Hunter-Gatherer Settlement Models and the Archaeological Record: A Test Case from the Upper Susquehanna Valley of New York. Ph.D. dissertation, State University of New York at Binghamton. University Microfilms. Ann Arbor.
- 1996 Prehistoric Hunter-Gatherer Settlement Models: Interpreting the Upper Susquehanna Valley. In *A Golden Chronography for Robert F. Funk*, edited by C. Lindner and E. V. Curtin, pp. 129-140. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services. Bethlehem, Connecticut.
- Walsh, J.
- 1977 Arrowhead Casino: A Middle to Late Archaic Site at Saratoga Lake, New York. *The Bulletin*, The New York State Archaeological Association 71:29-37.
- 1995 The Kitchen Garden Site (NYSM 1305). *The Bulletin* Journal of the New York State Archaeological Association 109:8-19.
- Washburn, W. E.
- 1978 Seventeenth Century Indian Wars. In *Handbook of North American Indians, Vol. 15, Northeast*, edited by B. G. Trigger, pp. 89-100. Smithsonian Institution, Washington, D.C.
- Weinman, P. L.
- 1965 Two Small Stratified Sites at Lake George, New York. *The Bulletin*, The New York State Archaeological Association 34:6-10.
- Weinman, P. L. and T. P. Weinman
- 1965 A Stratified Site at Lake George. (Senior author R. E. Funk.) *Pennsylvania Archaeologist* 35 (1):4-18.
- 1967 Two Recent Excavations. *The Bulletin*, The New York State Archaeological Association 41:14-16.
- 1968 The Fred Young Site-A River Phase Component. *The Bulletin*, The New York State Archaeological Association 43:1-6.
- 1969a The Moonshine Rockshelter. *The Bulletin*. The New York State Archaeological Association 46:11-15.
- 1969b The Hound Dog Rockshelter. *The Bulletin*. The New York State Archaeological Association 47:12-15.
- 1969c A Snook Kill Workshop. *Pennsylvania Archaeologist* 39 (1-4):23-28.
- 1970 The John Himmer Rockshelter. *The Bulletin*, The New York State Archaeological Association 48:19-23.
- 1977 The Bittersweet Sites I, II, and III (Cox 41, 42, 44): Components of the Susquehanna Tradition. *The Bulletin*. The New York State Archaeological Association 71:19-28.
- Weinman, P. L., T. P. Weinman, and R. E. Funk
- 1967 The Pickle Hill Site, Warren County, New York. *The Bulletin*, The New York State Archaeological Association 39:18-22.
- Wellman, B.
- 1982 A Survey of New York Fluted Points. *Archaeology of Eastern North America* 10:39-40.
- 1996 New York State Museum Site 303. In *A Golden Chronograph for Robert F. Funk*, edited by C. Lindner and E. V. Curtin, pp. 109-118. Occasional Publications in Northeastern Anthropology No. 15. Archaeological Services, Bethlehem, Connecticut.
- Wellman, B. and K. S. Hartgen
- 1975 Prehistoric Site Survey and Salvage in the Upper Schoharie Valley, New York State (abstract). *Eastern States Archaeological Federation Bulletin* 34:15.
- Wentworth, D.
- 1987 Archaeology at Clermont: A Preliminary Look at the Eighteenth Century Material Culture of a Livingston Household. In *The Livingston Legacy: Three Centuries of American History*, edited by R. T. Wiles, pp. 113-119. Bard College, Annandale-on-Hudson.
- West, F. H.
- 1981 *The Archaeology of Beringia*. Columbia University Press. New York.
- 1983 The Antiquity of Man in America. In *Late-Quaternary Environments of the United States, Vol. 1, The Pleistocene*, edited by S. C. Porter, pp. 364-382. University of Minnesota Press. Minneapolis.
- Whallon, R.
- 1968 Investigations of Late Prehistoric Social Organization in New York State. In *New Perspectives in Archaeology*, edited by L. Binford and S. Binford, pp. 223-244. Aldine Press, Chicago.

- 1980 On the Monothetic Nature of "Traditional" Types. A Contribution from the Analysis of Owasco and Iroquois Ceramics. In *Proceedings of the 1979 Iroquois Pottery Conference*, edited by C. F. Hayes III, pp. 9-20. Research Records 13- Rochester Museum & Science Center, Rochester.
- White, L. A.
1949 *The Science of Culture*. Farrar, Straus, and Company, New York.
1959 *The Evolution of Culture*. McGraw-Hill Company, New York.
- White, M. E.
1958 An Iroquois Sequence in New York's Niagara Frontier. *Pennsylvania Archaeologist* 28:14_5-150.
1961 *Iroquois Culture History in the Niagara Frontier of New York State*. Anthropological Papers, Museum of Anthropology, University of Michigan, No. 16. Ann Arbor.
1963a Settlement Pattern Change and the Development of Horticulture in the New York-Ontario Area. *Pennsylvania Archaeologist* 23 (1-2):1-2.
1963b 1962 Excavations at the Henry Long Site. *Science on the March* 43 (3):51-56. Buffalo Museum of Natural History.
1965 The Orchid Site Ossuary, Fort Erie, Ontario. *The Bulletin*, The New York State Archaeological Association 38:1-35.
1967a 1965 Excavations at the Simmons Site. In *Iroquois Culture, History, and Prehistory*, edited by E. Tooker, pp. 85-89. New York State Museum and Science Service, Albany.
1967b *An Early Historic Niagara Frontier Iroquois Cemetery in Erie County, New York*. Researches and Transactions of the New York State Archeological Association 16 (1):1-36; 58-91.
1971 Ethnic Identification and Iroquois Groups in Western New York and Ontario. *Ethnohistory* 18:19-38.
1972 On Delineating the Neutral Iroquois of the Eastern Niagara Peninsula of Ontario. *Ontario Archaeology* 17:62-74.
1974 NYAC: Friend or Foe? *The Bulletin*, The New York State Archaeological Association 62:1-4.
1976 Late Woodland Archaeology in the Niagara Frontier of New York and Ontario. In *The Late Prehistory of the Lake Erie Drainage Basin*, edited by D. S. Brose, pp. 110-136. Case Western Reserve University, Cleveland.
1977 The Shelby Site Reexamined. In *Current Perspective in Northeastern Archeology: Essays in Honor of William A. Ritchie*, edited by R. E. Funk and C. F. Hayes III, pp. 85-91. Researches and Transactions of the New York State Archeological Association 17 (1). Albany and Rochester.
- 1978a Neutral and Wenro. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 407-11. Smithsonian Institution, Washington, D. C.
1978b Erie. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 412-417. Smithsonian Institution, Washington, D. C.
- White, M. E., W. E. Engelbrecht and E. Tooker
1978 Cayuga. In *Handbook of North American Indians*, Vol. 15, *Northeast*, edited by B. G. Trigger, pp. 500-504. Smithsonian Institution, Washington, D.C.
- White, M. E. and E. Tooker
1968 Archaeological Evidence for Seventeenth Century Iroquoian Dream Fulfillment Rituals. *Pennsylvania Archaeologist* 34:1-5.
- Whitney, T.
1965 The Swamp Site. *Chenango Chapter, New York State Archeological Association Bulletin* 7 (2).
1967 The Eaton Site. *Chenango Chapter, New York State Archeological Association Bulletin* 9 (1).
1971 The Gravesen Site. *Chenango Chapter; New York State Archeological Association Bulletin* 12 (1):1-6.
1972 The Stewart-Fuller Site. *Chenango Chapter, New York State Archeological Association Bulletin* 13 (4).
1974 The Indian Occupations of Chenango County to 1975. *Chenango Chapter, New York State Archeological Association Bulletin* 15 (3).
1975 The Jamba Site. *Chenango Chapter; New York State Archeological Association Bulletin* 16 (2).
1977 Fluted Points from the Chenango Area. *Chenango Chapter; New York State Archeological Association Bulletin* 17 (1).
- Wiegand, E. A. II
1978 The Athena Site. *The Bulletin*, The New York State Archaeological Association 74:10-25.
1987 The Prehistoric Ceramics of Southwestern Connecticut: An Overview. *Bulletin of The Archaeological Society of Connecticut* 50:23-42.
- Wightman, W. P. D.
1953 *The Growth of Scientific Meas.* Yale University Press, New Haven.
- Wiley, G. R.
1966 *An Introduction to American Archaeology. Volume I: North and Middle America*. Prentice-Hall, Inc. Englewood Cliffs, New Jersey.

- Willey, G. R., and P. Phillips
1958 *Method and Theory in American Archaeology*. University of Chicago Press. Chicago.
- Willey, G. R. and J. Sabloff
1974 *A History of American Archaeology*. W. H. Freeman and Company, San Francisco.
- Williams, L. E.
1972 Fort Shantok and Fort Corchaug: A Comparative Study of Seventeenth Century Culture Contact in the Long Island Sound Area. Ph.D. Dissertation, New York University. University Microfilms, Ann Arbor.
- Willoughby, C. C.
1935 *Antiquities of the New England Indians*. Peabody Museum of American Archaeology and Ethnology. Harvard University. Cambridge.
- Wisniewski, S. and G. A. Gwynne
1982 The Tiger Lily Site, Long Island, New York: A Preliminary Report. *The Bulletin and Journal Archaeology for New York State* 84:1-17.
- Wissler, C.
1909 *Indians of Greater New York and the Lower Hudson*, edited by C. Wissler. Anthropological Papers of the American Museum of Natural History No. 3. New York.
- Witthoft, J.
1952 A Paleo-Indian Site in Eastern Pennsylvania: An Early Hunting Culture. *Proceedings of the American Philosophical Society* 96 (4):464-495. Philadelphia.
1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist* 23 (1):4-31.
- Woodworth, H.
1894 Indian Villages in Jefferson County. *Jefferson County Historical Society* 3:53-54.
- Wray, C.
1948 Varieties and Sources of Flint Found in New York State. *Pennsylvania Archaeologist* 18 (1-2):25-45.
1963 Ornamental Hair Combs of the Seneca Iroquois. *Pennsylvania Archaeologist* 33 (1-2):35-50.
1964 The Bird in Seneca Archaeology. *Proceedings of the Rochester Academy of Science* 11 (1):1-56.
1985a The Volume of Dutch Trade Goods Received by the Seneca Indians, 1600-1687 A. D. In *New Netherland Studies: An Inventory of Current Research and Approaches*. *Bulletin Koninklijke Nederlandse Oudheidkundige Bond* 84 (2-3):100-112.
1985b Firearms Among the Seneca - The Archaeological Evidence. In *Proceedings of the 1984 Trade Gun Conference*, Research Records No. 18 Part II, edited by C. F. Hayes III, pp. 106-107. Rochester Museum & Science Center. Rochester.
- Wray, C. and R. J. Graham
1966 *The Boughton Hill Site, Victor, New York*. Mimeographed report prepared for the Annual Meeting of the New York State Archaeological Association, Rochester, New York.
- Wray, C. and H. Schoff
1953 A Preliminary Report on the Seneca Sequence in Western New York. *Pennsylvania Archaeologist* 23 (2):53-63.
- Wray, C., M. L. Sempowski, and L.P. Saunders,
1991 *Train And Cameron: Two Early Contact Era Seneca Sites*. Research Records No. 21. Rochester Museum & Science Center. Rochester.
- Wray, C., M. L. Sempowski, L.P. Saunders, and G. C. Cervone
1987 *The Adams and Culbertson Sites*. Research Records No. 19. Rochester Museum & Science Center, Rochester.
- Wright, J. V.
1966 *The Ontario Iroquois Tradition*. National Museum of Canada Bulletin 210. Ottawa.
1978 The Implications of Probable Early and Middle Archaic Projectile Points from Southern Ontario. *Canadian Journal of Archaeology* 2:59-78.
1984 The Cultural Continuity of the Northern Iroquoian-Speaking Peoples. In *Extending the Rafters: Interdisciplinary Approaches to Iroquoian Studies*, edited by M. K. Foster, J. Campisi, and M. Mithun, pp. 283-299. State University of New York at Albany Press, Albany.
1990 Archaeology of Southern Ontario to A. D. 1650: A Critique. In *The Archaeology of Southern Ontario to A. D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 493-503. Occasional Publication of the London Chapter, Ontario Archaeological Society No. 5, London.
- Wyatt, R. J.
1977 The Archaic on Long Island. In *Amerinds and their Paleoenvironments in Northeastern North America*, edited by W. S. Newman and B. Salwen. *Annals of the New York Academy of Sciences* 288:400-410.
- Zeller, T.
1987 Arthur C. Parker: A Pioneer in American Museums. *Curator* 30 (1):41-62.

The Origins and Development of Historical Archaeology in New York State

Paul R. Huey, Van Epps-Hartley Chapter; NYSAA
Bureau of Historic Sites, New York State Office of Parks,
Recreation and Historic Preservation Peebles Island, Waterford, New York.

Interest in the identification of historic sites in urban, rural, and underwater areas and the collecting of artifacts from them developed in New York State before 1830 and as early as the late eighteenth century. Interest focused on Revolutionary War sites in the 1830s, 1840s, and 1850s, followed by increasing interest in Indian contact sites and sites from the Dutch period. After the Civil War there was renewed interest in Revolutionary War and War of 1812 sites including a growing awareness of the needs for site preservation and protection. After about 1890 there was increased interest in artifact typology and dating, and after 1930 research questions also grew increasingly sophisticated. Excavations specifically to interpret historic sites for the public grew in importance from the 1930s through the 1950s, leading eventually to the development of modern professional historical archaeology after 1960.

Introduction

While historical archaeology in New York State can be traced back to its origins in the colonial period, its slow development as a scholarly discipline since that time has directly reflected broad cultural patterns that have existed. To understand and interpret the development of historical archaeology, it is convenient to identify a sequence of past cultural patterns as cultural time periods, each of which was separated by a brief period of transition or more rapid change. These broad cultural time periods, each with a consistency and underlying cultural focus forming a distinctive and discrete pattern that generally continued for 30 to 40 years, correlate with various known periods and style changes in the fine arts. Such a series of discrete cultural periods can coincidentally also be used as an effective model not only in interpreting the history of a scholarly discipline but also in analyzing archaeological materials themselves as evidence of cultural change.

Various definitions have been proposed for historical archaeology. In Europe it correlates with post-Medieval archaeology, which is essentially the archaeology of the modern period of history beginning with the Renaissance, represented by European expansion into the New World and elsewhere. For Leone and Potter historical archaeology is simply "an archaeology of the emergence and development of capitalism" (Leone and Potter 1988:19). Deetz defines historical archaeology as

"the archaeology of the spread of European societies worldwide, beginning in the fifteenth century, and their subsequent development and impact on native peoples in all parts of the world" (Deetz 1991:1). Thus, "historical archaeology" might be defined as the archaeological study of European culture and its worldwide expansion beginning with the Renaissance, and of the contact in this period between Europeans and non-Europeans, often in a colonial context. Strictly speaking, of course, historical archaeology could be defined as the archaeological study of any past culture that left written records, which would include ancient Rome as well as Egypt, for example.

The earliest "archaeologists" of New York State were frequently as interested in the material remains of previous European settlements as they were in the evidence of prehistoric Indians, and often they did not distinguish carefully between the remains of each. More and more, however, the theoretical methodology of archaeology became developed as the archaeology of Indians, encompassing the time before and after initial European contact. The contact period is an important area of overlap with historical archaeology, because the effective interpretation of Indian contact sites depends heavily upon a knowledge of European trade goods and material culture. Thus, this phase of Indian archaeology can be defined as falling within the realm of historical archaeology.

The discoveries recorded by early archaeologists very often lack a precise record of context or provenience. Surface collections or poorly excavated assemblages may cause frustration today, but their significance and potential value for research must not be underestimated. On a global scale, an object or a collection with poor provenience control can still be useful, for, as Deetz has noted, "as the spatial scale is broadened, the collection gains broader relevance" in making international comparisons (Deetz 1991:7).

The Colonial and Revolutionary Periods Through c. 1790

The Dutch settlers of New Netherland in the seventeenth century were from a society with a traditional interest in its own history as revealed through archaeological evidence. A book published in Amsterdam in 1636, for example, included careful illustrations of red-bodied Roman pottery that had been excavated in the Netherlands. Such books, however, were seldom objective and tended to promote political and

patriotic agendas (Schama 1988:76). In April 1680, when Jasper Danckaerts visited an island near present Albany, he saw remains of "a fort built, they say, by the Spaniards." Danckaerts did not believe that the Spaniards, once bitter enemies of the Dutch, had ever come so far inland, and he was probably correct. What Danckaerts actually saw were remains of Fort Nassau, built by the Dutch 66 years earlier (James and Jameson 1969:215).

New discoveries occurred in the Hudson Valley below Albany as settlement and development expanded after 1680. In 1705 huge bones, probably from a mastodon, were excavated from a brick clay pit, and "a Dutch country-fellow" picked up a giant tooth nearby on the bank of the Hudson River. A second discovery of bones of immense size was made by "two honest dutchmen" the next year across the river. "Indians flocking to see the monstrous Bones" explained to the skeptical Dutch that the bones were from a giant who had lived just 240 years earlier. New England theologians such as Cotton Mather, however, were easily persuaded. Mather believed they were the bones of antediluvian human Giants. "Lively Proofs of the Mosaic History," and that they were much larger than the later post-diluvian giant humans described by numerous explorers and historians of the sixteenth century (Stanford 1959:47-49, 53; Levin 1988:764-765).

Colonial New Yorkers were perhaps more aware of their own history, but few had any deep interest in the sites or other physical remains of that history. In 1752 the town of Albany was already 100 years old, and New York had been under English rule for 88 years. Sites of colonial Dutch forts continued to be among the first archaeological resources to arouse sustained interest. In 1755, the excavation of a cellar of a house in New York City near the bank of the Hudson River revealed a stone "which from its thickness was judged to belong to a fortification." It was not found where the later forts had been built, and it was believed possibly to have been from the first small trading house built by the Dutch (Abeel 1916:65-55).

In an open field just south of Albany near the river, meanwhile, the site of Fort Orange, built by the Dutch in 1624, had remained clearly visible since its abandonment in 1676. Thomas Sowers, a British engineer, drew a plan of the City of Albany in 1756 on which he carefully indicated the traces of "The Old Fort." The site was well-known to the people of Albany and was a center of busy military activity during the French and Indian War. The still-visible evidence of old Fort Orange apparently held very strong symbolic significance to the people of Albany, and they greatly resented the British occupation and use of the historic site. Albany stubbornly and successfully thwarted British plans to build a storehouse on the site in 1765 and 1766. Richard Smith reported in 1769 that part of the moat that surrounded Fort Orange could still be seen, and on July 4, 1784, the celebration of Independence Day included the firing of 13 guns from the site. In 1788, a great parade in Albany in celebration of the

state's ratification of the Constitution filed into the open pasture south of the city and formed a semicircle around the site. After 11 guns were fired from the old fort, the crowd answered with three cheers, and more guns were fired in salute. The firing of salutes was a traditional eighteenth-century form of recognition of a historic site. In the 1750s, for example, once each year on October 20th a salute of five cannon was fired from the site of seventeenth-century Fort Christina on Delaware Bay (Huey 1988a:127-131; Halsey 1964:16-17; Munsell 1850:195; Munsell 1869:235; Reynolds 1874:264; Huey 1988b:52).

The Federal Period from c. 1790 to c. 1830

The acceptance of the Constitution in 1789 not only completed the American Revolution by establishing a new form of government but also required new "principles, morals, and manners of our citizens." New attitudes transformed social behavior, often to the advantage of younger Americans. Forces were unleashed that "transformed the young republic into a full-blown industrial capitalistic society" (Reinier 1982:150; Cohen 1986:370; Countryman 1987:559).

New York State began to expand and develop at an unprecedented rate. Near Albany, the site of Fort Orange had remained largely undisturbed until 1790, when Simeon DeWitt, the Surveyor General, surveyed the area for new streets and urban development as the city began to expand. On his survey map (Figure 1) he ran the line of Court Street, later called Broadway, directly across the east part of the "Site of Fort Orange," and apparently because of his interest in history, he soon built his new home on the two lots that incorporated most of the remaining fort site. One can only wonder what he found as he dug his cellar hole (Huey 1988a: 628, 629, 635).

By 1790, there was a growing awareness of history and an interest in recording and collecting remains associated with it. In New York City, in June 1790, as the works of Fort George at the tip of Manhattan were being leveled, many artifacts from Fort Amsterdam, which previously had stood on the site, were found and generated considerable publicity. The discoveries included Dutch artifacts which had "lain there ever since the first settlement in this city." There were "old Dutch tobacco pipes, somewhat different from those in use at the present day, and more clumsily made," and a coin from Groningen dated 1605. In addition to coffins containing the remains of the wife of Governor Hunter (1716) and of Governor Bellomont (1701), the diggers found a stone carved with the date 1642 and the name of Governor William Kieft, celebrating the construction of the Dutch church in the fort (Anonymous 1790a: 380; Anonymous 1790b: 372; Tuckerman 1905: 32-33).

More discoveries occurred in 1791. In Broad Street, wooden posts were uncovered from retaining walls built by

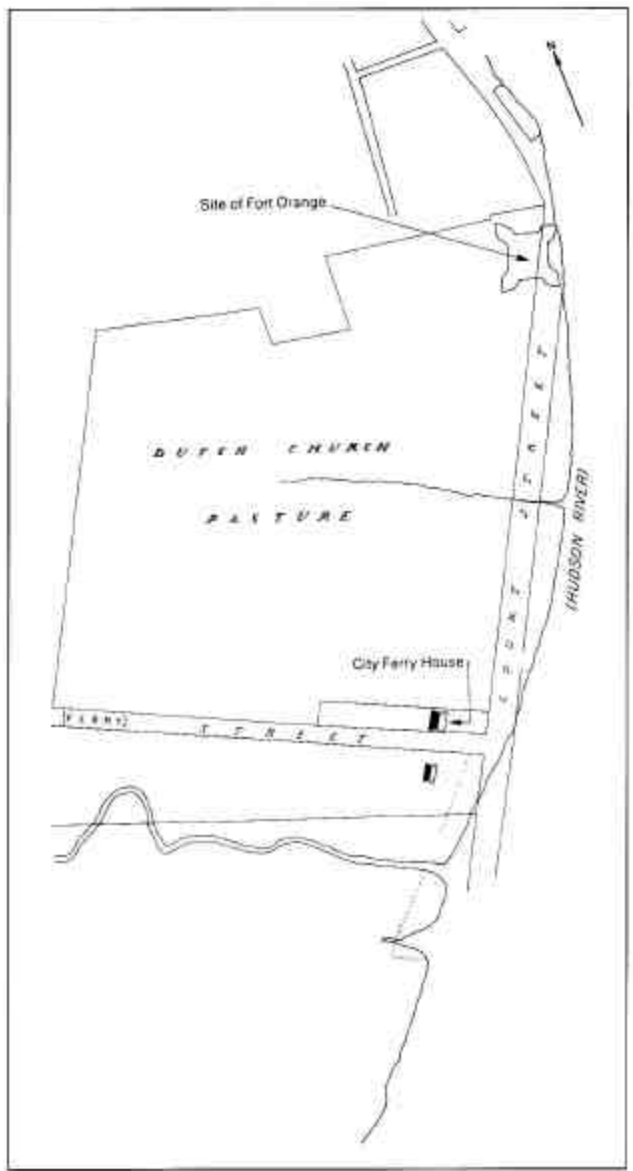


Figure 1. Detail redrawn from Simcon DeWitt's Albany City Map of 1790 showing the site of Fort Orange (File No. 077, Office of the Albany City Engineer).

the Dutch, and red cedar palisades were found under the foundation of the old fort. A young European tourist was astounded that the mayor of New York allowed the artifacts from the site to be kept by the finders. Consequently, he purchased the coins and other objects that were found at an unreasonably high price and presented them to the public library. "They represent," he said, "the most ancient things one can find in a country so new" (Abeel 1916:47-48, 66, 68; Bostelmann 1964:101).

