

4

# Public Archaeology Facility Report

PHASE 1A CULTURAL RESOURCE ASSESSMENT

ONEONTA STUDENT HOUSING PROJECT CITY OF ONEONTA OTSEGO COUNTY, NEW YORK MCD 07714

BY:

**KEVIN ERIC SHERIDAN** 

SUBMITTED TO:

JEFFREY R. SMETANA, NEWMAN DEVELOPMENT GROUP, LLC 3101 SHIPPERS ROAD, BOX 678 VESTAL, NY, 13851

DECEMBER 21, 2012

Binghamton University, State University of New York Binghamton, New York 13902-6000

# MANAGEMENT SUMMARY

Project Name:	Oneonta Student Housing Project
OPRHP #:	n/a
Involved Agency:	NYS DEC
Phase of Survey:	Phase 1A Cultural Resource Assessment
Location(s):	Adjacent to the east of Blodgett Drive, SUNY Oneonta, Oneonta, NY
Size of APE (Metric and English):	Approximately 5.7 ha (14 ac)
USGS 7.5 Minute Quadrangle Map:	1943/1982 Oneonta, NY
Results of Archaeological Sensitivity Assessment:	<i>Environmental context:</i> The project area is situated on the backslope of hills overlooking a valley containing an unnamed feeder stream for the Susquehanna River via Oneonta Creek. This stream is located 286 m (938 ft) west of the project area, while the confluence with Oneonta Creek lies approximately 2.3 km (1.4 mi) to the south. Analysis of the soil maps derived from the Web Soil Survey indicate that soils in the project area consist of shallow, rocky and channery soils. No alluvial soils are present in the project area, and deeply buried cultural horizons are not anticipated.
	Number of prehistoric sites identified: Six documented sites are located within 3.2 km (2 mi) of the project area, indicating a moderate sensitivity for prehistoric sites. The types of prehistoric sites expected for the vicinity of the project area include temporary camps, small resource-processing sites and rockshelters.
	Number of historic sites identified: Eight historic Euro-American sites are documented within a 3.2 km (2 mi) radius of the project area. All are associated with map documented structures (MDS) or standing historic structures, including residential and industrial sites. None of the known sites are located near the project area.
	<i>Recommendations</i> : Nearly half of the project area lies on land with 25-50% slope. In addition, two built-up, gravel roads lie within the project area, as well as a drainage ditch in the southern terminus. Approximately 60% of the project area is thus untestable. The remaining 40% is situated in areas between 8-15% slope, with shallow soil horizons consistent with channery, upland hill slopes displaying little soil development. We recommend that a survey consisting of approximately 90-100 STPs would be sufficient to adequately test for buried cultural resources.
Report Author:	Kevin Eric Sheridan, Public Archaeology Facility.
Date of Report:	December 21, 2012

# I. INTRODUCTION

This report presents the results of a Phase 1A cultural resource assessment for the proposed Oneonta Student Housing Project in City of Oneonta, Otsego County, New York (Figures 1-2). The facility will lie adjacent to the campus of SUNY Oneonta to the east of Blodgett Drive. The project will impact approximately 5.6 ha (14 ac) (Figure 3).

The fieldwork summarized in this document was performed under the supervision of Dr. Nina M. Versaggi, Director of the Public Archaeology Facility, Binghamton University. Kevin Eric Sheridan served as the project director and author of this report. Dylan Pelton was the field assistant. Maria Pezzuti and Annie Pisani performed all related administrative duties. In compliance with the Standards for Cultural Resource Investigations in New York State (1994) and the National Park Service's Criteria and Procedures for the Identification of Historic Properties (2000), the area within the project limits is considered the area of impact for the purpose of conducting the survey. The results of the research performed for this report do not apply to any territory outside the project area.



Figure 1. Approximate location of the project area in Otsego County and New York State.



Figure 2. Location of the proposed Oneonta Housing project area on the Oneonta 7.5' USGS Quadrangle.



Figure 3. Survey map showing current topography of APE (in red).



# **II. BACKGROUND RESEARCH**

# 2.1 Environmental Context

The project area is situated in Otsego County, New York. Otsego County is located in the glaciated Allegheny Plateau physiographic province of New York. The Allegheny Plateau is characterized by deep, narrow valleys and undulating divides, the result of dissection by tributaries of the major river ways. The current project area is situated on the backslopes of hills overlooking a valley containing an unnamed feeder stream for the Susquehanna River via Oneonta Creek. This stream is located 286 m (938 ft) west of the project area, while the confluence with Oneonta Creek lies approximately 2.3 km (1.4 mi) to the south. Elevations in the project area range from 469-530 m (1540-1740 ft) ASL

Analysis of the soil maps derived from the Web Soil Survey indicate that soils in the project area consist of shallow, rocky, and channery soils. Landforms range from gentle to steeply sloped hills interspersed with upland terraces. No alluvial soils are present in the project area, and deeply buried cultural horizons are not anticipated.