These discoveries and the interest aroused by them coincided not only with new urban development in the cities of New York and Albany but also with the wave of migration

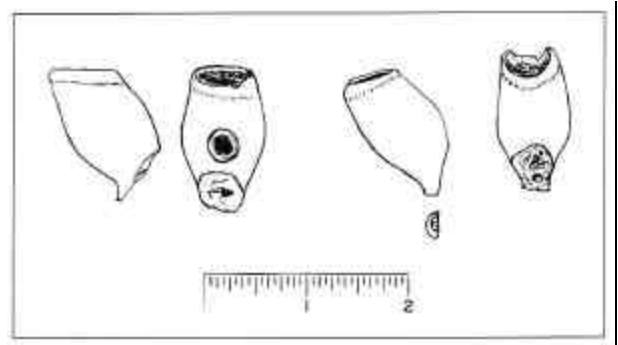


Figure 2. Dutch seventeenth-century tobacco pipe bowls of while clay found probably about 1788 near Portlandville, New York, by John Mumford (Spraker Collection, Yager Museum, Hartwick College).

and settlement that began sweeping westward across New York State in the 1780s and 1790s. Rich farmland that was plowed for the first time revealed abundant evidence including iron axes, iron knives, brass kettles, gun barrels, and other European artifacts indicating a previous occupation that had lasted for centuries. The Yager Museum collection at Hartwick College, for example, has some "Pipes found on flat south of Portlandville by John Mumford about 1783." These include some seventeenth-century Dutch tobacco pipes (Figure 2), a rare find in the upper Susquehanna Valley, as well as a piece of red clay pipe of a type usually associated only with the Chesapeake Bay area. One of the Dutch pipe bowls has a hole bored through the back to insert a reed stem. It is most likely that John Mumford found these pipes about 1788, since that is when the Mumfords arrived in the area from Bennington, Vermont (Hurd 1878:192). In the town of Victor, Ontario County, early settlers in the vicinity of Boughton Hill used iron axes and other iron artifacts plowed up there as a source of iron (Marshall 1848:12). Sites in the town of Pompey, Onondaga County, however, were especially noticed by early settlers as they first plowed the land in the 1790s (Clark 1849:147-148, 255, 256, 270; Marshall 1848:7). Some artifacts soon began to make their way into the growing collections of newly established museums in New York and Albany (Clark 1849:257, 261, 264-266, 326).

As settlement progressed westward into lands previously occupied by the once-feared Iroquois, the growing interest in the artifacts and other evidence of their culture coincided with an erosion of the Iroquois mystique. The Indians had lost their "savage virtues" and had seemed to have become "objects of pity." For the New Englanders who swarmed into New York, Lehman observes, "the fate of the Six Nations recalled that of the Massachusetts Indians a century before" (Lehman 1990: 524-526). Even the narratives of Indian captivities published after 1790 began to assume a "romantic" and stylized character (Van Der Beets 1973: 321).

The distinction between historic and prehistoric sites and artifacts often remained unrecognized. Reverend John Taylor

was mystified by the sophisticated earthwork fortifications he observed in 1802 at the eastern end of Lake Ontario in Jefferson County. Because iron artifacts had been found at these sites, he believed the sites were not of native origin, but he also knew they were of neither French nor English construction (O'Callaghan 1850:1139-1144). In other areas, artifacts were frequently found where annual tree growth rings made dating possible. Musket balls were found in trees where the growth rings revealed precisely when they had been fired. A tree cut down in Oswego contained a bullet that had been fired in 1696, and near Syracuse bullets were found in a tree where they had been deposited in 1656. In Pompey, a bullet was found covered with tree rings beginning in 1667. Also in Pompey a chain was found in a tree where it had been left in 1637, and in another tree an iron axe cut was dated at about 1650. At one site, a brass medal bearing the image of William of Orange was found (Clark 1849:84, 258, 261, 277-280, 364-365). Pompey soon became famous for the "pieces of gun-barrels, gun-locks, some leaden-balls, axes, knives, brass kettles, iron-chains, and a part of a church bell with the tongue C entire" which had been excavated there (Spafford 1813:275). Meanwhile, offered the position of United States Surveyor-General by President Washington in 1796, Simeon DeWitt reluctantly declined and continued his work as the New York Surveyor General. In 1797 he was at Oswego and surveyed the village grid of blocks and streets. On his "Plan of the Town of Oswego" drawn in 1798, he carefully recorded the location and outline of the visible remains of the "Old Fort," historic colonial Fort Oswego (DAB; Lear 1991:33, 36).

DeWitt Clinton (Figure 3), Simeon DeWitt's cousin, was also interested in forts, but particularly those at Indian sites of the historic contact period. In 1811 DeWitt Clinton reported on information that had been recorded about the once-visible earthen features of Fort Massapeag, the seventeenth-century Indian fort on western Long Island (Solecki 1995:20). When Clinton visited sites in central and western New York in 1815 or 1816, he collected a number of historic period European trade artifacts. In 1817, to avoid "great confusion," he called for the clear distinction of those remains from occupation by Indians prior to European contact or trade from those dating after European contact. At Indian village sites, he observed soil stains suggesting occupation areas, and at one such "large house" site at a village in Pompey he recorded a tree that had been growing there since at least since 1687. He believed, from the European trade artifacts, that there had been a battle there. Boughton Hill, near Victor, New York, he noted, was also "where a bloody battle is said to have been fought," but Clinton thought the Seneca battle of 1687 with the French had occurred in a field containing many artifacts near Avon, New York (Clinton 1818:5-7, 11; Clark 1849:257; Marshall 1848: 6-7). Closer to Rochester, on the west side of Irondequoit Bay, William H. Penfield excavated mounds about 1817 and found silver bands from a sword scabbard, belt buckles, and



Figure 3. Portrait of DeWitt Clinton (1769-1828) painted by Ezra Ames John Jay Homestead State Historic Site, New York State Office of Parks, Recreation and Historic Preservation).

hat ornaments (Harris 1884:46). Meanwhile, the serious study and analysis of glass beads began with a study published by Henry R. Schoolcraft (Figure 4). Far ahead of his time, he carefully described a tubular glass bead found in 1817 with a number of heads in a ceramic pot in an Indian burial in Hamburg, Erie County (Morlot 1992:47-48).

By 1830, a significant new direction had been added to the rapidly developing field of historical archaeology. Attention focused increasingly on sites associated with the Revolutionary and French and Indian Wars. Perhaps one of the earliest records of the retrieval of artifacts from underwater in New York State occurred in 1811, when "a 4 lb. French swivel, loaded with a ball and 3 grape shot" was raised from Lake Ontario (French 1860:457). As early as 1805, however, during a trip northward from Albany, Elkanah Watson had observed with interest the "charred and blackened fragments" of American Revolutionary War gunboats visible in a bay on the east side of Lake Champlain north of Crown Point. They had been burned and left there by Benedict Arnold after the Battle of Valcour Island in October 1776. At Ticonderoga, moreover, the ruins of the historic old fort there reminded Watson of the "appearance of an ancient castle of Europe" (Watson 1968:406-407). Horatio Gates Spafford compiled



Figure 4. Henry Rowe Schoolcraft (1793-1864) engraved by Wellstood and Peters (Cirker and Cirker 1967: 549).

brief notes on many other sites of interest from the French and Indian and Revolutionary Wars, in addition to the "ancient" sites at Pompey, in his *Gazetteer* published in 1813. He mentioned the "large mounds and banks of earth" that remained of Fort Edward, the still-visible works of Fort George "though in perfect ruins," the ruins of Fort William Henry, and the Revolutionary War earthworks at Peebles Island in Waterford (Spafford 1813:146, 190, 322). Born in Vermont in 1778, the son of a Revolutionary War veteran, Spafford had moved to Columbia County, New York, married, and there joined the Society of Friends (Broderick 1981: ii). Other historians in 1815 noted the vestiges of the British army camp site of 1755 still visible in the present City of Rensselaer, across the Hudson River from Albany, consisting of "the remains of ashes, the places where they boiled their camp kettles" (Munsell 1850:227).

Discoveries of artifacts from the Revolutionary War, such as an oaken pail of bullets plowed up in Onondaga County in 1815, had been occasionally noted (Clark 1849:136). At the battlefield of Saratoga, local farmers in 1821 reported "even yet our plows are constantly striking against cannon balls or dead men's bones, or turning up grape shot or bullets." Two years later another farmer, plowing for the first time, uncovered "the well-preserved skeleton of an officer, a part of his red uniform being entire, the color even being unchanged" (Stone 1970:153, 156). The remains

of Jane McCrea, who was killed by Indians in 1777, were disinterred in 1824 and moved to Fort Edward, but one of her teeth was kept and eventually was added to the collection of the "Poughkeepsie Museum" (Lossing 1855a:125-126). In 1823 a company was formed to raise the Revolutionary War ships *Hussar* and *Mercury* which sank in the East and Hudson Rivers at New York City carrying a large amount of money. In 1824 about 40 feet of the *Hussar's* stern was raised, but it broke apart (Stokes 1926:1629, 1641). By 1830, treasure hunting and the search for artifacts of monetary value was becoming an unfortunate factor in the development of archaeology (Clark 1849:364; De Lancey 1891). Other artifacts were added to museums, and these included links of the great iron chain that had stretched across the Hudson River between Fort Montgomery and Anthony's Nose. A long section of this chain was brought up from the river bottom on August 12, 1830, after three days of hard work (Diamant 1989:176).

The Romantic Era from c. 1830 to c. 1860

New York State prospered and developed extensively in the wake of the Erie Canal, as well as of new turnpikes soon to be followed by railroads. New York truly became the Empire State, sharing a vision that was national in scope. A spirit of reform prevailed, at the same time that the number of veterans who remembered places and events of the Revolution was rapidly dwindling. The American Revolution increasingly assumed a romantic aspect, and in 1832 Congress passed the first comprehensive pension act. This act provided a grant to every veteran who had served at least six months, and the narratives prepared by veterans to prove their service and eligibility under the act created a remarkable body of historical data. Documents were scrutinized, compiled and published, and serious historical research based on original sources gained increased respect. Historical archaeology gradually became more clearly oriented toward research and documentation (Griffin 1967:32-37; Dann 1980: xvi-xvii).

One of the first individuals to conduct field work to investigate and record the remains of colonial and Revolutionary War sites was Jared Sparks, the historian. Born in 1789 in Connecticut, Sparks obtained a scholarship at the Phillips Exeter Academy and from there went to Harvard, where he graduated. Already at work on his greatest life work, the editing and publication of the writings of George Washington, in 1830 Sparks toured the sites and scenes of the Revolution (DAB). On a visit to Crown Point August 15, for example, he carefully measured distances and sketched locations. He described remains of military hut sites, and he also drew a plan of Fort St. Frederic, the "Old French Fort" (Sparks 1830).

About the same time as Sparks's tour, other individuals were actually digging at Revolutionary War sites to find relics. At Bennington battlefield, the son of a veteran of the battle was so eager "to secure some relic of the field where his father fought, that he dug till he exhumed sundry bones, which being a medical man, he knew to be bones of men and of tall men." Other skeletons were excavated about 1832 and again about 1838 (Lord 1989:174). In Brooklyn, the skulls of Revolutionary War soldiers could be seen on the shore of Wallabout Bay, and thirteen large boxes of bones were collected during grading for construction of the Navy Yard. These were carried in a solemn procession to Brooklyn Heights, where they were reinterred (Watson 1832:182). In Albany in 1833 digging for the foundations of a new building in present James Street revealed a quantity of live mortar shells from a military store house of the Revolutionary War. And the iron-tipped point from the *chevaux-de-frieze* constructed by the Americans in the Hudson River near New Windsor was dredged up in 1836 and placed in Tomlinson's museum in Poughkeepsie (Munsell 1858:271-272; Barber and Howe 1841:222; Lossing 1855a:125). Plowing at the Saratoga battlefield in the summer of 1834 revealed at least 200 shot and bullets, a broken bayonet, and a silver shoe buckle. It was noted that many of the bullets were "much battered and some of them split," and the broken bayonet was interpreted as further evidence of the violence of the battle (Stone 1970:155).

Local interest in Revolutionary War sites intensified. The December 26, 1837, issue of *The Fort Plain Journal* noted that traces of the old trench of Fort Plain were still visible, and the *Lansingburgh Gazette* for January 8, 1838, contained a detailed description of the Revolutionary War earthen fortifications on present Peebles Island near Waterford (Barber and Howe 1841:280; "Lucius" 1838). In 1839, when Sylvester Churchill of the United States Army sold the site of the English fortress at Crown Point to new owners, he included in the deed a restriction prohibiting any demolition of the ramparts or walls or the removal of materials. Perhaps Churchill foresaw a possible military use for the old fort, but he also may have hoped to preserve the ruins because of their historic interest (Churchill 1839).

So popular had historic sites and artifacts of the Revolutionary War become in the 1830s that plans were made to erect "a good public house" at Saratoga battlefield for the convenience of visitors (Stone 1970:155). Another skeleton discovered there in 1841 was associated with six Spanish dollars, an English guinea, and fragments of a leather purse located near its pelvis (Lossing 1855a:127). Burials and relics from the Sullivan-Clinton expedition of 1779 had also been found in Cooperstown, and in 1841 remnants of Clinton's dam at the outlet of Otsego Lake were still visible there (Barber and Howe 1841:446). A more exciting discovery, perhaps, occurred in Brooklyn in 1848 in excavation for the cellar of a house at No. 52 Pierrepont Street, which was just outside the southwest

corner of Fort Sterling, a British fort built in 1780. A British sword marked "G R" was found with the remains of an officer. Later given to the Long Island Historical Society, the sword has been dated to the French and Indian War or earlier (Huntington 1941:35). Meanwhile, adding to the many veterans' stories recorded in response to the comprehensive pension act of 1832, local historians also interviewed elderly residents and wrote down their stories. In September 1844, 53-year-old John M. MacDonald began his excursions into Westchester County to interview elderly residents about their experiences in the Revolution. With the last visit in October 1851, he had recorded 407 interviews with 241 different persons (Hadaway 1927:88). In Washington County, meanwhile, Dr. Asa Fitch conducted similar interviews in 1847 and 1848 (Adler 1983:v).

Popular interest in historic sites expanded during the 1840s to include other sites in addition to those dating from the Revolutionary War. Francis Parkman, as an 18-year-old Harvard student, visited Lake George on a July day in 1842 and carefully retraced the fortifications and events of the French and Indian War. Remains of boats sunk in 1758 could be seen in the lake, and he noticed evidence of recent digging in the site of Fort William Henry. He learned that "some fools ...with a wizard and a divining rod" had been there to dig for money. Parkman was back at Lake George the next year, this time picking up a musket ball and a coin from a plowed field (Wade 1947:46-48, 91). The same treasure hunters who had dug at Fort William Henry, meanwhile, in 1844 were at Crown Point where, described as a "venerable, white-haired man" in his 80s, leaning on a staff and "accompanied by two athletic men," they had dug for treasure despite denial of permission to do so (Lossing 1855b:153).

Dutch sites dating from the seventeenth century also attracted interest. "Those little yellow bricks which are imported from Holland, by the Dutch of Fort Orange to build their houses with" had become recognized as a distinctive type by 1847, perhaps because of the number of such brick that must have been dug up at the site of Fort Orange in Albany (Zimmermann 1970:5). In 1848, Benson J. Lossing, a 3.5-year-old newspaper editor from Dutchess County, undertook the writing of a narrative sketch book describing sites and objects associated with the Revolution. While Lossing described sites such as Saratoga and Oriskany battlefields and some of the artifacts found at those places, he also told of visiting earlier colonial sites such as Crown Point and Fort Anne. At Fort Anne (Figure 5) he could see the stumps of stockade posts. He excavated part of one of the posts and, splitting it, he could detect "the pleasant odor of a fresh pine-log" (Lossing 1855a:33; Lossing 1855b:64, 139, 150-153, 245-246).

The interests of historian Jephtha R. Simms also extended to sites in addition to those of the Revolution. Born in Connecticut, he lived in Fultonville, New York, when his

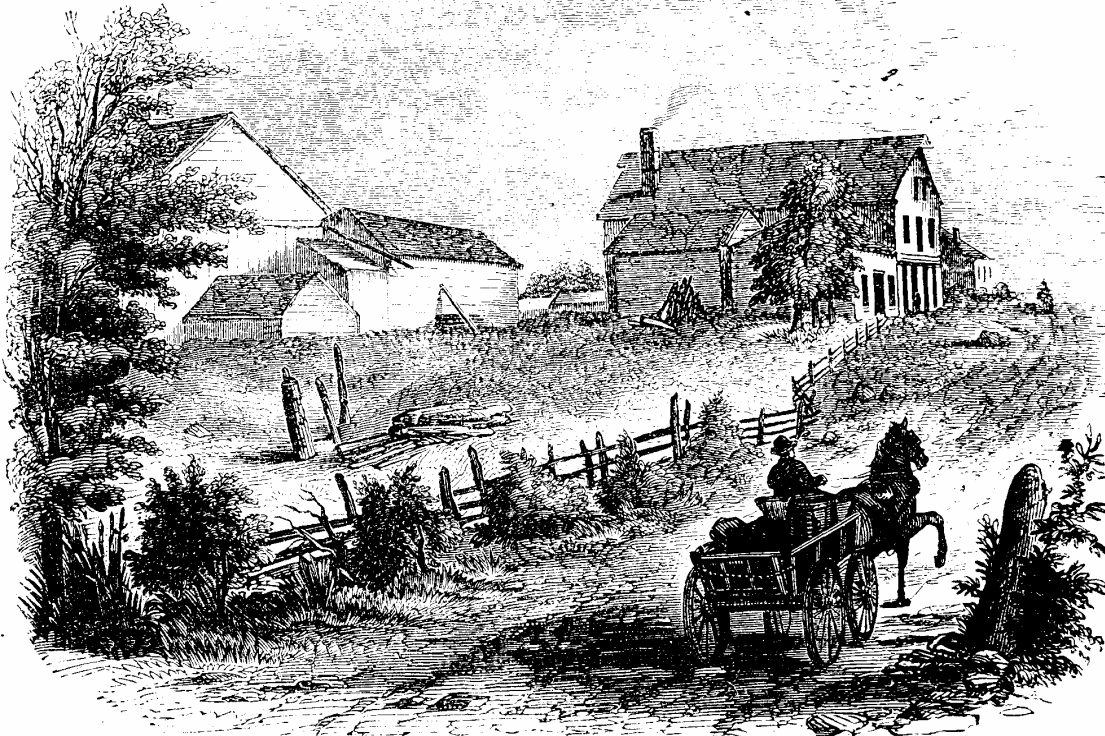
SITE OF FORT ANNE.³

Figure 5. Benson J. Lossing's view of the site of Fort Anne in 1848 (Losing 1855b: 139).

History of Schoharie County was published in 1845. In this book he described the remains of a deep wood-framed pit or cellar hole which he suggested might have been built by some of the first German settlers in the Schoharie Valley (Simms 1845:29; Simms 1980: Preface). On August 29, 1849, when Simms visited the site of Sir William Johnson's summer house on the Sacandaga, he hoped to be able to return "and again seek for some relic of the point's first occupancy. if only to be rewarded by the limb of an old apple tree" (Simms 1980:40-41). In Oswego County, Joshua V. H. Clark in 1848 had recorded the ruins of and features associated with Fort Brewerton, built in the French and Indian War (Clark 1849:179-183), while Pomroy Jones, writing in 1851, wrote of the many artifacts that had been found near the site of Wood Creek Fort near Rome in Oneida County (Hagerty 1971:84). In Otsego County, a somewhat poignant discovery occurred on the farm of William Field about 1856. A dog collar was plowed up

bearing the words IOHN SLATER HIS DOG ALBANY MARCH 27, 1757 (Hurd 1878:159). John Slater was probably a soldier at Albany. A 37-year-old Irish-born laborer in 1757, Slater enlisted on April 27, 1760, in Stephen Schuyler's Albany County Militia Company (Anonymous 1898:567).

On Lake Champlain, in writing an agricultural history of Essex County in 1852, Winslow C. Watson spoke of the many "relics of war" constantly found at Ticonderoga and of the extensive evidence still visible at Crown Point of an abandoned French village, once "a large and civilized community" (Watson 1853:679-684). At "Sandy Point," the northwest tip of Crown Point, John W. Strong of Vermont found arrowheads as well as "several pistol and musket balls, two French military buttons, a copper coin of the fifteenth century and two clumsy musket flints." He thought the site was the location of Champlain's battle with the Iroquois in 1609 (Swift

1971:31). Except for digging by the curious and the damage from plowing, sites such as Ticonderoga and Crown Point were still relatively safe from destruction. In cities such as Albany and New York, however, urban development threatened or destroyed historic burials and prompted an early concern for the preservation of such remains. There was strong opposition in New York in 1847 to opening Albany Street through the north part of the Trinity Church graveyard because it was "the most ancient cemetery in the city and probably in this country." It was estimated that between 30,000 and 40,000 bodies were buried there, including a large number of Revolutionary War officers and soldiers (Hastings 1901:1180). In Albany, excavations for water lines in State Street in 1851 exposed the foundations of the old Dutch church, and when two graves were opened, "bones were taken away by many for relics" (Munsell 1871:270).

Attempts to interpret artifacts from Revolutionary War sites or to conduct scholarly research were less frequent than the search for gold or the collecting of relics, unfortunately. At Saratoga battlefield, in the Balcarres Redoubt, gold and silver coins were found in a belt in 1846, and it was suspected that many more coins had been found by a farm laborer who suddenly became wealthy (Stone 1970:156, 166). By 1850, at Bennington battlefield, Dr. Asa Fitch lamented "balls and other relics of the battle used to be often found. But they are scattered and lost, and nothing of the kind is met with any more, the land has been so much plowed" (Lord 1989:174). The search for treasure and profit from Revolutionary War sites continued during the 1850s. In 1850 the Worcester Hussar Company was organized to recover treasure from the wreck of the *Hussar* (Stokes 1926:1865). In 1855 the New York Floating Derrick Company commenced an attempt to salvage the West Point Chain from the Hudson River. This effort prompted concern in Washington and plans by the government to assert a claim to the famous chain (Diamant 1989:180).

Serious interest in the study of Iroquois Indian sites of the historic period was renewed in the 1840s. Barber and Howe in 1841 reported on the number of interesting discoveries that had occurred in Pompey (Barber and Howe 1841:392-393). In 1842 at Geneva, dozens of Indian burials were unfortunately destroyed and four or five wagon loads of bones and skulls were hauled away. Many brass kettles were found with the skeletons (Hall 1909:273). Lewis Henry Morgan visited the site in November 1845 and recorded the visible remains (Figure 6) of a Seneca village which he believed to have been destroyed during Sullivan's expedition in 1779 (Conover 1889:8). He took a fragment of an oak stockade post for the State Museum in Albany (Parker 1888:4).

By October 1847, a young 34-year-old Buffalo lawyer named Orsamus Marshall was completing historical research on the French expedition led by Denonville against the Seneca in 1687. Published at New York in 1848, Marshall's

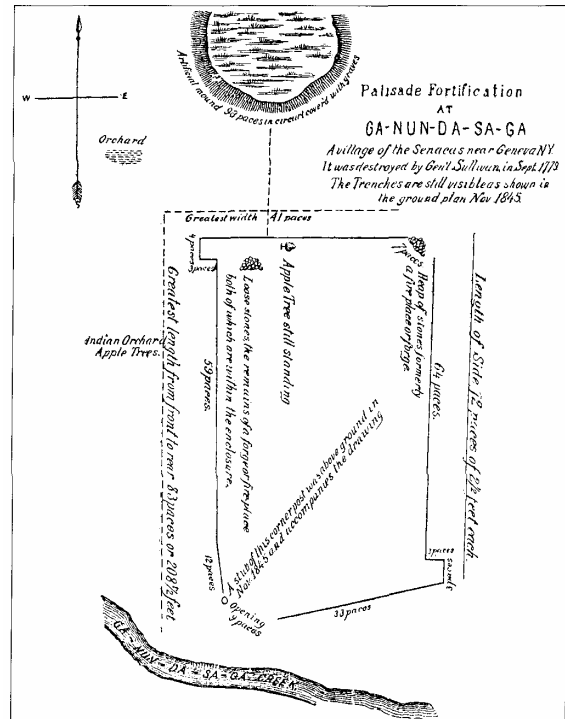


Figure 6. Lewis Henry Morgan's map of the site at Ga-nun-da-sa-ga near Geneva in November 1845 (Conover 1889:10).

work was to be a significant landmark in advancing serious archaeological research on the Iroquois. Son of a pioneer Buffalo physician, Orsamus H. Marshall was born at Franklin, Connecticut, and graduated from Union College in 1831. He was admitted to the bar in 1837 and practiced in Buffalo (Anonymous 1884:466).

Noting the unresolved question as to the location of Denonville's battle with the Seneca in 1687, Marshall began interviewing elderly men living on the Cattaraugus Reservation. He found that memories of the 1687 invasion had indeed survived, and turning to the Tonawanda Reservation, Marshall interviewed a chief named John Blacksmith. Blacksmith identified the location of the battle as a place near Victor, New York, and it became clear that the Seneca village of Ganondagan (Gannagaro) which was destroyed in 1687 was at the site on Boughton Hill, South of Victor (Marshall 1848:6-15). Accordingly, locations of other villages that were also destroyed, such as Totiakton, could be hypothesized.

Ephraim G. Squier, a 27-year-old New Yorker (Figure 7) who had moved to Ohio, visited Boughton Hill in 1848 and became interested in the line of palisades which could be traced, at intervals, on "Fort Hill" just to the west of Boughton Hill. Squier associated the Fort Hill site with the fort described by Denonville as "very advantageously situated



Figure 7. Ephraim George Squier (1821-1888) engraved by P.M. Whelpley (Cirker and Cirker 1967: 582).

on a hill" near Ganondagan, and Squier drew a carefully detailed plan of the Fort Hill site. It was published by the Smithsonian Institution in October 1849 in Squier's *Aboriginal Monuments of the State of New-York* (Squier 1849). Another version of the plan appeared in Squier's book, *Antiquities of the State of New York* published at Buffalo in 1851 (Squier 1851). Squier's work was recognized for his thorough observations and accurate descriptions. Born in the Town of Bethlehem, Albany County, the son of a Methodist minister with Connecticut origins, Ephraim lost his mother and a baby sister when he was 12 years old. Ephraim's father promptly remarried. In his early youth he studied civil engineering, but after the panic of 1837 he soon turned to journalism and literature (DAB; Barnhart 1996; Christoph and Christoph 1982:76, 209; Hughes 1968:120).

The publication of Joshua V. H. Clark's *Onondaga* in two volumes at Syracuse represented another important publishing event of 1849. Clark carefully summarized many of the discoveries that had been made. He published maps (Figure 8) of sites that produced trade artifacts, and he also illustrated some of the artifacts (Figure 9) (Clark 1849:277, 280). Clark condemned the looting of Indian burials for artifacts. He explained that "burying places have been resorted to by antiquaries and others, more curious than

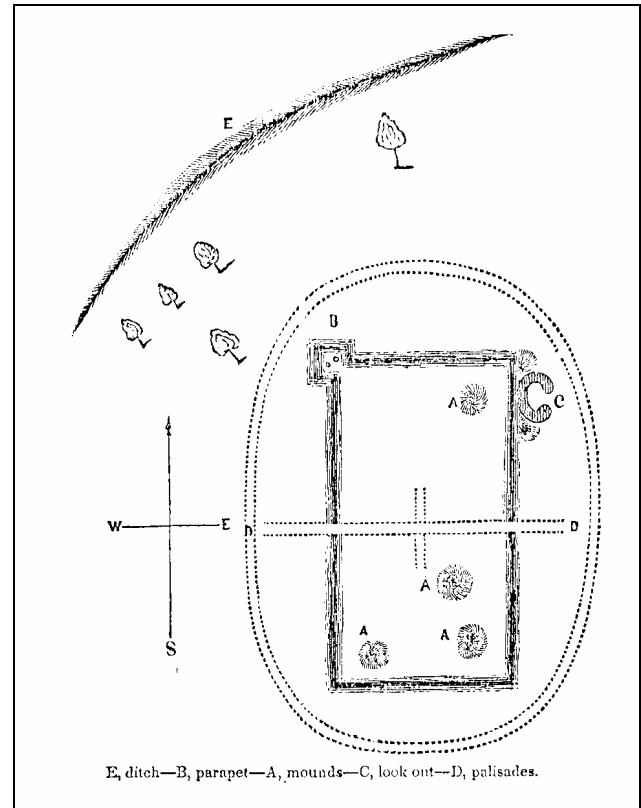


Figure 8. "Remains of an ancient fort and burying ground" in Lot 3, Town of Pompey, illustrated by Joshua V. H. Clark in 1849 (Clark 1849: 277).

considerate, for the purpose of obtaining Indian skeletons... we have robbed them of all else, and we should at least spare their places of sepulchre." The Indians, he believed, "though Pagan in their worship," in their respect for the dead shamed Christians (Clark 1849:257-258, 267-268). Orsamus Turner, in his *History of the Pioneer Settlement of Phelps & Gorham's Purchase* published at Rochester in 1852, mentioned that there had been many old Indian burial grounds in Bloomfield, "and many of the graves were opened in search of curiosities" by the first settlers (Turner 1852:194).

The five years from 1848 through 1852 produced a remarkable number of scholarly books that were to be very important in the development of historical archaeology. The major works by Orsamus H. Marshall, Ephraim G. Squier, and Joshua V. H. Clark all appeared between 1848 and 1851; Lewis Henry Morgan's *League of the Ho-de-no-sau-nee, or Iroquois* and Parkman's *The Conspiracy of Pontiac* also appeared in 1851. E. B. O'Callaghan's *The Documentary History of New-York* (including the journal of Reverend John Taylor) was published in four volumes between 1849 and 1851, and by 1852 Turner's *History* and Lossing's *Pictorial Field Book*, in parts, had appeared.

During the late 1850s, interest remained strong in Revolutionary War sites. The remains of the New Windsor

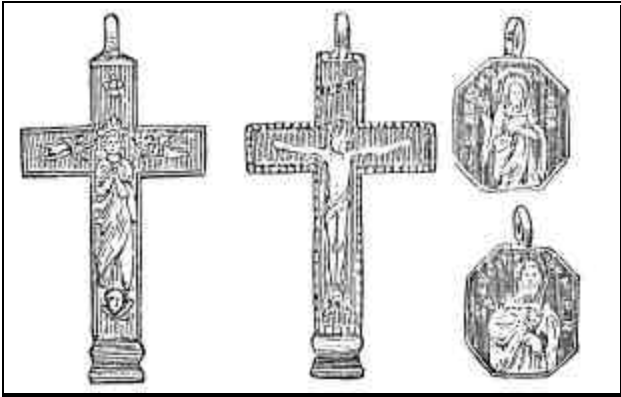


Figure 9. Religious medals found in Lot 3. Town Of Pompey, illustrated in 1849 by Joshua V. H. Clark (Clark 1849: 280).

Cantonment in Orange County, the site of the last American winter encampment of the Revolution, were still clearly visible, and in 1857 plans were made to build a monument there with stones from the hut sites (Dunleavy n.d.). Artifacts, including a number of buttons, were collected from the hut sites and from Temple Hill and were presented to the Washington's Headquarters Museum in Newburgh (Anonymous 1858:45).

The Victorian Period from c. 1860 to c. 1890

The 1850s ended with the occurrence of a most significant achievement, not in North America, but in England. This was the publication in 1859 of Darwin's brilliant *The Origin of Species*, which set forth a coherent and rational explanation for the development of species. Darwin's approach also provided the scientific support for a biological philosophy of industrial progress (Montagu 1971:13). In the United States, the tragic war for the Union reinforced the establishment of "an increasingly centralized government, or, to introduce another business concept, like a corporation run by representatives of the majority of stockholders" (Nichols 1963:275). With at least half the country's manufacturing enterprises still run on water power in 1860, in six upstate New York counties, the average number of persons employed by firms of fewer than 50 employees was less than nine. In 1860 the United States ranked behind England, France, and Germany in the value of its manufactured goods, but by 1894 the United States was the leader, with its manufactured goods nearly equaling those of Great Britain, France, and Germany combined. Steam and machinery had transformed American life (Gutman 1976:32-33).

The entire period was also characterized by bloody conflicts with Indians in the far west, and the further collection and study of artifacts representing an earlier period of Indian contact in the east was perhaps inspired not only by curiosity and sympathy but also the search for a model of successful predominance. This was a period of growing social conflict and disparity that greatly alarmed Americans. The

Civil War had fostered a greater searching for ideological roots and contact with the artifacts left by Revolutionary-era forefathers. During Reconstruction, the need to focus on common heritage and shared values greatly promoted research in colonial history. "New historical books have been written, old ones revived, annotated, edited and reproduced, to such an extent that half an American historian's labor, before lie begins his narrative, consists in clearing away the rubbish of his predecessors, and in reconciling conflicting authorities," wrote Henry Stevens in 1869 (Hays 1962:37; Stevens 1970:8).

In the spring of 1860 a Revolutionary War cartridge box dating probably from 1777 was excavated from Peebles Island, near Waterford, and in September 1861 another piece of the Fort Montgomery chain was raised from deep in the Hudson River off Anthony's Nose. When Thomas E. Courtenay traveled north to Montreal in October 1862, he marveled at the ruins of Fort Ticonderoga but was disgusted that Americans took "so little interest in places that ought to be dear to them from old associations, but they are not a venerating people and the love for the Almighty Dollar deadens appreciation for antiquities." Then he explained that "this place has been visited by so [many] Relique hunters that scarcely a vestige of woodwork remains. I was fortunate enough to get a piece of the frame work of one of the windows, a musket ball and flint point for an Indian arrow which I found in displacing the piece of wood... imbedded in the mortar around the window frame. these... will I hope prove of interest and instruction." Courtenay, of Irish birth but of an English family, had emigrated to the United States in 1842 and had been living in St. Louis. In 1862 he was on his way to Montreal on business for the Confederacy (Lossing 1972:109; Diamont 1989:176; Ruttenber 1882:72; Courtenay 1862).

Revolutionary War sites were discovered in Central Park in New York City in 1864 during grading in the north end of the park. Buried at a depth of about two feet were found remains of huts from an encampment believed to date from the War of 1812 if not the Revolution. Each hut had a corner fireplace, with straps of iron, apparently pot hooks. There were also bayonets and shot (Hunter Research, Inc. 1990:D304). Earlier remains, however, continued to appear in cities such as Albany, where in 1866 a builder found a section of the old city stockade and presented relics from the site to the Common Council (Munsell 1870:329). Discoveries in Albany in 1875 and 1876 included another section of stockade wall, the foundation of the old Dutch church, and burials (Munsell 1876:6, 35-36). More burials and a small iron cannon were found in 1882 (Talcott 1973:269-270, 443-444).

Colonial sites in rural areas around Albany produced artifacts that were added to the New York State Museum collections. Artifacts of the eighteenth century other than military objects began to be of more interest, undoubtedly in reaction

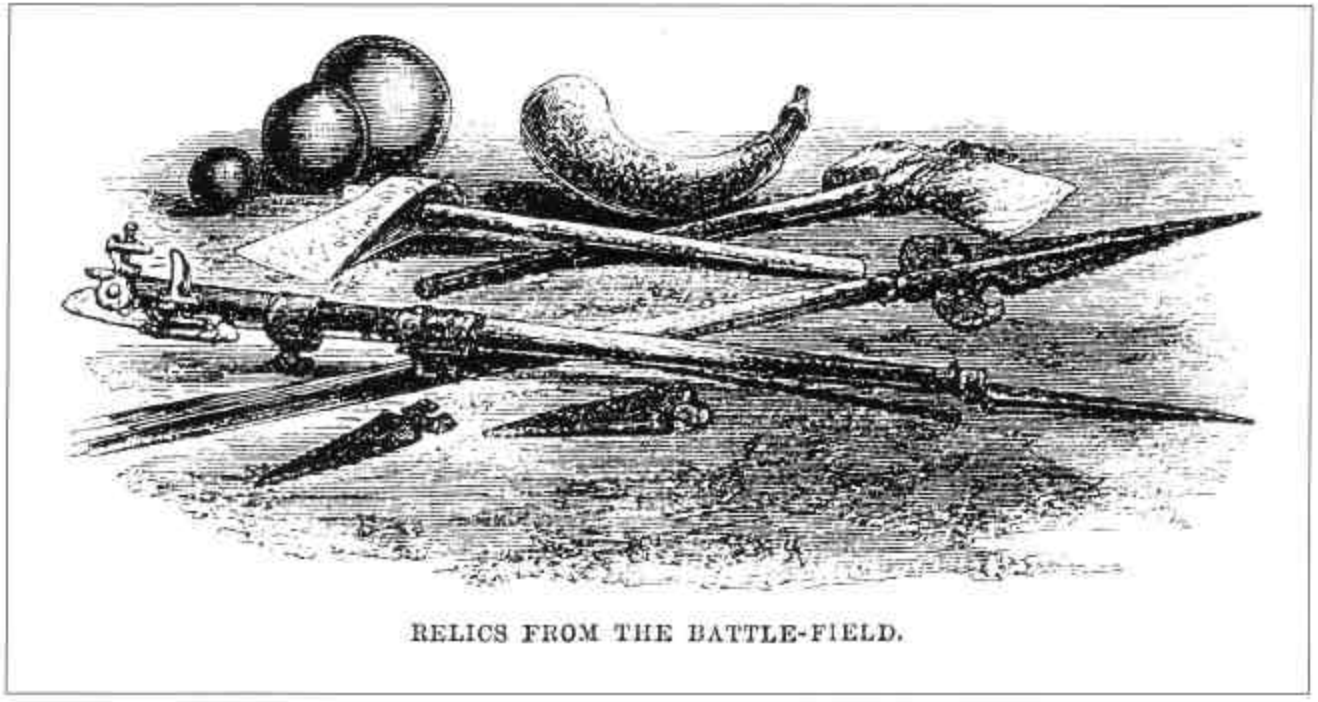


Figure 10. Artifacts from Saratoga Battlefield illustrated by Benson J. Lossing in 1866 (Lossing 1972: 104).

to the bloody war that had recently split the nation. In 1866 Lossing had illustrated not only battlefield relics from Saratoga (Figure 10) but also old silver coins found at Fort Edward, which he explained were called "cob money" (Lossing 1972:80, 104). Historians such as Edward Eggleston in 1884 began to use excavated artifacts such as colonial horseshoes (Figure 11) and an iron shovel as illustrations in historical articles and books, following the tradition of Lossing (Eggleston 1884: 445, 446). Interest in non-military artifacts as unusual or distinctive objects steadily increased. David S. Kellogg, a 38-year-old Plattsburgh physician in 1886, collected from the sites at Crown Point, Ticonderoga, and other places along Lake Champlain. At Crown Point he saw an ice creeper in a local collection which he carefully sketched (Everest 1970: 14, 15). When divers from Boston later that year began looting the wreck of the *Royal Savage*, which had sunk near Valcour Island in October 1776, Kellogg had them arrested for disturbing United States property (Everest 1970:17-18). In 1888, young Stephen H. P. Pell picked up an ornate bronze flint and tinder box in the ruins of Fort Ticonderoga. The discovery thrilled him and stimulated his interest in eventually reconstructing the fort (Pell 1975:2). By 1888 and 1889, however, Dr. Kellogg had expanded the scope of his Champlain Valley collection to include cannon balls and other relics from the War of 1812 (Everest 1970: 43, 51, 57, 59).

Research at historic Iroquois sites between 1860 and 1890 consisted mostly of continued collecting. One early collector was Ledyard Lincklaen of Cazenovia. He was also a naturalist

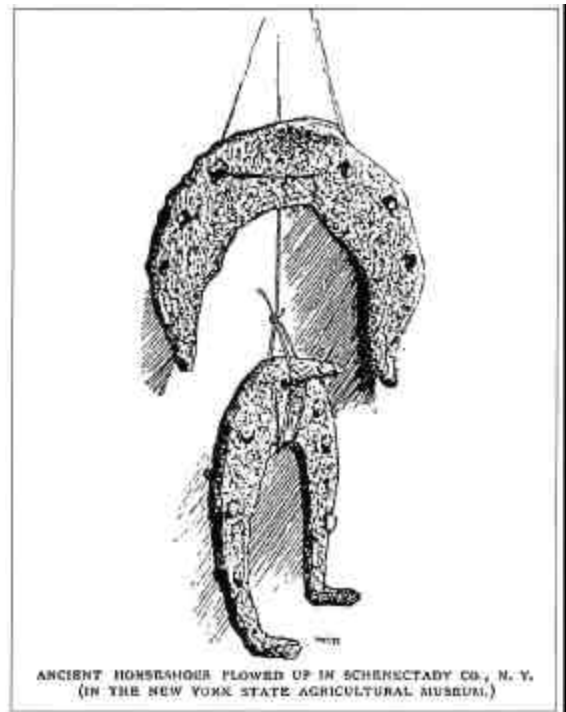


Figure 11. Colonial horseshoes from Schenectady County illustrated in 1884 by Edward Eggleston (1837-1902) in his article *Husbandry in Colony Time*, (Eggleston 1884:445).

by avocation, and in 1843 he had moved into Lorenzo, the family mansion at Cazenovia, with his bride. He married Helen Seymour, sister of future governor Horatio Seymour. Ledyard Lincklaen visited the Indian Hill site at Pompey in 1861 and found a knife, Jesuit rings, brass points, iron axes, a crucifix, and other artifacts. He gave a flintlock from the site to his daughter, Helen K. Lincklaen, as indicated on the dated label still attached to the artifact. She was one of a group of Cazenovia villagers who called themselves the "Old Canoe Indians." Their interest in Indians centered around the discovery and ceremonial resinking of a dugout canoe in Cazenovia Lake. A photograph of Helen dated October 12, 1861, shows her dressed in Indian costume. Ten years later she married Charles S. Fairchild, who became Attorney General of New York (Grills 1991).

A few individuals conducted systematic research at Iroquois sites. John S. Clark of Auburn in 1877 made a map of the Mohawk Caughnawaga site at Fonda showing the locations of darkened areas in the field (Grassman 1969:642). Clark's map (Figure 12) of Seneca Iroquois sites published in 1885 (included in a volume with an 1884

imprint) demonstrates the great progress that had been made in identifying Seneca sites and their historical sequence (Hawley 1884). At Boughton Hill, a Seneca burial was carefully excavated by a young 20-year-old doctor named A. L. Benedict in September 1885. Benedict carefully recorded what he found with perhaps unprecedented analytical detail and accuracy (Benedict 1891:120).

Collectors of artifacts from historic Indian sites in the Mohawk Valley in the 1880s included A. G. Richmond, who had been first cashier of the Canajoharie Bank. He prospered in banking and other investments and in 1891 built an imposing mansion in Canajoharie. An iron trade axe, an iron hoe, brass arrow points, and wampum and beads from his collection were in the Albany Bicentennial Exhibition during July 1886 (Anonymous 1878:101; Snow 1995a:119-120; Anonymous 1886: 11). As curiosities, many such objects prompted considerable research. George S. Conover of Geneva in 1889 wrote of the distinctive "man in the moon" and "stars and comet" beads that had been found there. John S. Clark

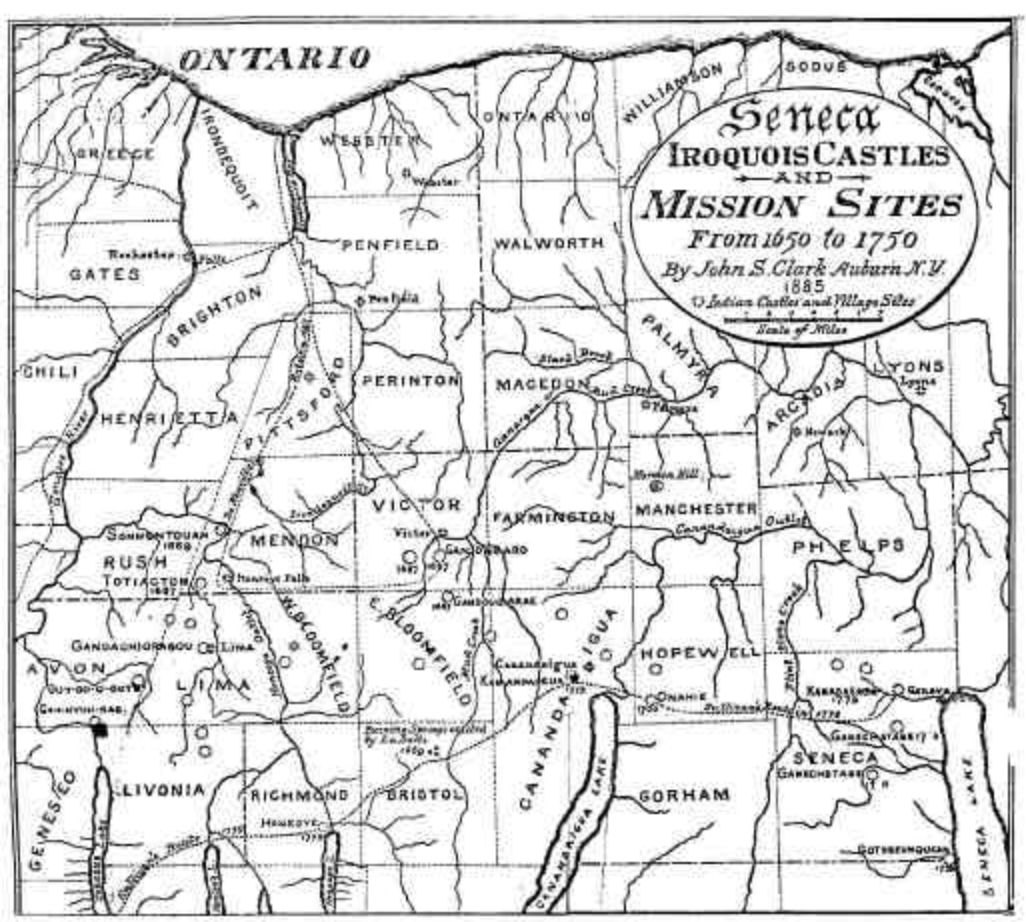


Figure 12. Map by John S. Clark dated 1885 of locations of Seneca sites and their dates (Hawley 1884).

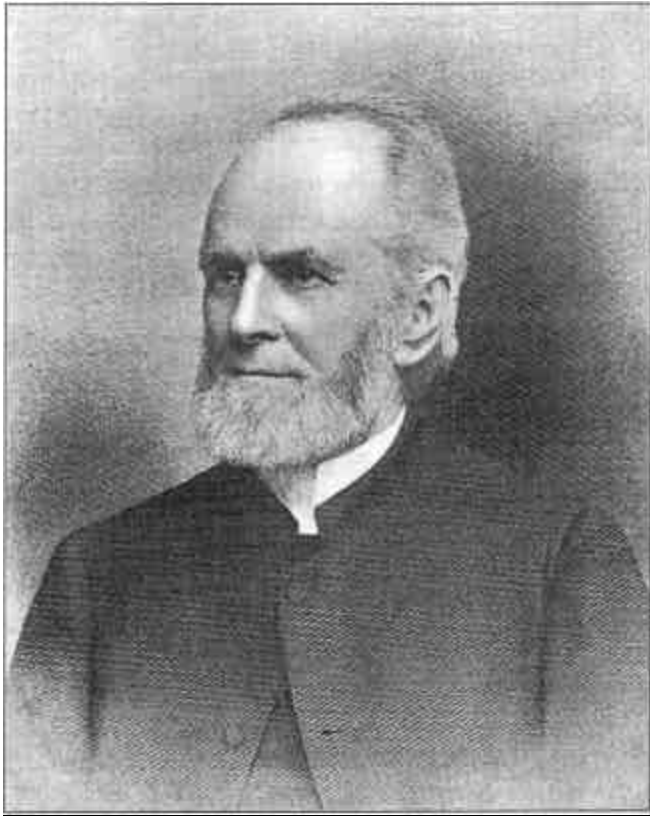


Figure 13. William M. Beauchamp (1830-1925) (Beauchamp 1914).

concluded that they were unrelated to any Christian symbolism. One "stars and comet" bead was obtained by William Clement Bryant of Buffalo, who with his family in the spring of 1888 took a trip to Europe. His sharp-eyed daughter, Marcia, saw "with delighted surprise" the same design on a tile mosaic over a portal of the Alhambra in Spain, and she made a pencil sketch of it. Marcia Bryant, who was described as "an ardent and enthusiastic Indianologist," wrote that "the figures on the bead are Moorish and Mahometan emblems. The large meteor-like star, surrounded by smaller ones, symbolizes the brilliant career of the Moorish Nation" (Conover 1889:6). William C. Bryant, with Orsamus Marshall, William P. Letchworth, Millard Fillmore, and others, was among the organizers of the Buffalo Historical Society and was president in 1876. He was a successful lawyer in Buffalo, and, as a reformer, he helped organize the Civil Service Reform Association of Buffalo. Born in 1870, Helen Marcia Bryant was William C. Bryant's only daughter. She is among the first women known to have made a contribution to historical archaeology in New York State, and she was likely to have carried on her father's interest in historical and archaeological research. In 1894 she married Albert Carl Spaan, also a lawyer and the son of a German immigrant. Sadly, she died on January 16, 1896,

eight days after her 26th birthday (Larned 1911:[I] 193, [II] 170, 222; Hill and Downs 1923:164; White 1898:451). Her brother, William L. Bryant, also practiced law and then became not only director of the Buffalo Society of Natural Sciences from 1909 until 1925 but also an authority on fossil fishes. He named his daughter Marcia (Anonymous 1947).

The Progressive Era, c. 1890 to c. 1930

By the end of the 1880s, there was a growing sense that life could be greatly improved not only through technology but also through reforms. A cultural change was underway which marks a watershed between the past and the present. Life in 1650 was more similar to life in 1875 than was life in 1875 similar to life in 1915. Inclusive within the Progressive Era was World War I, an idealistic "war to end all wars." But within the Progressive Era, an almost countless number of inventions and improvements would transform daily life: the electric light, the telephone, radio, moving pictures, the automobile, the airplane, the phonograph, the X-ray, smokeless gunpowder, dynamite, bottle caps, wire nails, pasteurized milk, celluloid, concrete, vitamins, and many more. The Progressive Era also brought with it strong movements in favor of the conservation of natural resources, and historic preservation efforts became highly organized. Other major reforms included consumer protection, prohibition, women's Suffrage, and fair labor laws. Frank Lloyd Wright overturned conventional architectural styles, while skyscrapers forever changed the Manhattan skyline as New York City rapidly expanded and swept away archaeological sites in the path of development. By 1900, "practically all the ideas of social improvement which Americans of later generations were to debate, modify, amplify, and apply had been formulated and thoroughly discussed by reflective persons from one end of the country to the other" (Beard and Beard 1944:396-397). This statement seems to be about this period as true today as it was in 1944.

By 1890, a new scientific trend was also finally developing in the archaeology of historic Indian sites. On August 1, 1890, Irving W. Coates visited a deep washout on the side of Fort Hill near Victor which had revealed a line of stockade posts. He measured and carefully described what he saw (Coates 1893). Dr. A. L. Benedict, meanwhile, in 1891 published his very thorough, scientific description of the burial he had excavated on Boughton Hill in 1885. A. L. Benedict, who legalized his initials as his name, was soon to become a prominent Buffalo physician (Benedict 1891; Anonymous: 1950a). Further research on artifacts, with attempts to trace occurrences by type, continued with the work of William M. Beauchamp (Figure 13). Born in Orange County, New York, the son of an immigrant from England, he had moved with his family in 1831 as an infant to a new home in Onondaga County. He entered the Episcopal ministry and was ordained priest in 1863. He served as rector of the church at Baldwinsville until he retired in 1900 (DAB). Active in the

identification of historic archaeological sites as early as 1888, he published *Earthenware of the New York Aborigines* as a State Museum Bulletin in 1898. He illustrated elbow-type pipes with the EB mark, now known to be Dutch, although Beauchamp had no idea that any Dutch pipes had been found. He also described English tobacco pipes marked RT and R TIPPET and reinforced the important point, made earlier by A. C. Chenoweth, that such pipes had been found at Mohawk Indian sites as well as in historic non-Indian sites on Manhattan and in Acadia (Beauchamp 1898:115-116). By 1900, Beauchamp had made the first known attempt to arrange the historic seventeenth century Onondaga Iroquois sites in a sequence, which he published that year in his *Aboriginal Occupation of New York* (Bradley 1979:7). In 1903 he published *Metallic Ornaments of the New York Indians*, another important source of data (Beauchamp 1903).

Careful excavation of contact sites continued in May 1903 with the work by M. Raymond Harrington and Arthur C. Parker at the Silverheels site southwest of Buffalo (Harrington 1922). In 1909, a 39-year-old Buffalo educator named Frederick Houghton excavated the historic Van Son site on Grand Island, assuming that it had been a Neutral village. Frederick Houghton was soon to make important additional contributions to the study of the Iroquois in western New York. As principal of the Buffalo public school system, Houghton also wrote several text books on teaching English to non-English-speaking adults (White 1968:7-8; Anonymous 1950b). Meanwhile, the rapid publication of many important documentary source materials, translated and edited with greatly improved standards of accuracy, provided the resources for progressively scientific analysis of archaeological material and identification of sites. In 1894 the Burrows Brothers Company of Cleveland decided to republish the rare *Jesuit Relations* with an English translation, but this project soon expanded under the direction of Reuben Gold Thwaites as editor. From 1896 to 1901, at the rate of more than one a month, 73 volumes of *The Jesuit Relations and Allied Documents* appeared (Kenton 1954: iii-iv). By 1910, translations of other important Dutch and French sources had become available in the Original Narratives of Early American History series under the general editorship of J. Franklin Jameson; these included *Voyages of Samuel de Champlain: 1604-1618* (1907) and *Narratives of New Netherland: 1609-1664* (1909). In 1908 the State Education Department published the invaluable *Van Rensselaer Bowier Manuscripts* translated and edited by A. J. F. van Laer. Other publication achievements in this remarkable period provided familiar documentary sources which have also continued to serve as essential tools for historical archaeologists to the present day. These include colonial muster rolls and other records published in two volumes by the New York State Historian in 1897 and 1898, Berthold Fernow's edition of *The Records of New Amsterdam* published in seven volumes in 1897, the

Abstracts of Wills published by The New-York Historical Society annually in seventeen volumes from 1893 to 1909, and the *Public Papers of George Clinton* published in eight volumes by the State Historian from 1899 to 1904.

In 1910 Frederick Houghton searched for burials and refuse heaps at Ganondagan (Gannagaro, or Boughton Hill) near Victor, and he excavated burials on a site to the south (Houghton 1912:430, 439). He excavated burials at the Seneca Marsh Site in 1911 (Houghton 1912:421), and in 1912 he published his classic synthesis of the historic Seneca occupation of New York between 1655 and 1687. He developed five time periods from prehistory to after 1779. Houghton tried especially to reconstruct the Senecas' way of life and culture (Houghton 1912). In a talk he prepared for presentation in Rochester on February 10, 1917, Houghton outlined the sequence of Seneca village sites in generally correct order, from the Belcher and Tram sites to the Victor site (Houghton 1951:53). The excavation of many more burials at Boughton Hill by Parker and others continued in 1919 and 1920, and in 1922 Houghton concluded that the careful study of archaeological remains "has yielded a rather definite idea of the culture of the people" (Houghton 1922:39-40). Houghton was perhaps one of the first historical archaeologists to use the word "culture."

An active collector in the upper Susquehanna Valley was Willard E. Yager, an Oneonta newspaper editor who had retired in 1890. As early as 1908 he had collected artifacts from sites at Oquaga, in the Town of Windsor, Broome County (Yager n.d.:2837, 2842, 2843). Francis W. Halsey in 1902 had recognized the importance of Oquaga during the eighteenth century but also believed the site was occupied before 1650 (Halsey 1902:28). In the spring of 1913, an extensive washout occurred along the Susquehanna River in the Oquaga area. Yager acquired many eighteenth century artifacts picked up from the area by collectors including Albert Hupman, Percy L. Lang, Rowan D. Spraker, and Laurel Heath (Figure 14). Some of the material found there, such as the red clay tobacco pipes, may however date from the seventeenth century. The artifacts included a variety of Jesuit rings found by Laurel Heath and Albert Hupman. Albert Hupman also found gray and amber gunflints (Yager n.d.: 4708-4711).

Elsewhere in New York State, excavations of historic Indian burials on Long Island had been conducted in 1917 and 1918 by Foster H. Saville of the Museum of the American Indian at a site near Easthampton. A glass bottle was found on which was scratched the name of the owner, Wabetom, a Montauk chief (Saville 1920). Other seventeenth-century burials were excavated in 1928 at Montauk by Roy Latham (Latham 1978).

Historical archaeology between 1890 and 1930 was influenced heavily by the work of William L. Calver and Reginald P. Bolton. Reginald P. Bolton, born in England, was a civil

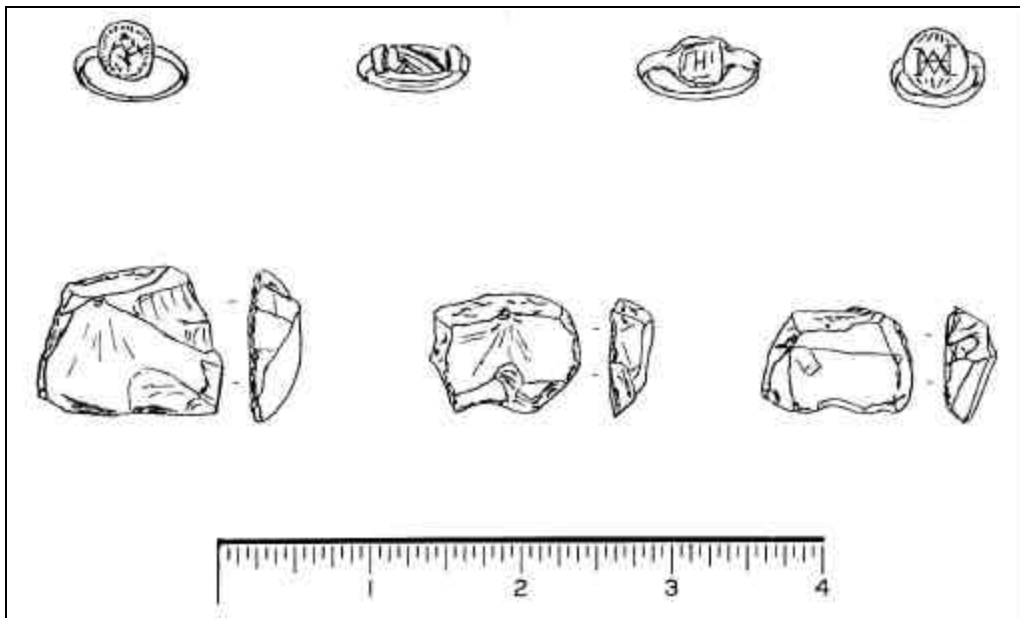


Figure 14. Artifacts collected from sites at Oquaga in Broome County in 1913. Finger rings from left to right were catalogued by Willard E. Yager as number 4708, found by Laurel Heath, and numbers 4709 through 4711, found by Albert Hupman. The gunflints, collected by Albert Hupman, are gray (left and center) and pale amber (right) (Yager Museum, Hartwick College).

engineer who in 1890 located and identified the remains of Fort Washington on upper Manhattan Island with the assistance of Edward Hagaman Hall. Also, early in 1890, William L. Calver was actively digging. Trained as a railway engineer and employed by the rapid transit system. William L. Calver at this time discovered the camp site of the British 17th Regiment from the Revolutionary War located on the Dyckman farm on Manhattan. Edward Hagaman Hall, born in Auburn, New York, and educated at the Auburn Academic High School, was an editor and writer who often dug with Calver and Bolton. The exploits of Calver and Bolton are perhaps well enough known not to require going into detail here (Anonymous 1942; Hall 1925:42; Anonymous 1941a:118-119; Calver and Bolton 1950:11; Anonymous 1899:176; Gruber 1984).

A third major influence in the development of historical archaeology in New York was Robert M. Hartley, grandson of a New York businessman and philanthropist. Born in the Town of Florida in the Mohawk Valley in 1862, Hartley had begun collecting military buttons by 1890. He built a home in 1903 on land which he then acquired from his father; the house is still standing (Figure 15) (Anonymous 1941b; Miller 1943:47-48; Stanley 1991). Like David Kellogg in the Champlain Valley, Calver, Bolton, Hartley, and Hall each had or developed an interest in Indian sites as well as non-Indian historic sites.

In 1904, Elroy McKendree Avery, a Michigan-born Civil War veteran, former high school principal, and writer of textbooks, began publication of his multi-volume *A History of the United States and Its People*.

Following the tradition of Lossing and Eggleston, he used artifacts to illustrate his writing (Avery 1909; Anonymous 1937:57). Many of the artifacts were from the Champlain Valley collection of Silas H. Paine, a Standard Oil Company executive from Lake George, who had a small cobble stone museum on his estate at Silver Bay. His collection is now in the State Museum (Paine 1919:300; Ingalls 1922:258).

The Jamestown Tercentenary of 1907 was a major event, in which the New York exhibit included artifacts from Johnson Hall, Saratoga battlefield, Schenectady, and other



Figure 15. House built in 1903 and occupied by Robert M. Hartley in the town of Florida, Montgomery County, photographed April 14, 1996.

places. The collection had been assembled by Cuyler Reynolds, an Albany writer and historian educated at the Albany Academy and a Catskill boarding school (Reynolds 1909:253, 258, 261, 274, 277, 545-546).

Hartley and Calver in September 1908 visited Ticonderoga and Crown Point to dig for buttons, and, remarkably, at Crown Point they found a compass that Burgoyne had lost (Miller 1943:26, 45-46, 52, 54, 73). Plans had been made to excavate and reconstruct Fort Ticonderoga, and that winter the wreck of a colonial boat found nearby was raised and dragged ashore across the ice from the lake. It was misidentified as a Revolutionary War schooner. Actually it was probably the *Duke of Cumberland* brig, built by Amherst in 1759. The wreck was allowed to crumble and decay. Meanwhile, the excavations and reconstruction at Fort Ticonderoga produced a large collection (Bossom 1913:614; Cohn 1985:38-39).

By 1912 excavations were underway at Crown Point that were much more ambitious than a hunt for military buttons. These excavations were directed by Annie E. Witherbee. Married to Walter C. Witherbee, Treasurer of the iron mining firm of Witherbee, Sherman and Company, she was Annie E. Gautier before her marriage in 1886. She was born in Albany in 1852, a daughter of Dr. Josiah Hornblower Gautier and Maria (Gregory) Gautier. The French Canadian ancestry of her mother and most likely also her father may have helped inspire her interest, and her younger sister who died in 1881 had married Louis Mesier, descendant of a distinguished colonial New York family (Ingalls 1922:110-112; IGI 1794; IGI 1820; IGI 1844; IGI 1852; Spencer-Mounsey 1928:81). Members of the New York Lake Champlain Tercentenary Commission believed her "discoveries ...in and about the old French Fort ...are such as may lead to the rewriting of a description of these forts [at Crown Point]." Specifically, it was said, "she has located the ovens and found the oven doors, candle-sticks, snuffers, glassware, blue and white china of Fort St. Frederic, built in 1731 [1734], the underground drain, from the English Forts, built of stone two and one-half feet high, resting on a solid rock and twenty inches in width in perfect condition. She has also found the casemate and bastions around the English Forts, which were built in 1759 by Amherst. She has opened up the old forge and found many relics such as a gun-carriage, chairs, knives, spades, iron bars, bolts and other articles" (Hill 1913:76-77). The location of her collection is not known.

In 1915, an Essex County, New York, judge named Berne A. Pyrke took the lead in promoting the excavation, development, and interpretation of the ruins at Crown Point. He was himself a collector of Crown Point artifacts and built his summer cottage near the site. The State purchased a wreck that had been found in the lake from the farmer who raised it and moved it into the British fort for display (Anonymous 1916:30-31). The wreck remains unidentified since a few years later it was destroyed in a grass fire. Excavations meanwhile soon

revealed many artifacts in Fort St. Frederic. The same year, 1915, Calver turned his attention to the Revolutionary War hut sites at New Windsor Cantonment. Working with Oscar T. Barck, treasurer of a Brooklyn clothing company, Dr. John Deyo, and John Ward Dunsmore, a historical painter, Calver excavated an officers' hut between August 6 and August 9, 1915. The next year, in September 1916, Robert M. Hartley joined Oscar T. Barck in excavating there. They carefully recorded the dimensions of the hut, sketched a plan, and photographed it (Koke 1976; Anonymous 1953b; Hall 1917:163; Huey 1983). During the 1920s, Calver and Bolton continued to excavate a variety of sites and to write articles, while on Manhattan they often managed to stay just ahead of rapidly expanding new construction. At Crown Point, funding for continued excavation gradually dwindled, however.

The Depression and Cold War Era, c. 1930 to c. 1960, and the Era of Public Accountability, c. 1960 to c. 1990

The onset of the great economic Depression that characterized the 1930s overturned traditional American values related to savings, ambition, and hard work. The Depression and World War II were the most traumatic events of the twentieth century. The period represents a life-and-death struggle between differing and conflicting philosophies in response to the economic dilemma of the Depression: socialism, communism, and fascism. Historical archaeology took on new meaning as a tool useful in reconstructing Colonial Williamsburg, an attempt to recreate an entire community and an entire environment from a happier- economically more successful time and culture and perhaps to observe how it had worked.

Although the excavations at Williamsburg and then at Jamestown set important precedents for the archaeological study of varieties of sites and complete communities, in New York State much of historical archaeology through the 1950s continued, in the tradition of Calver and Bolton, at military sites. One exception was the work by Calver and Bolton, with Morgan H. Seacord, in 1932 in excavating an area to the rear of the oldest part of Philipse Manor Hall in Yonkers, New York. They uncovered an "ancient wall" that they interpreted as the foundation of part of "the earlier manor house" preceding the existing structure. The only known field record of this work consists of a small sketch map, and the artifacts have disappeared. Nevertheless, it is most likely they uncovered the foundations of a small, later wing on the house that is shown still standing in an 1895 illustration (Seacord 1933; Bridges and Huey 1976). Highlights of historical archaeology in New York State since 1930 include the raising by L. F. Hagglund of the *Philadelphia* from Lake Champlain in August 1935 and the excavations at Stony Point Battlefield and at the site of Fort Clinton in the lower Hudson Valley under the direction of William H. Carr in September 1935.

The remains of the west redoubt of Fort Clinton from the Revolutionary War were cleared of trees and brush, and the entrenchments were excavated and restored to their original ground level (Carr 1935). The stabilized site is preserved and still visible near the Trailside Museum in Bear Mountain State Park. At the same time, Carr directed the excavation of a colonial house foundation at Stony Point Battlefield, located in Rockland County. While Hartley continued to collect buttons at Crown Point in 1936 (Miller 1943:54), extensive excavation of middens and fortifications at Stony Point continued during 1937, 1938, and 1939 (Koke 1939). Saratoga Battlefield became federal property in 1938, and in 1940 and 1941 Robert Ehrich with a Civilian Conservation Corps crew exposed sections of fortification lines and redoubts there (Starbuck 1988:18).

Sadly, both William L. Calver and Robert M. Hartley died in 1940, and in February 1942, Reginald P. Bolton died at the age of 85. Despite these losses, the excavation of military sites and discoveries of artifacts continued in New York City during the rapid development that followed World War II. In 1946 a flintlock musket was recovered by a steam shovel in Battery Park while excavating for the new Battery-Brooklyn Tunnel. The hammer was still cocked, and the weapon was fully loaded with a charge of black powder, a ball, seven buckshot, and a wad. It was tentatively interpreted as a weapon that was lost during a skirmish near the Battery on August 23, 1775 (Koke 1948). In 1950, an important source for historical archaeologists was made available by The New-York Historical Society. This was the collection of 34 articles by Calver and Bolton published as *History Written With Pick and Shovel*, with an introduction by Richard J. Koke.

Historical archaeology nevertheless remained relatively undeveloped and unfocussed as a discipline, and no overall effort could be organized to rescue information from massive construction projects such as the New York State Thruway in 1953. Many sites were lost. In a desperate attempt to rescue artifacts from a portion of the New Windsor Cantonment site in the path of the Thruway, Calvin D. Myers, a Newburgh newspaper editor, began work with a mineral detector loaned by the New York State Division of Archives and History to locate and collect objects from the site. It is not known if any excavations occurred other than the recovery of the stones from the hut sites using power equipment. Oscar T. Barck arrived to discuss the work with Myers just as the work ended; sadly, it was one of Barck's last visits to New Windsor Cantonment, for he died that October (Anonymous 1953a; Anonymous 1953b).

In 1955, Louis F. Ismay, a teacher, began directing excavations in a newly-rediscovered colonial village site at Crown Point. The village was at first believed to have been a French village, but evidence of subsequent English occupation also soon appeared; the excavations at the village site continued until 1959 (Huey 1959). At Lewiston, New York, Richard McCarthy began rescue excavations in 1956 at

a site he interpreted as that of the French "Magasin Royal" built in 1720 near the Niagara River (Scott et al. 1993:8, 93). Excavations were soon also occurring at Fort Ticonderoga, at Johnson Hall, and at Fort William Henry at the same time. In 1958, at Lewiston, McCarthy began excavating the Portage Site, a British colonial military site from the 1760s or later (Scott et al. 1993:12-14). To these were added other excavations in 1958 by John H. Mead at the site of Fort Montgomery in Orange County (Figure 16), also in 1958 at the site of Fort Independence in Bronx County by "The New York City Archaeological Group" under Julius Lopez (Lopez 1978), and in 1959 by Edward M. Larrabee at Saratoga on the Schuyler House grounds (Figure 17), all sites dating from the Revolutionary War. During the fall and winter of 1959 Gilbert Hagerty conducted excavations near Rome in search of the site of Fort Bull, built in 1755 and 1756, and he uncovered a line of post molds (Hagerty 1971:84). Historical archaeology in the Northeast during the 1950s and 1960s has been summarized in more detail elsewhere (Huey 1986; Feister 1995:63).

It was in the late 1950s and early 1960s, however, that a new phase began to develop, and a new generation began to play a leading role in the development of historical archaeology in New York State. Increasingly, young people became involved in current issues and in social action. There was a new concern about pollution and environmental protection, and there was a trend toward establishing higher standards of accountability, both at the government and at the individual levels. This writer vividly remembers wiring a bumper sticker to the family car in 1958 that said "Keep America Beautiful/Don't be a Litterbug." Publication of *Silent Spring* in 1962 was an awakening for many. Soon, through the 1960s, many Americans were noisily rejecting a 1940s and 1950s type of response in Viet Nam to the Cold War. Because so many archaeological sites were being destroyed and lost in the United States, historic preservation and the protection of archaeological resources became a national priority and was supported by new federal legislation in 1966. In New York State, the Historic Trust was established and made responsible for the National Register and the State Historic Sites programs. A preservation philosophy developed, calling for the preservation and wise management of resources at sites that could be protected and for the excavation of sites that otherwise could not be saved in order to rescue information for research (Huey 1981; Huey 1995:16).

With the increased integration of historical archaeology and historic preservation, historical archaeology rapidly professionalized and became more accountable to the public after c. 1960. Public funding simply for collecting buttons or clay pipes could not be justified, and historical archaeology finally became historical, theoretical, scientific, and anthropological. This was part of a more general change in American

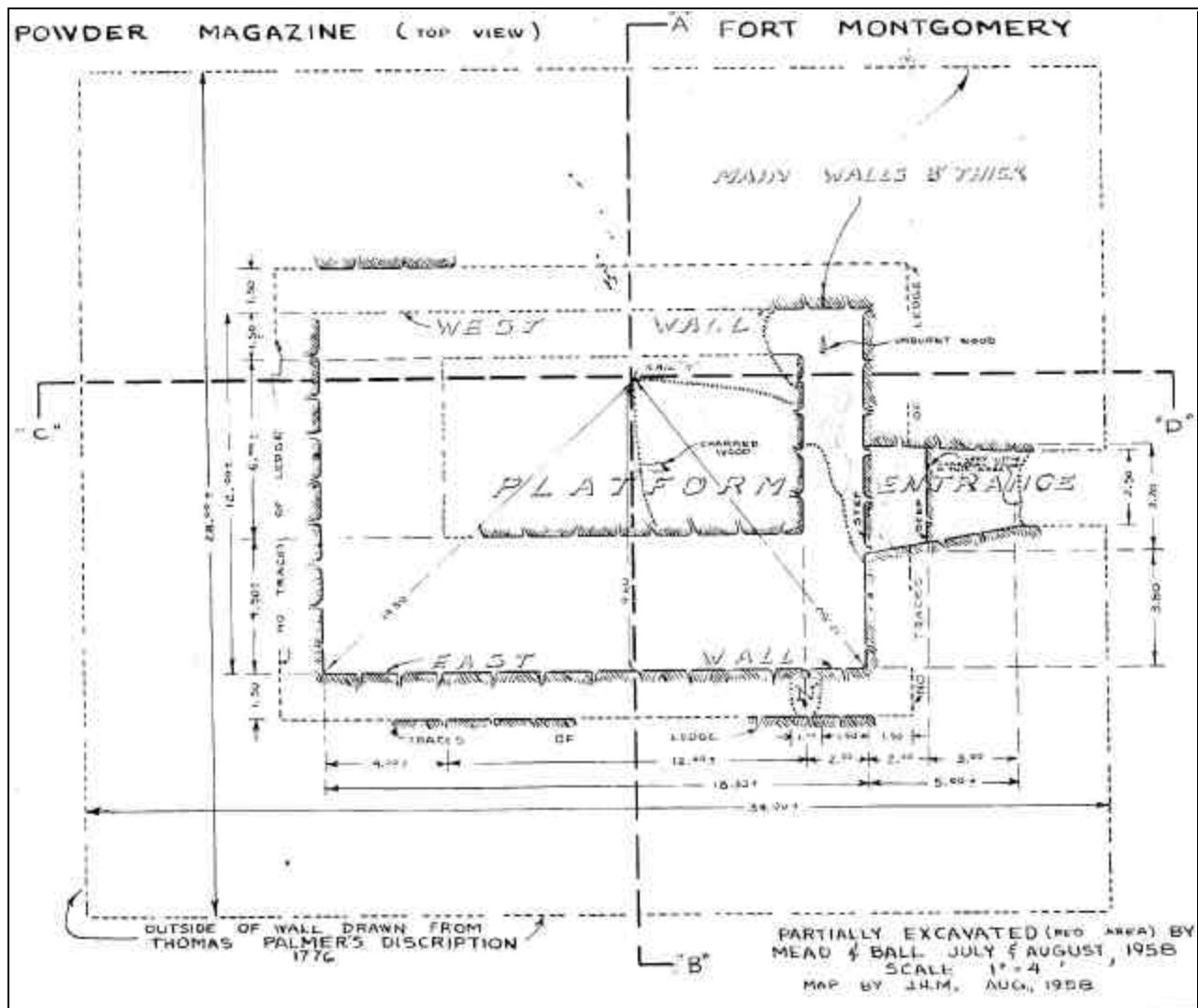


Figure 16. Excavation plan of the site of the Powder Magazine at Fort Montgomery by John H. Mead, August 1958 (Trailside Museum, Bear Mountain State Park. New York State Office of Parks, Recreation and Historic Preservation).

archaeology, the rise of "new," or processual, archaeology (Schuyler 1978:201). Historical archaeologists were given important new and useful ideas and theoretical tools by James Deetz (1967), Henry Glassie (1975), Stanley South (1977), and others. Finally, it became important for historical archaeology not just to confirm history, or what was already known, but also to provide new information and new insights of significance to history and anthropology (Salwen 1989:6-7; Wilderson 1975; Leone and Potter 1988). Urban renewal, for example, prompted excavations that revealed sites from historical periods not previously studied and known only through incomplete documentary sources. Significant new information was developed as a result.

Excavations in 1969 by the New York State Historic Trust at a construction site in New York City on

the colonial waterfront at Old Slip demonstrated the potential significance of stratified landfill deposits (Huey 1984:17-23). In 1970, Bert Salwen, a mechanical engineer who earned a Ph.D. in archaeology, uncovered remains of the seventeenth-century Kingston stockade. Later that year excavations in Albany revealed part of the site of Fort Orange, built in 1624 (Huey 1995:16-17). Fort Stanwix in Rome, New York, was excavated in 1971, and urban archaeology continued to make major contributions in the 1980s following the excavations between 1979 and 1981 in the Stadt Huys block, the Hanover Square block, and the Telco block on Manhattan (Huey 1986:10-11; Rockman and Rothschild 1984:114; Rothschild 1990:138-139). In 1978, workmen excavating under 209 Water Street in New York City uncovered the well-preserved remains of a ship. The building above it was built in 1836, although it is

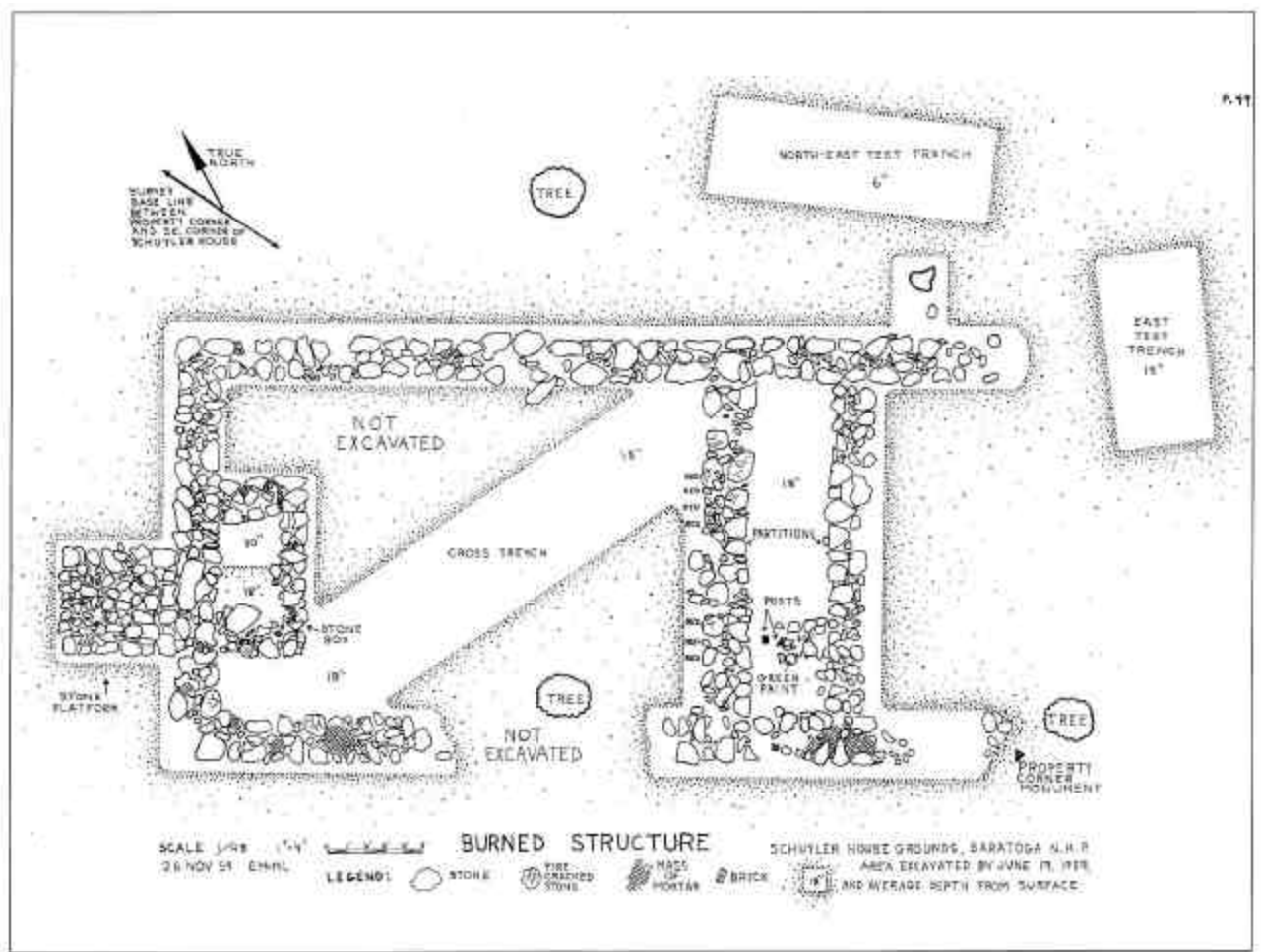


Figure 17. Excavation plan by Edward M. Larrabee of the site of a structure burned in 1777 at the Schuyler House, Saratoga National Historical Park (Courtesy of Edward M. Larrabee).

thought that the ship dates from before 1758. The work was redesigned so as to avoid further disturbance of the remains, and they were reburied under clean sand (Brouwer 1980:22-23). This ship may, in fact, be one of many early ships abandoned and buried along Water Street and elsewhere on lower Manhattan. In 1832, New Jersey-born John F. Watson interviewed a 76-year-old New York resident who recalled that "so recently has a part of Water Street been filled up, that he could now lead to the spot there, where could be found the body of a vessel deep under present ground" (Watson 1832:103). Another important New York City project was the rescue excavation in 1983 and 1984 of seventeenth-century lots at Pearl and Whitehall streets which included the site of the West India Company warehouse (Grossman 1985). In Albany, significant rescue excavations were conducted by Hartgen Archeological Associates, Inc. in 1986, the year of the 300th anniversary of the city's charter, at the site of the Volkert Jansen Douw house dating possibly from before

1650. The house had become the city's almshouse in 1685 (Huey 1991:335-345).

In addition to archaeological discoveries in New York City and Albany, significant discoveries occurred in Buffalo and Rochester as well. In June 1980, during the construction of Buffalo's Light Rail Rapid Transit System, parallel logs of an early log road were discovered deep below the modern street surface of the city. The remains were carefully recorded during rescue excavations, and it is believed the road was constructed between 1800 and 1810 and used until 1839 or 1840 (Cinquino, Keller, Tronolone, and Vandrei 1984). In Rochester, a heavy machine demolishing a ruined industrial structure on the western bank of the Genesee River gorge in 1983 broke through an apparently stable concrete floor into a large wheel chamber below the building. The chamber contained the astonishingly intact but fragile remains of a nearly complete nineteenth-century wooden and iron water wheel almost 25 feet in diameter. In 1988 Brian L. Nagel of the

Rochester Museum & Science Center directed a study of the remains that included documentary research, remote sensing, and examinations by an archaeological conservator and an architectural consultant (Nagel 1989).

Other major accomplishments since 1960 have included the interpretation and publication of the results of excavations of military hut sites. Revolutionary War hut sites on Manhattan had been excavated as early as the 1860s, and Calver, Bolton, Hartley, and others had focused their collecting efforts on hut sites after 1890. However, despite the knowledge of military life and artifacts generated from these hut site excavations, no detailed report on the excavation of a Revolutionary War hut site was written or published until the work directed by Charles L. Fisher in the 1980s for the New York State Office of Parks, Recreation and Historic Preservation in the hut sites at New Windsor Cantonment (Fisher 1983, 1984). In 1986 he produced a thorough analytical and interpretive report on the excavation of a single Massachusetts Brigade hut site carefully excavated by John H. Mead in the 1960s (Fisher 1986).

Excavation; at more substantial military sites were conducted in the 1960s, 1970s, and 1980s with work at sites of small forts as well as at large fortresses of the French and Indian War, Revolutionary War, and War of 1812. John H. Mead in the 1960s continued his excavations at Fort Montgomery, in addition to his work at the hut site at New Windsor Cantonment, and Edward M. Larrabee and Susan M. Kardas also began the excavations at Fort Tompkins and other sites at Sacketts Harbor Battlefield State Historic Site in the 1960s. As commercial development threatened historically significant military sites in the 1960s and 1970s, surveys and rescue excavations became necessary, as at the sites of the Revolutionary War Fishkill Supply Depot in Dutchess County and at the site of Fort Gage at Lake George, New York. Fort Gage, a British earthwork redoubt built in 1758, was destroyed to build a new motel, but only after a partial excavation of the site was conducted in 1975. Farther north, at Crown Point State Historic Site, excavations both along the barracks walls in the British fort in advance of drain construction and in an outside area of British hut sites proposed for new construction were completed in the 1970s and 1980s. The data from this work have been used to address a number of current questions and issues in military historical studies. The significant on-going archaeological research program at Old Fort Niagara State Historic Site was begun in 1979 by the Old Fort Niagara Association under the direction of Stuart D. Scott and Patricia Kay Scott. Under this program, survey work has not only rescued data from the path of new construction but also identified sites and remains that have been correlated with historic maps and records. In 1984 the Scotts conducted extensive rescue excavations in Fort Ontario State Historic Site, where they skillfully uncovered traces of the earlier colonial British forts on that

site (Larrabee 1968; Gifford and Crozier 1973; Feister and Huey 1985; Feister 1984; Fisher 1995; Scott and Scott 1990; Scott and Scott 1984). Significant advances occurred also in the area of underwater archaeology. In the 1970s, Henry W. Moeller of the New York Ocean Science Laboratory directed careful work on the wrecked remains of the H.M.S. *Culloden*, a British 74-gun ship that was lost in 1781 at Montauk on Long Island (Moeller 1977). In 1988 an underwater survey was conducted in the cove of the Niagara River adjacent to Fort Niagara. Using a 100-by 100-foot grid, the divers identified a possible eighteenth-century shoreline represented by a band of artifacts underwater (Knoerl 1988).

At Indian sites, meanwhile, much of the focus had been placed upon developing cultural sequences and chronologies, a process that was greatly advanced with the development of radiocarbon dating. Historic contact sites had become important as a means of identifying cultural patterns for known and historically documented Indian groups and of projecting back from them into prehistory (Salwen 1989:3-4). The study of historic period Iroquois sites now moved ahead rapidly. Burials were excavated beginning in 1934 at the Seneca Dutch Hollow Site (Ritchie 1954). The same year, in excavating the prehistoric Sackett Site in Ontario County, William A. Ritchie found extensive evidence there of a later Seneca village, burned in 1779. Ritchie also excavated late eighteenth-century refuse pits and burials as well as prehistoric burials in 1936 at the site of the Seneca village of Canawaugus, and the same year he excavated three intrusive Seneca burials dating about 1770 at the Big Tree Farm Site (Hayes 1965:5, 7, 9). On Long Island the Fort Corchaug excavations began in 1936 (Solecki 1950:15). In 1938 Warren King Moorehead astutely observed that pre-1675 Iroquois sites were non-existent in the upper Susquehanna Valley (Moorehead 1938:30-31). Historical documentation was becoming much more fully integrated into the interpretation of the archaeological record, as demonstrated by Joseph R. Mayer's *Flintlocks of the Iroquois, 1620-1687* published in 1943 by the Rochester Museum of Arts and Sciences. He stressed the importance of "historical background" and "careful scrutiny of the economic necessities, political pressures and military campaigns of the period" (Mayer 1943:6). In June 1950 six years of excavations by Father Thomas Grassman and the Van Epps-Hartley Chapter had revealed the entire plan of the Mohawk Caughnawauga village site at Fonda, New York. At the October 1951 meeting of the Eastern States Archaeological Federation, Grassman presented a paper outlining his conclusions as to the locations of the various Mohawk villages in sequence from 1614 to 1780. Subsequently, in 1965 Donald Lenig, a 46-year-old electronics and physics technician, published the results of his more than ten years of thorough research and analysis of Iroquoian pottery in his book *The Oak Hill Horizon and its Relation to the Development of Five*

Nations Iroquois Culture, Published by the New York State Archaeological Association. In this important book Lenig proposed a site sequence that included a sequence of eight protohistoric and historic Mohawk sites from c. 1475 to 1650 (Grassman 1969:638-648; Lenig 1965:66). Completing the efforts begun in the 1840s by Orsamus Marshall, Charles F. Wray and Harry L. Schoff in 1953 published their landmark Seneca site sequence which extended the earliest Seneca trade contacts back to about 1550 (Wray and Schoff 1953). Further studies have continued successfully to trace Iroquois groups from historic times back into prehistory (Tuck 1971; Pratt 1976; Niemczycki 1984). At the same time, there have been other comprehensive syntheses of these Iroquois groups within the historic period (Rumrill 1985; Hagerty 1985; Bradley 1987).

Additional studies during the 1960s, 1970s, and 1980s of artifacts and of individual Iroquois sites contributed to the on-going effort to refine site sequences and provide comparative data. Peter P. Pratt's *Oneida Iroquois Glass Trade Bead Sequence: 1585-1745* with color plates, published in 1961, was of immediate use to many historical archaeologists, whether or not they were excavating historic Iroquois sites (Pratt 1961). Also during 1961, Donald Lenig directed the excavation at Fort Plain, New York, of 21 Mohawk Indian burials dating c. 1700 to 1740 (Fort Plain Museum 1964). In 1964 and 1965 the Rochester Museum of Arts and Sciences excavated part of the Seneca Cornish Site now dated to between 1625 and 1640, and at the 1965 Conference on Iroquois Research Charles F. Hayes III presented a paper, later published, giving details on the longhouse that was uncovered (Hayes 1967). Also in 1965 Hayes published his innovative comparative study of late historic Seneca sites and a late eighteenth-century tavern site in Monroe County (Hayes 1965). A highlight of the New York State Archaeological Association annual meeting held at Rochester on April 23, 1966, was Charles F. Wray's presentation of a specially prepared report on his work at the Boughton Hill Site since the 1950s (Wray and Graham 1966). In 1970 the New York State Historic Trust purchased Boughton Hill (Ganondagan) as a State Historic Site, and to facilitate planning, interpretation, and responsible management of the archaeological resources contracted with the Rochester Museum & Science Center to conduct a comprehensive survey of the site in 1977. The testing covered 30.5 acres and successfully defined an actual occupation area of 9.1 acres, in the shape of an ellipse about -580 feet wide and 870 feet long (Hayes, Barber, and Hamell 1978:9-12). This work was followed by other survey work, and in 1983 and 1984, excavations by Robert L. Dean revealed the postmold outline of a rectangular house structure about 36 feet long and 19 or 20 feet wide (Dean 1984:21). Three years later, a major addition to the literature of contact-period Seneca sites was the 1987 study of the Adams and Culbertson sites dating from the third quarter of the sixteenth century (Wray et al. 1987).

The serious study of contact period Indian sites slowly extended eastward and westward from the central areas historically associated with the Five Nations Iroquois. In the Hudson River in 1939, Mary Butler of Vassar College excavated a rockshelter on Goat Island, near the northwest corner of Dutchess County. In addition to evidence of prehistoric occupation, she uncovered evidence of historic colonial occupation in the seventeenth century and again in the eighteenth century. The seventeenth-century material included a gunflint and a seventeenth-century Dutch bulbous pipe bowl with an IW or JW heel mark. By 1656 the island had been named Jan de Wit's Island, perhaps for Jan de Wit, the trader who had sailed to the Hudson River from Amsterdam in 1613. When his ship's captain and two others were killed by Indians, De Wit took command and sailed back to Amsterdam in 1614 (Chilton 1991). It is possible that an encounter with the Mahicans occurred on this island at that time.

Evidence of extensive Mahican sites along the Hudson River comparable to the large Iroquois village sites to the west continues to remain, however, elusive. In 1962 Robert E. Funk of the State Museum, with Frank Schambach, excavated at a prehistoric site located at Little Nutton Hook in northwestern Columbia County; intrusive through the prehistoric strata was a later refuse pit which contained a donut-shaped lead bead or weight in association with hammerstones, Indian pottery, and an unfinished projectile point. In 1963 and 1964 at the Bronck House Rockshelter site in northeastern Greene County, excavations directed by Funk revealed not only a stratified prehistoric site but also evidence of historic occupation in the uppermost zone. There was part of a carved bone knife handle and a mid to late seventeenth-century elbow-type clay pipe bowl (Funk 1976:100-101, 113). A third find in this area of the Hudson Valley occurred in 1968, when Paul L. Weinman and Thomas P. Weinman found a clearly stratified Middle and Late Woodland site near Catskill, Greene County. Mixed with the Indian material were historic trade artifacts: fleur de lis-marked pipe stems, a tubular blue glass bead, pieces of brass, hand-wrought nails, red earthenware, and an elbow-type clay pipe bowl. The clay pipes and the glass bead are most likely mid seventeenth-century Dutch artifacts (Weinman and Weinman 1971:55-56). Bert Salwen was by this time contributing useful information on the historic-period coastal Indian occupation of Long Island with his published analysis of excavations at seventeenth-century Fort Shantok in 1962 (Salwen 1966).

By 1980, further archaeological discoveries to the northward along the Hudson River in former Mahican territory had provided additional evidence of those Indians in the seventeenth century. Rescue excavations in 1974 directly in front of Crailo State Historic Site in the City of Rensselaer revealed extensive remains of an Indian site probably from the second

quarter of the seventeenth century; there were many Dutch artifacts in association with the Indian material (Huey, Feister, and McEvoy 1977). In 1977 survey excavations in the north part of Waterford, Saratoga County, by Charles L. Fisher and Karen S. Hartgen revealed a site containing late sixteenth- or very early seventeenth-century glass trade beads (Fisher and Hartgen 1983). Two years later, in 1979, survey work on Peebles Island in Waterford by the Archeology Unit of the New York State Bureau of Historic Sites uncovered a site with Late Woodland Indian pottery, droplets of melted lead, a small glass bead, and a Dutch seventeenth-century elbow-type pipe bowl fragment. These are believed to represent the Mahican Indian Occupation of Menomine's Castle, which was located on Peebles Island from before 1630 to perhaps 1650 (Huey 1996:14, 16).

During the 1960s and early 1970s Marian E. White actively researched historic Neutral-Erie sites in western New York and further refined the sequence and dating of those sites. She thoroughly analyzed data from a number of contact sites, and in 1967 she published her studies of the Kleis Site near Hamburg, New York, excavated in 1958, and of the Simmons Site in the Town of Elma, Erie County. In 1968 she published a study of the collection from the Van Son Cemetery Site on Grand Island, excavated by Houghton in 1909 (White 1967a; White 1967b; White 1968). In the 1970s she organized the New York Archaeological Council, a professional organization of both historical archaeologists and archaeologists of prehistory. During the 1970s and 1980s there has occurred a steady and very desirable merging of archaeological research goals and questions at historic Indian and at non-Indian sites, a process which has been encouraged by events such as the 1982 bead conference at Rochester and the strong interest of individuals both within and outside New York, including Dutch and English post-Medieval archaeologists and many academic historians (Baart 1987). Archaeological research programs and the protection of archaeological sites were also greatly strengthened in the 1980s by the State Historic Preservation Act, which extended the provisions of the 1966 federal historic preservation law from the federal level to the state level.

Current Developments and Future Directions

Important discoveries and other events have occurred in the field of historical archaeology in New York State in the 1990s. In addition to the continuing rescue of data from threatened sites and the work of cultural resource management, the analysis of old and almost-forgotten collections has become a priority and must continue. The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) have helped make this responsibility unavoidable. The value and importance of studies based on excavations that had never been fully reported was previously demonstrated by

scholars such as Hayes (1965), White (1968), Feister (1975), and Fisher (1986). Elizabeth S. Chilton (1991) has continued this important work, as have Stuart D. Scott and Patricia Kay Scott with their valuable publication in 1993 on Artpark and the Lower Landing sites at Lewiston (Scott et al. 1993). Dean R. Snow in 1995 published the results of his extensive research on Mohawk Valley collections and sites in two volumes (Snow 1995a; Snow 1995b). A major synthesis of the archaeology of the contact period in the Northeast was published in 1995 by Robert Grumet and will serve as a very useful guide in the development of future research priorities (Grumet 1995).

One challenging area for continued research is the Hudson Valley, where the scarcity of any extensive evidence of Indian occupation in the sixteenth and seventeenth centuries suggests a smaller or more dispersed population than in the Iroquoian areas to the west. Joseph E. Diamond of SUNY New Paltz has been looking at old collections while studying data from recent excavations in the Hudson Valley to analyze house forms, site locations, seasonality, and ceramic types in this period. At least two excavated sites near the Esopus Creek have beads from the c. 1580 to c. 1620 period, and one of those sites has revealed the postmold pattern of a longhouse which was 107 feet long and about 30 feet wide (Diamond 1996:95, 103). A particularly significant discovery occurred in 1993 in the Town of East Greenbush, where surveys for a natural gas transmission line route crossing the alluvial flood plain of a former island along the Hudson River revealed a multi-component Middle and Late Woodland site. An average date for the Late Woodland and early historic component would be approximately c. 1550, with radiocarbon dates as early as 1470 and as late as 1680. A hearth dated 1600 \pm 50 years contained two sheet brass fragments. The postmold outlines of two structures were found. A rectangular house was about 13 feet by 36 feet in size, while an ovoid structure was about 26 by 36 feet (Lavin, Mozzi, Bouchard, and Hartgen 1996:119, 125-126).

Underwater archaeology has become an especially promising area in need of future attention and development. High quality work has only recently been completed on colonial and War of 1812 wreck sites by Kevin Crisman and Art Cohn. They have focused on hypothetical reconstructions and on the accurate mapping and recording of shipwreck remains (Krueger et al. 1985; Crisman 1987; Crisman and Cohn 1994). In 1990 a group of divers in Lake George discovered on the bottom of the lake the intact wreck of a large pointed rectangular vessel called a radeau. Named the *Land Tortoise*, it was built in 1758 by the British in the campaign to attack the French. The attack failed, and that fall the British sank the *Land Tortoise* and 260 bateaux in the lake to hide them until they could be raised and used again the following year. The bateaux have been well known as underwater sites since the 1950s, but the *Land Tortoise* was

apparently a unique vessel designed to be armed with cannon and used on the lakes (Abbass 1992).

Since the 1990s the French and Indian War has continued to be a rich field for research on land as well as underwater. David R. Starbuck has conducted a long-term program at the site of Fort Edward and at nearby Rogers Island in the Hudson River. On Rogers Island these excavations have revealed remains of soldiers' huts, a latrine, the smallpox hospital, and the barracks (Starbuck 1996). Maria A. Liston and Brenda J. Baker, meanwhile, have analyzed the skeletal remains of victims of the French and Indian War at Fort William Henry, destroyed in 1757 after the famous siege and massacre (Liston and Baker 1996).

Another area of archaeology which promises much potential for the future is urban archaeology, where some of the most significant stratified archaeological sequences are to be found but where the rate of destruction of resources is most rapid (Huey 1991). There is a wide range of types and dates of urban archaeological resources extending from Buffalo to New York City. New York City has not only deeply stratified landfill deposits of significance but also blocks of land that have been occupied since the first half of the seventeenth century. Kingston, Albany, and Schenectady are also cities where seventeenth- and eighteenth-century Dutch and English colonial archaeological resources should be protected and studied. On-going excavation programs and publications by post-Medieval archaeologists in Great Britain continue to form an improved basis for trans-Atlantic comparisons, while in the Netherlands many excavations have also focused on the fascinating sixteenth- through eighteenth-century period and have produced data of great importance to historical archaeologists in New York State. The scope of post-Medieval archaeology in the Netherlands, beginning with many excavations directed by Jan Baart in the 1970s and 1980s in Amsterdam, has expanded to include other towns and cities with results beautifully published by the Stichting Promotie Archeologie at Zwolle. Equally interesting and pertinent work has occurred in western Germany as well as in former Dutch colonies such as South Africa.

In New York City two major research projects have recently occurred as a result of cultural resource management surveys. One discovery occurred in 1991 prior to the proposed construction of a new office tower and pavilion at 290 Broadway. Human bones were found, and a full-scale excavation commenced. Located near Chambers Street and Broadway, the area was known in the nineteenth century to contain many graves, and John F. Watson recorded in 1832 that "in digging for a lamp post, at the north-east corner of Reed Street and Broadway, they were surprised to get up several human bones, and thus leading to the recollection of the former fact, that between that place and Chamber street was once the area of the negroes' burying ground" (Watson 1832:108, 118-119). Consequently, the site was identified as part of the old

"Negros Burial Ground," and it rapidly became apparent that it contained a very significant collection of African-American remains, possibly the largest and earliest collection of remains representing any non-Indian ethnic group from the colonial period. Within a year, the last of 240 skeletons had been removed from the site for eventual transferal to Howard University for careful study and analysis by physical anthropologists (Harrington 1993).

Recent excavations for the federal General Services Administration by the consulting firm, Historic Conservation and Interpretation of Newton, New Jersey at the site of a new federal courthouse just to the northeast of New York's City Hall have revealed the remains of one of New York's most notorious nineteenth-century slums, the "Five Points." Describing New York in 1834, Dr. William Caruthers warned "you can get your stomach full of filth, if you will walk down to the *Five Points*," and he vividly recalled the horrors of the recent cholera epidemic there. "The loaded atmosphere from the filthy streets began to salute our olfactories, and various evidences were presented to our eyes of the loathsome and disgusting dissipation which was still kept up, in spite of the terrors of the grim monster.... In the first house we entered, were three persons lying ill of the disease in one room: all of them of the very lowest class of drunken debauchees. I can scarcely give you an idea of the wretched condition of these tattermalions.... If such is their condition in ordinary times, what must it be now? They are in the lowest depths of human degradation and misery.... They die like dogs, amid the ribald jests, vulgar wit, and Billingsate slang of their quondam associates." In 1842 Charles Dickens also described the Five Points, "reeking everywhere with dirt and filth." "Debauchery," he wrote, "has made the very houses prematurely old.... So far, nearly every house is a low tavern.... all that is loathsome, drooping, and decayed is here" (Caruthers 1834:I, 163; II, 27-28; Dickens 1968:108-110). The analysis of artifacts from this site by John Milner Associates of Philadelphia is providing the first archaeological glimpse of life among newly-arrived immigrants and the extremely poor of New York City. "The archaeological analysis is showing that the poor had a wider range of objects in their homes than might have been anticipated. The artifacts recovered, such as the ceramics, show that some residents of the block had objects similar to those found in the homes of the more affluent members of society" (Rothschild and Wall 1996:233-234). Analysis of faunal remains has also revealed ethnic differences in food choices and preparation. The evidence suggests a discrepancy between some of the contemporary accounts of the Five Points neighborhood and the archaeological material. The negative image conveyed by writers of the period may in fact reflect a prevalent attitude toward working-class districts during the nineteenth century (Yamin 1997:52).

A comparison of the Five Points data with material from

the nineteenth-century slums and crowded inner city immigrant districts of other cities will be useful. In downtown Buffalo, New York, Dean and Barbour Associates has conducted excavations at the site of a predominantly Irish neighborhood where the Erie Canal intersected with Lake Erie. This work has revealed the remains of nineteenth-century boarding houses and saloons, the residents of which included sailors, laborers, and scoopers, the men who moved grain from ships to grain elevators. The material excavated from the sites of structures and associated privies will reflect the reality of boarding house life, the role of women, the consumer choices of saloon owners (who were able to dictate the terms of scoopers' work), and the significance of Irish ethnicity (Pena 1997).

Cultural resources surveys throughout New York State in recent years have located and identified a surprising number of sites of taverns, inns, boarding houses, and hotels, and the growing body of data from these surveys offers rich potential for further comparative study and research. Charles F. Hayes III as early as 1965 focused on the importance of archaeological studies of tavern sites (Hayes 1965), and Lois M. Feister (1975) continued with further work on the subject. Diana diZ. Wall and Nan A. Rothschild expanded the comparative study of tavern sites in 1984 to include the seventeenth-century Lovelace Tavern site in New York City, and a midden deposit at the site of Fort Orange in Albany has been identified as most likely relating to an even earlier seventeenth-century tavern that once stood near the fort (Rockman and Rothschild 1984; Huey 1988a:472-474, 482-483). A new focus on nineteenth-century tavern sites began with the research and rescue excavations at the Centre House Tavern in the Town of Amherst, Erie County, by the State University of New York at Buffalo under Elaine S. Herold and Lyn K. Cowan (Cowan and Herold 1989). The Public Archaeology Facility of the State University of New York at Binghamton excavated at the Hunting Tavern in the Village of Andes, Delaware County (Bulgrin 1990). The Public Archaeology Facility has also located the site of the mid to late nineteenth-century Lura Hotel site in the Village of Bovina, Delaware County (Powers, Hohman, and Ravage 1996), the site of the Chapman Hotel, which burned in 1866, in the Town of Chenango, Broome County (Hohman, Levandowski, and Kastl 1995), and the site of the Balsley house in the Town of Manlius, Onondaga County, which was a boarding house in the 1830s for visitors to the famous mineral springs there (Reeves and Lutins 1996). In 1996 the Anthropological Survey of the New York State Museum located and identified the old Schoharie Hotel site adjacent to the bed of the Schoharie Valley Railroad in Schoharie County (Rieth and LoRusso 1996:88). Excavations at an eighteenth-century colonial tavern, meanwhile, were directed in 1995 by Linda Barber and Annette Silver at the historic Ketcham Inn in Center Moriches on Long Island (Anonymous 1995).

The archaeology of charitable institutions is a topic especially in need of further development (De Cunzio 1995:132-133). The data excavated from sites of colonial and nineteenth-century almshouses and orphanages, such as those in Albany, New York City, and Staten Island, have much potential for research (Huey 1991:335-344; Feister 1992; Pena 1990; Cotz 1984; Baugher et al. 1985; Zakalak 1981). Also, the remains recovered through the rescue excavation of burial grounds associated with such institutions, such as those in Monroe, Oneida, and Albany Counties, will provide insight into the history of diseases and poverty (Santangelo 1989; LoRusso 1990; Roberts and Parker 1994). In 1984, for example, human skeletal remains were discovered in Highland Park South in Rochester by the Monroe County Department of Parks & Recreation, and the Rochester Museum & Science Center was called in to conduct rescue excavations. Eventually, a crew of 12 professional archaeologists and 35 volunteers succeeded in excavating the remains of 305 individuals. A German coin dated 1850 was found at the site, and it was learned that an almshouse founded in 1826, a lunatic asylum, and a workhouse (later a penitentiary) had once existed just west of the cemetery. The remains included children and infants, and the evidence of trauma and pathology in the burials included amputations, healed fractures, osteoarthritis, syphilis, anemia, rickets, scurvy, rheumatoid arthritis, osteomyelitis, and dental problems (Nagel and Saunders 1985).

As a result of cultural resource surveys, hundreds of additional sites have been discovered throughout New York State, and data are being collected at an unprecedented rate. The rapid expansion and development westward after the Revolutionary War created the sites of many early farms and farmhouses in every area, and the information from these sites on consumer behavior, ethnicity, and other cultural patterns has yet to be developed. The study of late eighteenth- and nineteenth-century rural farmhouse sites has been greatly promoted by the cultural resources management program at Fort Drum (Berger et al. 1992), but these are only a small part of a very large population of sites that can form the basis for meaningful comparative studies utilizing generalized artifact categories from yard middens and other features (Huey 1994). New scientific technology will also make it increasingly possible to extract previously unavailable data from sites. With parasitological analysis of soils from privies will come some startling revelations about health. Pollen analysis will make it possible to take advantage of the valuable information about environmental changes that may be provided by soil profiles (Kelso and Ping Hsu 1995). Extensive surveys continue to be needed to locate, protect, and wisely manage archaeological resources both on land and underwater in New York State.

A new era in historical archaeology appears to have begun in the 1990s. Although the level of funding for archaeology

was generally either frozen at a constant level or decreased though the 1980s, entire archaeology programs were drastically cut or dismantled early in the 1990s, just when such programs are more than ever needed because of anticipated increases in the rate of new development. Despite the fact that since 1960 the results of recent historical archaeological research have been widely published and made accessible both to the public and to other professionals, there are also many data still waiting to be analyzed, synthesized, and reported. While many fine educational and interpretive programs and exhibits have been developed in historical archaeology, it now seems doubtful that sufficient public support exists with which to fulfill these important research responsibilities. Thus the profession faces a major challenge in education and communication if such support is to be restored.

On the other hand, word processors, computers, and the Internet have begun to effect a revolution in scientific research; this is a revolution that even now has barely begun. Already, reports can be more quickly written and published, archaeological data can be more quickly and precisely sorted, managed, and analyzed, and instant

communication technology has opened the entire world to the rapid exchange of ideas and information. Political barriers have fallen. The Information Era has begun. It will become increasingly necessary to focus clearly on specific research goals in order to avoid becoming overwhelmed with information (Naisbitt 1984: xxii, 16-17). One hopes that the new information technology nevertheless will unlock the secrets of major well-provenienced collections of artifacts and other archaeological data that have remained inaccessible or little studied simply because of their volume and complexity. Other collections, especially those which may lack precise archaeological associations, will also assume a greater significance than before for research in a global perspective. Historical archaeology must focus on more fully utilizing previously excavated but incompletely studied data, on excavating sites that cannot be preserved in order to rescue information of use at present and in the future, and on protecting and wisely managing those relatively fewer archaeological resources on public land as a continuing public trust for future generations.

References Cited

- Abbass, D.K.
1992 *The Lake George Radeau: A Report to the State of New York for the 1991 Field Season*. Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Abeel, Garret
1916 Historical Notes About the City of New York, From 1609 to 1792. In *Year Book of The Holland Society of New York, 1916*, pp. 44-87. The Holland Society of New York, New York.
- Adler, Winston, editor.
1983 *Their Own Voices: Oral Accounts of Early Settlers in Washington County, New York*, collected by Dr. Asa Fitch. Heart of the Lakes Publishing, Interlaken, New York.
- Anonymous
1790a The Gazette. *The Massachusetts Magazine: Or, Monthly Museum of Knowledge and National Entertainment* 2(6):378-384.
1790b Intelligence. *The New-York Magazine, or; Literary Repository* June: 370-373.
1858 *Catalogue of Manuscripts and Revolutionary Relics, Deposited in Washington's Head Quarters, Newburgh*. N. Y. Highland Courier Press, Newburgh.
1878 *History of Montgomery and Fulton Counties, N. Y.* F. W. Beers & Co., New York.
1884 Deaths: Marshall, Orsamus Holmes. *The New-England Historical and Genealogical Register* 38(4):466.
1886 *Catalogue of Albany's Bicentennial Loan Exhibition, at the Albany Academy, July 5 to July 24, 1886*. Weed, Parsons & Co., Albany.
1898 *Third Annual Report of the State Historian of the State of New York, 1897*. Wynkoop Hallenbeck Crawford Co., New York and Albany.
1899 *Register of the Empire State Society of the Sons of the American Revolution*. Published in the Year of Our Lord, 1899, n.p.
1916 Crown Point Foundation. In *Proceedings of the New York State Historical Association* 15:30-32. New York State Historical Association, n.p.
1937 *The National Encyclopedia of American Biography*, volume XXVI. James T. White & Company, New York.
1941a Obituaries: William Louis Calver. *New York History* 22(1):118-119.
1941b Obituaries: Robert M. Hartley. *New York History* 22(1):122.
1942 Obituaries: Reginald Pelham Bolton. *New York History* 23(2):247-248.
1947 William L. Bryant, Museum Director: Roger Williams Park Official Dies in Providence at 76 - Lawyer, Paleontologist. *The New York Times* June 10:27.
1950a Obituary: A.L. Benedict. *New York Times* January 16:25.
1950b Obituary: Frederick Houghton. *The New York Times* April 30:102.
1953a Historians Seek Artifacts Along Route of Thruway. Newspaper article in files of Knox's Headquarters State Historic Site, New York State Office of Parks, Recreation and Historic Preservation, Vail's Gate, New York.
1953b Obituary: Oscar T. Barck. *The New York Times* Oct. 26: 21.
1995 Ketcham Inn Excavated by S.C.C.C. and Dowling College Students. *Suffolk County Archaeological Association Newsletter* 21(2):2-3.
- Avery, Elroy McKendree
1909 *A History of the United States and its People*, volume VI. The Burrows Brothers Company, Cleveland.
- Baart, Jan M.
1987 Dutch Material Civilization: Daily Life Between 1650-1776, Evidence from Archaeology. In *New World Dutch Studies: Dutch Arts and Culture in Colonial America, 1609-1776*, edited by Roderic H. Blackburn and Nancy A. Kelley, pp. 1-11. Albany Institute of History and Art, Albany.
- Barber, John W., and Henry Howe
1841 *Historical Collections of the State of New York*. Published for the Authors, by S. Tuttle, New York, New York.
- Barnhart, Terry A.
1996 The Iroquois as Mound Builders: Ephraim George Squier and the Archaeology of Western New York. *New York History* 77 (2):124-150.
- Baughner, Sherene, Judith Baragli, Louise De Cesare, and Robert W. Venables
1985 *An Archaeological Predictive Model of Snug Harbor Cultural Center*. New York City Landmarks Preservation Commission, New York. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation. Peebles Island, Waterford, New York.
- Beard, Charles A., and Mary R. Beard
1944 *A Basic History of the United States*. Doubleday, Doran & Company, New York.

- Beauchamp, William M.
1898 *Earthenware of the New York Aborigines*. New York State Museum Bulletin 5(22). University of the State of New York, Albany.
- 1903 *Metallic Ornaments of the New York Indians*. New York State Museum Bulletin 73. University of the State of New York, Albany.
- Beauchamp, William M., editor
1914 *Annual Volume of the Onondaga Historical Association, 1914*. The Dehler Press, Syracuse.
- Benedict, A. L.
1891 An Indian Grave in Western New York. *The American Naturalist* 25(290):119-121.
- Berger, Louis, & Associates
1992 *The Cultural Resources of Fort Drum. Introduction to the Program and Synthesis of Principal Findings*. The Cultural Resources Group, Louis Berger & Associates, Inc., East Orange, New Jersey. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Bossom, Alfred C.
1913 The Restoration of Fort Ticonderoga. In *Eighteenth Annual Report, 1913, of the American Scenic and Historic Preservation Society*, pp. 607-618. J. B. Lyon Company, Albany.
- Bostelmann, Clarissa Spencer, translator
1964 *Journey into Northern Pennsylvania and the State of New York*, by Michel-Guillaume St. Jean de Creve-coeur. The University of Michigan Press, Ann Arbor.
- Bradley, James W.
1979 *The Onondaga Iroquois: 1500-1655, a Study in Acculturative Change and its Consequences*. Ph.D. dissertation, Department of Social Science, Syracuse University, Syracuse.
- 1987 *Evolution of the Onondaga Iroquois: Accommodating Change, 1500-1655*. Syracuse University Press, Syracuse.
- Bridges, Sarah T., and Paul R. Huey
1976 *Historical Archeology at Philipse Manor Hall State Historic Site*. New York State Parks & Recreation/Taconic State Park & Recreation Commission, Albany and Staatsburg.
- Broderick, Warren F.
1981 Preface. In *A Gazetteer of the State of New-York*, by Horatio Gates Spafford, pp. ii-viii. Heart of the Lakes Publishing, Interlaken, New York.
- Brouwer, Norman
1980 The Ship in Our Cellar. *Seaport: The Magazine of South Street Seaport Museum* 14(3):20-23.
- Bulgrin, Lon E.
1990 *Stage 1/2 Archaeological Survey Hunting Tavern Restoration Project, Village of Andes, Delaware County, N. Y.* Public Archaeology Facility, State University of New York. Binghamton. Report on file. Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Calver, William Louis, and Reginald Pelham Bolton
1950 *History Written With Pick and Shovel*. The New-York Historical Society, New York.
- Carr, William H.
1935 Studies of Forts Clinton and Montgomery. In *Report of Bear Mountain Nature Trails and Trailside Museum*, pp. 88-91. Unpublished report in files of the Trailside Museum, Bear Mountain State Park, New York State Office of Parks, Recreation and Historic Preservation.
- Caruthers, William A.
1834 *The Kentuckian in New-York*. Harper & Brothers. New York.
- Chilton, Elizabeth S.
1991 *The Goat Island Rockshelter: New Light from Old Legacies*. Research Report #29. Department of Anthropology. University of Massachusetts at Amherst, Amherst, Massachusetts.
- Christoph, Florence, and Peter R. Christoph
1982 *Records of the People of the Town of Bethlehem, Albany County, New York, 1698-1880*. Bethlehem Historical Association, Selkirk. New York.
- Churchill, Sylvester
1839 Deed to James and Samuel F. Murdock, May 28. Essex County Deeds, Book R, pp. 388, 455.
- Cinquino, Michael A., Marvin G. Keller, Carmine A. Tronolone, and Charles E. Vandrei, Jr.
1984 Log Roads to Light Rails: The Evolution of Main Street and Transportation in Buffalo, New York. *Northeast Historical Archaeology* 13:53-64.

- Cirker, Hayward, and Blanche Cirker, editors
1967 *Dictionary of American Portraits*. Dover Publications, Inc., New York.
- Clark, Joshua V. H.
1849 *Onondaga; Or Reminiscences of Earlier and Later Times*. Stoddard and Babcock, Syracuse.
- Clinton, DeWitt
1818 *A Memoir on the Antiquities of the Western Parts of the State of New York*. Printed by I.W. Clark, Albany.
- Coates, Irving W.
1893 *In the Footprints of De Nonville*. Reprinted from The Ontario County Times. Ontario County Times Printing House, Canandaigua, New York.
- Cohen, Daniel A.
1986 Arthur Mervyn and His Elders: The Ambivalence of Youth in the Early Republic. *The William and Mary Quarterly*, Third Series 48(3):362-380.
- Cohn, Arthur B.
1985 Arnold's Bay and Fort Ticonderoga Project. In *A Report on the Nautical Archeology of Lake Champlain: Results of the 1983 Field Season of the Champlain Maritime Society*, edited by R. Montgomery Fischer, pp. 37-39. Northlight Studio Press, Barre, Vermont.
- Conover, George S.
1889 *Seneca Villages. Principal Settlements Between Canandaigua and Seneca Lake*. Geneva. New York.
- Cotz, JoAnn E.
1984 *Cultural Resource Study at Sailor's Snug Harbor, for the Morgue Utility Line, Areaway Wall Stabilizations, and the Fire Sprinkler Line*. Archeological Research Consultants, Inc., Midland Park, N.J. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Countryman, Edward
1987 Of Republicanism, Capitalism, and the "American Mind." *The William and Mary Quarterly* Third Series 44(3):556-562.
- Courtenay, Thomas E.
1862 Letter to "My Dear Son," dated Montreal, October 4. Manuscript in possession of Joseph M. Thatcher, Supervising Curator, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Cowan, Lyn K., and Elaine S. Herold
1989 *Cultural Resources Investigation for the North Forest Road Reconstruction Project, Town of Amherst, Erie County, New York*. Reports of the Archaeological Survey. 21(13). Department of Anthropology, State University of New York at Buffalo, Buffalo, New York. Report on file. Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford. New York.
- Crisman, Kevin J.
1987 *The Eagle. An American Brig on Lake Champlain During the War of 1812*. The New England Press, Shelburne. Vt., and The Naval Institute Press, Annapolis, Maryland.
- Crisman, Kevin J., and Arthur B. Cohn
1994 Lake Champlain Nautical Archaeology Since 1980.
- DAB
1958- *Dictionary of American Biography*, edited by Allen Johnson and Dumas Malone. Charles Scribner's Sons, New York.
- Dann, John C., editor
1980 *The Revolution Remembered: Eyewitness Accounts of the War for Independence*. The University of Chicago Press, Chicago and London.
- De Cunzo, Lu Ann
1995 *Reform, Respite, Ritual: An Archaeology of Institutions; The Magdalen Society of Philadelphia, 1800-1850*. *Historical Archaeology* 29(3).
- Dean, Robert L.
1984 *Archaeological Investigations at Gannagaro State Historic Site, Victor Ontario County, New York, 1983-1984*. Dean and Barbour Associates, Buffalo and Steamburg, N.Y. Report on file, Archeology Unit, Bureau of Historic Sites. New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Deetz, James
1967 *Invitation to Archaeology*. The Natural History Press, Garden City, New York.
- 1991 Introduction: Archaeological Evidence of Sixteenth- and Seventeenth-Century Encounters. In *Historical Archaeology in Global Perspective*, edited by Lisa Falk, pp. 1-9. Smithsonian Institution Press, Washington and London.

- De Lancey, O. L.
1891 Letter to Irving C. Sholes, dated Oneonta, N.Y. July 20. Collection of the New Berlin Library and Museum, New Berlin, New York.
- Diamant, Lincoln
1989 *Chaining the Hudson: The Fight for the River in the American Revolution*. Carol Publishing Group, New York.
- Diamond, Joseph E.
1996 Terminal Late Woodland/Early Contact Period Settlement Patterns in the Mid-Hudson Valley. *Journal of Middle Atlantic Archaeology* 12:95-111.
- Dickens, Charles
1968 *American Notes*. Peter Smith, Gloucester, Massachusetts.
- Dunleavy, D.
n.d. Memorandum to John Duffy. Copy on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Eggleston, Edward
1884 Husbandry in Colony Times. *The Century Illustrated Monthly Magazine* 27(3):431-449.
- Everest, Allan S., editor
1970 *A Doctor at All Hours: The private Journal of a Small-Town Doctors Varied Life, 1886-90*, by David S. Kellogg. The Stephen Greene Press, Brattleboro, Vermont.
- Feister, Lois M.
1975 Analysis of the Ceramics Found at the Vereberg Tavern Site, Albany County, New York. *Man in the Northeast* 10:2-17.
1984 Material Culture of the British Soldier at "His Majesty's Fort at Crown Point" on Lake Champlain, New York, 1759-1783. *Journal of Field Archaeology* 11(2):123-132.
1992 The Orphanage at Schuyler Mansion. *Northeast Historical Archaeology* 20:27-36.
1995 *Johnson Hall Outbuildings, Landscape History, and Forgotten Features*. Documentary and Archeological Research Conducted Between 1945 and 1991, Johnstown, Fulton Counts; New York. Report on file, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Feister, Lois M., and Paul R. Huey
1985 Archaeological Testing at Fort Gage, a Provincial Redoubt of 1758 at Lake George, New York. *The Bulletin and Journal of Archaeology for New York State* 90:40-59.
- Fisher, Charles L.
1983 Archaeology at New Windsor Cantonment: Construction and Social Reproduction at a Revolutionary War Encampment. *Northeast Historical Archaeology* 12:15-23.
1984 Archaeological Survey and Historic Preservation at the Site of a Revolutionary War Cantonment in New Windsor, New York. *North American Archaeologist* 6(1):25-39.
1986 *Material Objects, Ideology, and Everyday Life: Archaeology of the Continental Soldier at the New Windsor Cantonment*. Report on file, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
1995 The Archaeology of Provincial Officers' Huts at Crown Point State Historic Site. *Northeast Historical Archaeology* 24:65-86.
- Fisher, Charles L., and Karen S. Hartgen
1983 Glass Trade Beads from Waterford, New York. *Pennsylvania Archaeologist* 53(1-2):47-52.
- Fort Plain Museum
1964 *Prospectus of Fort Plain Museum*. Issued by the Board of Trustees, Fort Plain Museum, Fort Plain, New York, April 30.
- French, John H.
1860 *Historical and Statistical Gazetteer of New York State*. R.P. Smith, Syracuse.
- Funk, Robert E.
1976 *Recent Contributions to Hudson Valley Prehistory*. New York State Museum Memoir 22. The University of the State of New York, The State Education Department. Albany.
- Gifford, James C., and Daniel G. Crozier
1973 *The Archaeological Salvage and Survey of a Portion of the Revolutionary War Supply Depot at Fishkill, New York*. Department of Anthropology, Temple University, Philadelphia. Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.

- Glassie, Henry
1975 *Folk Housing in Middle Virginia*. The University of Tennessee Press, Knoxville.
- Grassman, Thomas
1969 *The Mohawk Indians and Their Valley*. J. S. Lischynsky, Publisher, Schenectady.
- Griffin, C. S.
1967 *The Ferment of Reform, 1830-1860*. Thomas Y. Crowell Company, New York.
- Grills, Russ
1991 Lincklaen Portraits. Memorandum to Paul Huey, dated March 22. Copy on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Grossman, Joel W.
1985 *The Excavation of Augustine Heermans' Warehouse and Associated 17th Century Dutch West India Company Deposits*. Prepared by Greenhouse Consultants Inc.. New York. Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Gruber, Jacob W.
1984 Artifacts Are History: Calver and Bolton in New York. In *The Scope of Historical Archaeology: Essays in Honor of John L. Cotter*, edited by David G. Orr and Daniel G. Crozier, pp. 13-27. Laboratory of Anthropology, Temple University, Philadelphia.
- Grumet, Robert S.
1995 *Historic Contact*. University of Oklahoma Press, Norman and London.
- Gutman, Herbert G.
1976 *Work, Culture, and Society in Industrializing America*. Vintage Books, New York.
- Hadaway, William S., editor
1927 *The McDonald Papers, Including Biographical Notes of the Author*. Part II. Published for Westchester County by the Westchester County Historical Society, White Plains, New York.
- Hagerty, Gilbert W.
1971 *Massacre at Fort Bull: The de Leri- Expedition Against Oneida Carry, 1756*. Mowbray Company, Providence, Rhode Island.
- 1985 *Wampum, War and Trade Goods West of the Hudson*. Heart of the Lakes Publishing, Interlaken, New York.
- Hall, Edward Hagaman
1909 *Fourteenth Annual Report, 1909, of the American Scenic and Historic Preservation Society*. J.B. Lyon Company, Albany.
- 1917 *New York City Archaeology*. In *Twenty-Second Annual Report of the American Scenic and Historic Preservation Society*, pp. 163-175. J.B. Lyon Company, Printers, Albany.
- 1925 Fort Washington. In *Thirtieth Annual Report of the American Scenic and Historic Preservation Society, 1925*, pp. 41-42. J.B. Lyon, Albany.
- Halsey, Francis Whiting, editor
1902 *The Old New York Frontier*. Charles Scribner's Sons, New York.
- 1964 *A Tour of Four Great Rivers*, by Richard Smith. Ira J. Friedman, Inc., Port Washington, New York.
- Harrington, M. Raymond
1922 A Midcolonial Seneca Site in Erie County. In *The Archeological History of New York*, by Arthur C. Parker, pp. 207-237. The University of the State of New York, Albany.
- Harrington, Spencer P.M.
1993 Bones & Bureaucrats: New York's Great Cemetery Imbroglio. *Archaeology* 46(2): 28-38.
- Harris, George H.
1884 *Aboriginal Occupation of the Lower Genesee Country*. Rochester. ["This work comprises the first fifteen chapters of the Semi-centennial history of Rochester, N. Y, edited by Wm. F. Peck and published by D. Mason & Co."]
- Hastings, Hugh, editor
1901 *Ecclesiastical Records: State of New York*, volume II. James B. Lyon, Albany.
- Hawley, Charles
1884 *Early Chapters of Seneca History Jesuit Missions in Sonmontouan, 1656-1684*. Knapp, Peck, & Thomson, Auburn, New York.

- Hayes, Charles F., III
 1965 *The Orringh Stone Tavern and Three Seneca Sites of the Late Historic Period*. Research Records of the Rochester Museum of Arts and Sciences 12, Rochester Museum Association, Rochester, New York.
- 1967 The Longhouse at the Cornish Site. In *Iroquois Culture, History and Prehistory*, edited by Elisabeth Tooker, pp. 91-97. The University of the State of New York, The State Education Department, New York State Museum and Science Service, Albany.
- Hayes, Charles F., III, Daniel M. Barber, and George R. Hamell
 1978 *An Archaeological Survey of Ganagaro State Historic Site, Ontario County, New York*. Rochester Museum and Science Center, Rochester, N. Y. Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Hays, Samuel P.
 1962 *The Response to Industrialism: 1885-1914*. The University of Chicago Press, Chicago and London.
- Hill, Henry Wayland
 1913 *The Champlain Tercentenary: Final Report of the New York Lake Champlain Tercentenary Commission*. J. B. Lyon, Albany.
- Hill, Henry Wayland, and Winfield Scott Downs, editors
 1923 *Municipality of Buffalo, New York: A History, 1720-1923*. Lewis Historical Publishing Company, Inc., New York and Chicago.
- Hohman, Christopher, James Levandowski, Diana Loren, and Richard Kastl
 1995 *Cultural Resource Management Survey; 1994 Highway Program Paragraph 3 Archaeological Survey and Paragraph 4 Site Examinations, SUBi-1507 (Chapman Site) and SUBi-1508 (Schoolhouse #7 Site), PIN 9016.25.121, Rte. 12 (River Road) at Pamela Drive and Brotzman Road, Hamlet of Kattellville, Town of Chenango, Broome County, New York*. Public Archaeology Facility, Binghamton University, Binghamton. Report on file. Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Houghton, Frederick
 1912 *The Seneca Nation from 1655 to 1687*. *Bulletin of the Buffalo Society of Natural Sciences* 10(2).
- 1922 *The Archeology of the Genesee Country*. Researches and Transactions of The New York State Archeological Association.
- 1951 Transcription of the notebook beginning August 16, 1915. Buffalo Museum of Science, Buffalo.
- Huey, Paul R.
 1959 *New Discoveries at Crown Point, N. Y.* Rensselaer County Junior Museum, Troy, New York.
- 1981 Historic Preservation in New York. *The Bulletin and Journal of Archaeology for New York State* 82:1-3.
- 1983 Introduction to Symposium on Archaeology of the Revolutionary War Period. *Northeast Historical Archaeology* 12:2.
- 1984 Old Slip and Cruger's Wharf at New York: An Archaeological Perspective of the Colonial American Waterfront. *Historical Archaeology* 18(1): 15-37.
- 1986 The Beginnings of Modern Historical Archaeology in the Northeast and the Origins of the Conference on Northeast Historical Archaeology. *Northeast Historical Archaeology* 15:2-15.
- 1988a *Aspects of Continuity and Change in Colonial Dutch Material Culture at Fort Orange, 1624-1664*. Unpublished Ph.D. dissertation, Department of American Civilization, University of Pennsylvania. Philadelphia.
- 1988b The Archeology of Colonial New Netherland. In *Colonial Dutch Studies: An Interdisciplinary Approach*, edited by Eric Nooter and Patricia U. Bonomi, pp. 52-77. New York University Press. New York and London.
- 1991 The Archeology of Fort Orange and Beverwijck. In *A Beautiful and Fruitful Place: Selected Rensselaerswijck Seminar Papers*, edited by Nancy Anne McClure Zeller, pp. 326-349. New Netherland Publishing, Albany.
- 1994 Archaeological Testing for an Electrical Line at Ganondagan State Historic Site, July 12, 1994. *The Bulletin: Journal of the New York State Archeological Association* 108:11-17.
- 1995 The Fort Orange and Schuyler Flatts NHL. *CRM* 18(7):15-19.
- 1996 *An Archeological and Documentary History of Peebles Island State Park, Waterford, N.Y.* Report on file. Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Huey, Paul R., Lois M. Feister, and Joseph E. McEvoy
 1977 Archeological Investigations in the Vicinity of "Fort Crailo" During Sewer Line Construction Under Riverside Avenue in Rensselaer. New York. *The Bulletin*, New York State Archeological Association 69:19-42.

- Hughes, Thomas P.
1968 *American Ancestry*, volume II. Genealogical Publishing Company, Baltimore.
- Hunter Research, Inc.
1990 *A Preliminary Historical and Archaeological Assessment of Central Park*, volume I. For the Central Park Conservancy and the City of New York. Hunter Research, Inc., Trenton, New Jersey.
- Huntington, Edna
1941 Two Swords. *The Long Island Historical Society Quarterly* 3(2):35-37.
- Hurd, D. Hamilton
1878 *History of Otsego County, New York*. Everts & Fariss, Philadelphia.
- IGI= International Genealogical Index
1794 Birth of Julia Aussem, May 7.
1820 Birth of Marie Louise Elizabeth Gregory, September 17.
1844 Marriage of Mary or Maria Louisa Gregory and Josiah Hornblower Gautier, December 10.
1852 Birth of Ann Elizabeth Gautier.
- Ingalls, George A.
1922 Obituaries. *The Quarterly Journal of the New York State Historical Association* 3(4):238-266.
- James, Bartlett Burleigh, and J. Franklin Jameson, editors
1969 *Journal of Jasper Danckaerts, 1679-1680*. Barnes & Noble, Inc., New York.
- Kelso, Gerald K., and Dick Ping Hsu
1995 Battlefield Palynology: Reinterpretation of British Earthworks, Saratoga National Historical Park, Stillwater, New York. *Northeast Historical Archaeology* 24:87-96.
- Kenton, Edna, editor
1954 *The Jesuit Relations and Allied Documents*. The Vanguard Press, New York.
- Knoerl, T. Kurt
1988 Old Fort Niagara. *Stem to Stern* 4:5.
- Koke, Richard J.
1939 Drawings of excavations at Stony Point Battlefield. Stony Point Battlefield State Historic Site, New York State Office of Parks, Recreation and Historic Preservation.
- 1948 A Musket from Battery Park. *The New-York Historical Society Quarterly* 32(1):40-41.
- 1976 Letter to John H. Mead, dated New-York Historical Society, April 12. Copy on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island. Waterford, New York.
- Krueger, John W., Arthur B. Cohn, Kevin J. Crisman, Heidi Miksch, and Jane M. Lape
1985 *The Bulletin of the Fort Ticonderoga Museum* 14(6).
- Larned, J. N.
1911 *A History of Buffalo, Delineating the Evolution of the City*. Progress of the Empire State Company, New York.
- Larrabee, Edward M.
1968 *Sockets Harbor 1967 Excavation Report*. Thousand Islands State Park Commission, Alexandria Bay, New York.
- Latham, Roy
1978 Seventeenth Century Graves at Montauk, Long Island. In *Readings in Long Island Archaeology and Ethnohistory* 2:6. Suffolk County Archaeological Association, n.p.
- Lavin, Lucianne, Marina E. Mozzi, J. William Bouchard, and Karen Hartgen
1996 The Goldkrest Site: An Undisturbed, Multi-Component Woodland Site in the Heart of Mahican Territory. *Journal of Middle Atlantic Archaeology* 12:113-129.
- Lear, Paul A.
1991 *Locations of Potential Archaeological Sites Related to Fort Ontario State Historic Site in the City of Oswego, New York*. Unpublished report, Fort Ontario State Historic Site, Oswego, New York.
- Lehman, J. David
1990 The End of the Iroquois Mystique: The Oneida Land Cession Treaties of the 1780s. *The William and Mary Quarterly*, Third Series 47(4):523-547.
- Lenig, Donald
1965 *The Oak Hill Horizon and its Relation to the Development of Five Nations Iroquois Culture*. Researches and Transactions of the New York State Archaeological Association, 15(1). New York State Archaeological Association, Buffalo.

Leone, Mark P., and Parker B. Potter, Jr.

- 1988 Introduction: Issues in Historical Archaeology. In *The Recover of Meaning: Historical Archaeology in the Eastern United States*, edited by Mark P. Leone and Parker B. Potter, Jr., pp. I-22. Smithsonian Institution Press, Washington and London.

Levin, David

- 1988 Giants in the Earth: Science and the Occult in Cotton Mather's Letters to the Royal Society. *The William and Mary Quarterly*, Third Series 45(4):751-770.

Liston, Maria A., and Brenda J. Baker

- 1996 Reconstructing the Massacre at Fort William Henry, New York. *International Journal of Osteoarchaeology*. 6:28-41.

Lopez, Julius

- 1978 The History and Archeology of Fort Independence on Tetard's Hill, Bronx County, N.Y. *The Bulletin*, New York State Archeological Association 73:1-28.

Lord, Philip, Jr.

- 1989 *War Over Walloomscoick: Land Use and Settlement Pattern on the Bennington Battlefield - 1777*. New York State Museum Bulletin 473. The University of the State of New York, The State Education Department, Albany.

LoRusso, Mark S.

- 1990 *A Cultural Resource Survey Report of Wadsworth Center for Laboratories and Research: Summer Boiler Project and Virus Demolition*. Report on file, Division of Research and Collections, New York State Museum, Albany.

Lossing, Benson J., editor

- 1855a *The Military Journals of Two Private Soldiers, 1758-/775, With Numerous Illustrative Notes*. Published by Abraham Tomlinson, at the Museum, Poughkeepsie.

Lossing, Benson J.

- 1855b *The Pictorial Field-Book of the Revolution*, volume I. Harper & Brothers, Franklin Square, New York.
- 1972 *The Hudson From the Wilderness to the Sea*. New Hampshire Publishing Company, Somersworth, New Hampshire.

"Lucius"

- 1838 The Revolutionary Relics in our Neighborhood. *The Lansingburgh Gazette* January 8.

Marshall, Orsamus H.

- 1848 *Narrative of the Expedition of the Marquis de Nonville Against the Senecas, in 1687*. Bartlett & Welford, No. 7 Astor House. New York.

Mayer, Joseph R.

- 1943 *Flintlocks of the Iroquois, 1620-1687*. Research Records No. 6, Rochester Museum of Arts and Sciences, Rochester.

Miller, P. Schuyler

- 1943 *Catalogue of the Robert M. Hartley Collections*. Published by Mrs. Robert M. Hartley, Fort Plain. New York.

Moeller, Henry W.

- 1977 *Permit to Retrieve and Preserve the Remains of the HMS Culloden by the New York Ocean Science Laboratory, Montauk, N.Y.* New York Ocean Science Laboratory, Montauk, N. Y. Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation. Peebles Island, Waterford, New York.

Montagu, Ashley

- 1971 Foreword. In *A Dissertation on the Poor Laws by a Well-wisher to Mankind*, by Joseph Townsend. pp. 1-13. University of California Press, Berkeley. Los Angeles, and London.

Moorehead, Warren King

- 1938 *A Report on the Susquehanna River Expedition*. The Andover Press. Andover, Massachusetts.

Morlot, A.

- 1992 On the Date of the Copper Age in the United States. *Beads: Journal of the Society of Bead Researchers* 4:39-48.

Munsell, Joel

- 1850 *The Annals of Albany*, volume IT. J. Munsell, Albany.
- 1858 *The Annals of Albany*, volume IX. Munsell & Rowland. Albany.
- 1869 *The Annals Albany*, volume I. Joel Munsell, Albany
- 1870 *Collections on the History of Albany*, volume III. J. Munsell, Albany.
- 1871 *The Annals of Albany*, volume III. Joel Munsell, Albany.
- 1876 *Men and Things in Albany Two Centuries Ago*. Joel Munsell's Sons, Albany.

- Nagel, Brian L.
1989 *Historical Documentation and Condition Report for the Triphammer Site Complex, Brown's Race, City of Rochester, Monroe County, New York*. Research Division, Rochester Museum and Science Center, Rochester. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Nagel, Brian L., and Lorraine P. Saunders
1985 Highland Park South Cemetery 1984: Excavations and Preliminary Analysis. Paper presented at the New York State Archaeological Association Annual Meeting, Oneonta. New York, April 21.
- Naisbitt, John
1984 *Megatrends: Ten New Directions Transforming Our Lives*. Warner Books, Inc., New York.
- Nichols, Roy F.
1963 *Blueprints for Leviathan: American Style*. Atheneum, New York.
- Niemczycki, Mary Ann Palmer
1984 *The Origin and Development of the Seneca and Cayuga Tribes of New York State*. Research Records 17 Rochester Museum & Science Center, Rochester.
- O'Callaghan, Edmund B., editor
1850 *The Documentary History of the State of New-York*, volume III. Weed, Parsons & Co., Albany.
- Paine, Silas H.
1919 Soldiers of the Champlain Valley. In *Proceedings of the New York State Historical Association* 17:300-428. Published by the New York State Historical Association, n.p.
- Parker, Ely S.
1888 *Reasons Why the State Should Acquire the Famous Burial Mound of the Seneca Indians Adjacent to the State Agricultural Experiment Station*. Presented to Hon. W.W. Wright, Geneva, Ontario County, N.Y., January 14.
- Pell, Stephen H. P.
1975 *Fort Ticonderoga: A Short History*. Reprinted for the Fort Ticonderoga Museum, Ticonderoga, New York.
- Pena, Elizabeth S.
1990 *Wampum Production in New Netherland and Colonial New York: The Historical and Archeological Context*. Unpublished Ph.D. dissertation, Department of Archaeology, Boston University, Boston.
- 1997 On the Waterfront in Buffalo: Saloons and Boarding Houses at the Martin Phillips Site. Paper presented at the Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Corpus Christi, Texas, January 10.
- Powers, James F., Christopher D. Hohman, and Jesse A. Ravage
1996 *Cultural Resource Reconnaissance Survey, 1996 Highway Program, PIN 9018.27.101/BINS 1-01984-0 and 1-01985-0, NYS Route 28 Over Little Delaware and Glen Burnie Creek, Towns of Bovina and Delhi, Delaware County, New York*. Public Archaeology Facility, Binghamton University, Binghamton. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Pratt, Peter P.
1961 *Oneida Iroquois Glass Trade Bead Sequence: 1585-1745*. The Fort Stanwix Museum, Rome, New York.
- 1976 *Archaeology of the Oneida Iroquois*. Occasional Publications in Northeastern Anthropology 1, George's Mills, New Hampshire.
- Reeves, Matthew, and Allen Lutins
1996 *Cultural Resource Management Survey, 1996-1997 Highway Program, Archaeological Site Examinations, Snook Site (SUBi-1651), Balsley Site (SUBi-1652), Everingham Site (SUBi-1653), and Flace Site (SUBi-1654), PIN 3010.10.121/BIN 1-03463, NY Route 92 Over Limestone Creek, Town of Manlius, Onondaga County, New York*. Public Archaeology Facility, Binghamton University, Binghamton. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Reinier, Jacqueline S.
1982 Rearing the Republican Child: Attitudes and Practices in Post-Revolutionary Philadelphia. *The William and Mary Quarterly*. Third Series 39(1):150-163.
- Reynolds, Cuyler
1909 *New York at the Jamestown Exposition*. J. B. Lyon Company, Albany.
- Reynolds, William M., translator
1874 *A History of New Sweden; or, The Settlements on the River Delaware by Israel Acrelius*. The Historical Society of Pennsylvania, Philadelphia.

Rieth, Christina B., and Mark LoRusso

- 1996 *A Cultural Resources Reconnaissance Survey Report of PIN 9306.56.122/BIN 1-00413-0, Route 7 Across Schoharie Creek, Hamlet of Central Bridge, Town of Schoharie, Schoharie County, New York (Program Year 1996/1997)*. Anthropological Survey, New York State Museum, Albany. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation. Peebles Island. Waterford, New York.

Ritchie, William A.

- 1954 *Dutch Hollow, an Early Period Seneca Site in Livingston County, New York*. Research Records No. 10. Rochester Museum of Arts and Sciences, Rochester.

Roberts, William L, IV, and Sandra Parker

- 1994 *Archaeological Investigations of the Chilled Water Line, Manhattan Psychiatric Center, Wards Island, New York*. Greenhouse Consultants, Inc., 40 Exchange Place, New York. Report on file, Bureau of Field Services, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.

Rockman, Diana Diz., and Nan A. Rothschild

- 1984 *City Tavern, Country Tavern: An Analysis of Four Colonial Sites*. *Historical Archaeology* 18(2):112-121.

Rothschild, Nan A.

- 1990 *New York City Neighborhoods: The 18th Century*. Academic Press, Inc., San Diego, New York, Boston, London, Sydney, Tokyo, Toronto.

Rothschild, Nan A., and Diana diZ. Wall

- 1996 *History and Archaeology of New York*. In *Unearthed Cities - Edo, Nagasaki, Amsterdam, London, New York*, pp. 229-234. Metropolitan Edo-Tokyo Museum, Tokyo.

Rumrill, Donald A.

- 1985 *An Interpretation and Analysis of the Seventeenth Century Mohawk Nation: Its Chronology and Movements*. *The Bulletin and Journey of Archaeology for New York State* 90:1-39.

Ruttenber, Edward M.

- 1882 *Catalogue of Manuscripts and Relics in Washington's Head-Quarters, Newburgh, N. Y, With Historical Sketch*. E. M. Ruttenber & Son, Newburgh.

Salwen, Bert

- 1966 *European Trade Goods and the Chronology of the Fort Shantok Site*. *Bulletin of the Archeological Society of Connecticut* 34. Published by the Society. New Haven.
- 1989 *The Development of Contact Period Archaeology Southern New England and Long Island: From "Gee Whiz!" to "So What?"* *Northeast Historical Archaeology* 18:1-9.

Santangelo, Mary C.

- 1989 *A Cultural Resources Survey Report of DOCS Oneida Supplement, City of Rome, Oneida County, New York*. Report on file, Division of Research and Collections. New York State Museum, Albany.

Saville, Foster H.

- 1920 *A Montauk Cemetery at Easthampton, Long Island*. *Indian Notes and Monographs* 2(3):16-29.

Schama, Simon

- 1988 *The Embarrassment of Riches*. University of California Press. Los Angeles and London.

Schuyler, Robert L., editor

- 1978 *Historical Archaeology: A Guide to Substantive and Theoretical Contributions*. Baywood Publishing Company, Inc., Farmingdale, New York.

Scott, Stuart D., and Patricia Kay Scott

- 1984 *Fort Ontario Archaeology - 1984*. East Arnhemst. N. Y Report on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- 1990 *A Fort Called Niagara*. *Archaeology* 43(1):64-66. 84.

Scott, Stuart D., Patricia Kay Scott, Paul Mathew Nasca, Christopher J. Hughes, and David Mauzy

- 1993 *An Archaeological Survey of Artpark and the Lower Landing, Lewiston, New York*. The Edwin Mellen Press, Lewiston/Queenston/Lampeter.

Seacord, Morgan H.

- 1933 *Report of Morgan H. Seacord*. *The Quarterly Bulletin of the Westchester County Historical Society* 9(1):5-7.

Simms, Jephtha R.

- 1845 *History of Schoharie County, and Border Wars of New York*. Munsell & Tanner, Albany.
- 1980 *Trappers of New York*. Harbor Hill Books, Harrison, New York.

- Snow, Dean R.
 1995a *Mohawk Valley Archaeology: The Collections*. The Institute for Archaeological Studies, University at Albany, SUNY, Albany.
 1995b *Mohawk Valley Archaeology: The Sites*. The Institute for Archaeological Studies, University at Albany. SUNY, Albany.
- Solecki, Ralph S.
 1950 The Archeological Position of Historic Fort Corchaug, L. I., and its Relation to Contemporary Forts. *Bulletin of the Archeological Society of Connecticut*, 24:3-40.
 1995 The Rescue of Fort Massapeag. *CRM* 18(7):20-24.
- South, Stanley
 1977 *Method and Theory in Historical Archeology*. Academic Press, New York, San Francisco, and London.
- Spafford, Horatio Gates
 1813 *A Gazetteer of the State of New-York*. H. C. Southwick, No. 94, State-Street, Albany.
- Sparks, Jared
 1830 Plans and Descriptions of Gates' Camp, Ticonderoga, Crown Point, St. John's and Other Places. Copy on file, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Spencer-Mounsey, Creighton
 1928 The Mesier Family of New Amsterdam and Wappinger's Falls, N.Y. *The New York Genealogical and Biographical Record* 59(1):77-83.
- Squier, Ephraim G.
 1849 *Aboriginal Monuments of the State of New-York*. Smithsonian Contributions to Knowledge. Smithsonian Institution, Washington.
 1851 *Antiquities of the State of New York*. Geo. H. Derby and Co.. Buffalo.
- Stanford, Donald E.
 1959 The Giant Bones of Claverack, New York, 1705: a Poem by Reverend Edward Taylor. *New York History* 40(1):47-61.
- Stanley, Marlin L.
 1991 Letter to Paul Huey, dated Hartley Road, Amsterdam, N.Y., March 30. Copy on file, Archeology Unit, Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.
- Starbuck, David R.
 1988 The American Headquarters for the Battle of Saratoga. *Northeast Historical Archaeology* 17:16-39.
 1996 Four Years of Archaeological Research on Rogers Island, an Encampment of the French and Indian War, *Journal of Middle Atlantic Archaeology* 12:149-161.
- Stevens, Henry
 1970 *Historical and Geographical Notes on the Earliest Discoveries in America: 1453-1530*. Burt Franklin, New York.
- Stokes, L. N. Phelps
 1926 *The Iconography of Manhattan Island, 1498-1909*, volume V. Robert H. Dodd, New York.
- Stone, William L.
 1970 *Visits to the Saratoga Battle-Grounds, 1780-1880*. Kennikat Press, Port Washington, N.Y./London.
- Swift, Samuel
 1971 *History of the Town of Middlebury in the County of Addison, Vermont*. Charles E. Tuttle Company, Rutland, Vermont.
- Talcott, S. V.
 1973 *Genealogical Notes of New York and New England Families*. Genealogical Publishing Co., Inc.. Baltimore.
- Tuck, James A.
 1971 *Onondaga Iroquois Prehistory: A Study in Settlement Archaeology*. Syracuse University Press, Syracuse.
- Tuckernan, Bayard
 1905 *Peter Stuyvesant*. Dodd, Mead and Company, New York.
- Turner, Orsamus
 1852 *History of the Pioneer Settlement of Phelps & Gorham's Purchase, and Morris Reserve*. William Alling, Rochester.
- Van Der Beets, Richard, editor
 1973 *Held Captive by Indians: Selected Narratives, 1642-1836*. The University of Tennessee Press, Knoxville.
- Wade, Mason, editor
 1947 *The Journals of Francis Parkman*. Harper & Brothers Publishers, New York and London.
- Watson, John F.
 1832 *Historic Tales of Olden Time*. Published by Collins

and Hannay, New York.

Watson, Winslow C.

- 1853 A General View and Agricultural Survey of the County of Essex. In *Transactions of the N. Y. State Agricultural Society* 12. 1852:649-898. C. van Benthuisen, Albany.

Watson, Winslow C., editor

- 1968 *Men and Times of the Revolution; or, Memoirs of Elkanah Watson*. Crown Point Press, Inc., Elizabethtown, New York.

Weinman, Paul L., and Thomas P. Weinman

- 1971 The Rip Van Winkle Site. *Pennsylvania Archaeologist* 41(1-2):53-60.

White, Marian E.

- 1967a *An Early Historic Niagara Frontier Iroquois Cemetery in Erie County, New York: Archaeology and Physical Anthropology of the Kleis Site*. Researches and Transactions of The New York State Archeological Association 16(1). Rochester, New York.
- 1967b 1965 Excavations at the Simmons Site: A Niagara Frontier Iroquois Village. In *Iroquois Culture, History, and Prehistory*, edited by Elisabeth Tooker, pp. 85-89. The University of the State of New York, The State Education Department, New York State Museum and Science Service, Albany.
- 1968 A Reexamination of the Historic Iroquois Van Son Cemetery on Grand Island. *Anthropological Contributions. Bulletin of the Buffalo Society of Natural Sciences* 24:1-48.

White, Truman C., editor

- 1898 *Our County and its People: A Descriptive Work on Erie County A, New York*, volume II. The Boston History Company, Publishers, Boston.

Wilderson, Paul W.

- 1975 Archaeology and the American Historian: An Interdisciplinary Challenge. *American Quarterly* 27(2):115-132.

Wray, Charles F. and Robert J. Graham

- 1966 *The Boughton Hill Site, Victor, New York*. Mimeographed report prepared for the Annual Meeting of the New York State Archaeological Association, Rochester, New York.

Wray, Charles F., and Harry L. Schoff

- 1953 A Preliminary Report on the Seneca Sequence in Western New York, 1550-1687. *Pennsylvania Archaeologist* 23(2):53-63.

Wray, Charles F., Martha L. Sempowski, Lorraine P. Saunders, and Gian Carlo Cervone

- 1987 *The Adams and Culbertson Sites*. Research Records No. 19. Rochester Museum & Science Center, Rochester, New York.

Yager, Willard E.

- n.d. Yager Museum Catalogue. Yager Museum, Hartwick College, Oneonta. New York.

Yamin, Rebecca

- 1997 New York's Mythic Slum: Digging Lower Manhattan's Infamous Five Points. *Archaeology* 50(2):44-53.

Zakalak, Ulana D.

- 1981 *Archaeological Monitoring of Test Trench Excavations at Sailors' Snug Harbor, Staten Island, New York*. Meadows/Woll Architects. New York. Report on file, Bureau of Field Services. New York State Office of Parks, Recreation and Historic Preservation, Peebles Island, Waterford, New York.

Zimmermann, H. Russell

- 1970 Cream City Brick. *Historic Preservation* 22(3):4-12.

Past and Present NYSAA Award Recipients

The Achievement Award

Charles M. Knoll (1958)	Donald M. Lenig (1963)	Robert E. Funk (1977) (1994)
Louis A. Brennan (1960)	Thomas Grassmann O.F.M. (1970)	Peter P. Pratt (1980)
William A. Ritchie (1962)	Paul L. Weinman (1971)	Herbert C. Kraft (1989)

Fellows of the Association

Monte Bennett	Paul R. Huey	Bert Salwen
James W. Bradley	R. Arthur Johnson	Lorraine P. Saunders
Louis A. Brennan	Edward J. Kaeser	Harold Secor
William S. Cornwell	Herbert C. Kraft	Martha L. Sempowski
Dolores N. Elliott	Roy Latham	Dean R. Snow
William E. Engelbrecht	Lucianne Lavin	David W. Steadman
Lois M. Feister	Donald M. Lenig	Audrey J. Sublett
Stuart J. Fiedel	Edward J. Lenik	James A. Tuck
Charles L. Fisher	Julius Lopez	Stanley G. Vanderlaan
Robert E. Funk	Richard L. McCarthy	Paul L. Weinman
Thomas Grassmann O.F.M.	James F. Pendergast	Thomas P. Weinman
Alfred K. Guthe	Peter P. Pratt	Marian E. White
Gilbert W. Hagerty	Robert Ricklis	Theodore Whitney
Charles F. Hayes III	William A. Ritchie	Charles F. Wray
Franklin J. Hesse	Bruce E. Rippeteau	Gordon K. Wright
Richard E. Hosbach	Donald A. Rumrill	

Certificate of Merit

Thomas Amorosi	Robert J. Gorall	Peter P. Pratt
Roger Ashton	R. Michael Gramly	Louis Raymond
Charles A. Bello	George R. Hamell	Saul Ritterman
Monte Bennett	Elaine Herold	William Sandy
Daniel M. Barber	Franklin J. Hesse	Barbara Sciully
Malcolm Booth	Richard E. Hosbach	Harold Secor
James W. Bradley	Paul R. Huey	Annette Silver
Ralph Brown	Dale Knapp	Mead Stapler
Art Carver	Albert D. La France	David W. Steadman
Gordon De Angelo	Kingston Larnier	Marilyn C. Stewart
Elizabeth M. Dumont	Edward J. Lenik	Neal L. Trubowitz
Lewis Dumont	William D. Lipe	Charles E. Vandrei
William F. Ehlers	John H. McCashion	James P. Walsh
Dolores N. Elliott	Ellis E. McDowell-Louden	George R. Walters
Garry A. Elliot	Dawn McMahon	Beth Wellman
John Ferguson	Jay McMahon	Henry P. Wemple
Joan H. Geismar	Brian L. Nagel	Roberta Wingerson
Stanford J. Gibson	Annette Nohe	Stanley H. Wisniewski
Gwyneth Gillette	Marjorie K. Pratt	