Figure 4. Soil Map of the Project Area. Key: LrE - Lordstown, Chadakoin, and Manilus soils, 25-50% slope; MeC - Mardin channery silt loam, 8-15% slope; OgB - Oquaga-Arnot complex, 1-8% slope, rocky; OgC - Oquaga-Arnot complex, 8-15% slope, rocky.

p.	5

Series Name	Soil Horizon & Depth	Color & Texture	Slope %	Drainage & Land Form
Lordstown, Chadakoin, and Manilus soils	A 0-20 cm (0-8 in) B 20-66 cm (8-26 in) C 66-71 cm (26-28 in ) R 71-81 cm (28-32 in)	Dark brown channery silt loam Yellowish brown very channery silt loam Dark brown extremely channery silt loam Dark gray fractured sandstone and shale	LrE (25-50%)	Hills, ridges and benches
Mardin channery silt loam	A 0-30 cm (0-12 in) B1 30-38 cm (12-15 in) B2 38-53 cm (15-21 in) C 53-79 cm (21-31 in)	Dark brown channery silt loam Light yellowish brown silt loam Olive brown channery silt loam Dark grayish brown channery silt loam	MeC (8-15%)	Drumlinoid ridges, hills, till plains
Oquaga-Arnot complex	Au 0-3 cm (0-1 in) A 3-17 cm (1-5 in) B 17-33 cm (5-13 in) C1 33-48 cm (13-19 in) C2 48-71 cm (19-28 in)	Very dark brown mucky peat Dark reddish brown channery silt loam Yellowish red channery silt loam Dark reddish brown very channery silt loam Reddish brown extremely channery silt loam	OgB (1-8%) OgC (8-15%)	Hills, ridges and benches

## Table 1. Soil descriptions.

## 2.2 Site Files Summary

An archaeological site files search for the current project was completed using the records of the New York State Museum (NYSM), Office of Parks Recreation and Historic Preservation (OPR&HP), and Public Archaeology Facility. The results show that there are six previously recorded prehistoric sites, eight previously recorded historic Euroamerican sites and one site with no information located within a 3.2 km (2 mi) radius of the project area. The prehistoric sites included a number of different site types, including resource processing sites, Late Woodland villages (with one possible Owasco component), a rockshelter and possible burial mound. Two sites (07740.000043 and NYSM 4454) consist of site a reported by Parker (1922). None are adjacent to or within the project area.

Eight historic Euroamerican sites are reported within 3.2 km (2 mi) of the project area. All are associated with map documented structures (MDS) on 19<sup>th</sup> and early 20<sup>th</sup> century maps, and include grist mills, saw mills, feed mills, foundries and a site containing a foundation and associated wooden boat (the C. Whitewood Boat Site [SUBi-2043, NYSM #11041]. None of these sites are within or adjacent to the project area. There are nine National Register Listed properties and two National Register Listed Historic Districts within 3.2 km (2 mi) of the project area. The two districts are the Walnut Street Historic District (NRL: 90NR02185) and the Oneonta Downtown Historic District (NRL: 03NR05133). A total of 162 inventoried properties are located within 3.2 km (2 mi) of the project area. The majority of these properties are located within the City of Oneonta and portions of the campus of SUNY Oneonta, and are not within or adjacent to the project area.



Site #	Site Name	Table 2. Site files summ Distance from PA / Distance from water / elevation / slope	Cultural Affiliation/Site Type	Other Information
07714.000011	Sawmill (H.R. Gifford or . Losee, prop?)	3392 m (11,128 ft) northeast of pa/on Oneonta Creek/439 m (1440 ft) ASL/gentle	On 1868 Beers Atlas / sawmill	No Information
07714.000013	Cider Mill (S.B., prop?)	1685 m (5529 ft) northeast of pa/on Oneonta Creek/ 408 m (1340 ft) ASL/gentle	On 1868 Beers Atlas / mill	No Information
07714.000012	John Allsop Sawmill	3205 m (10,516 ft) northeast of pa/on Gifford Creek/439 m (1440 ft) ASL/gentle	On 1868 Beers Atlas / sawmill	No Information
07714.000078	Denton Reed II (SUBi-2505)	3193 m (10,476 ft) northwest of pa/50-75 m (165-246 ft) east of Otego Creek, 40 m (131 ft) north of ancient kettle-hole wetland/348-354 m (1140-1160 ft) ASL/gentle	Unknown / Camp? Processing location?	117 STPs: 2 non-cortical flakes (1 burnt and utilized), 1 core fragment, 2 utilized cortical chunks, 1 shatter (all are Onondaga chert), 2 FCR
07714.000077	Denton Reed I (SUBi-2504)	3179 m (10,430 ft) northwest of pa/50-75 m (165-246 ft) east of Otego Creek, 30 m (100 ft) south of ancient kettle-hole wetland/348-354 m (1140-1160 ft) ASL/gentle	Unknown / Camp? Processing location?	117 STPs: 1 utilized Onondaga chert non-cortical flake, 1 utilized Onondaga chert cortical flake, 1 Onondaga chert core fragment (unidentified material), 1 utilized Onondaga chert cortical chunk, 2 FCR
07740.000110	Harvey Barnes Steam-Powered Saw, Planing, Matching Mill	2152 m (7059 ft) south of pa/350 m (1148 ft) to Susquehanna River/335 m (1100 ft) ASL/flat	On 1868 Beers Atlas/NY Census of Industry 1865 / mill	Historic Industrial Resources Survey, Part 1
07740.000112	J. Ferrington's Foundry	2388 m (7833 ft) south of pa/ 100 m (328 ft) to Susquehanna River /335 m (1100 ft) ASL/flat	On 1868 Beers Atlas / foundry	Historic Industrial Resources Survey, Part I
07740.000113	M. N. Elwell Grist and Feed Mill	2405 m (7891 ft) south of pa/ 100 m (328 ft) to Susquehanna River /335 m (1100 ft) ASL/flat	On 1868 Beers Atlas/NY Census of Industry 1865 / mill	Historic Industrial Resources Survey, Part I
07740.000043	Village Site	2604 m (8544 ft) south of pa/200 m (656 ft) to Susquehanna River/329 m (1080 ft) ASL/flat	Late prehistoric, unidentified / No Information	Parker 1922
07740.000111	E. R. Ford Foundry (Fords and Howe property)	2375 m (7791 ft) south of pa/ 100 m (328 ft) to Susquehanna River /335 m (1100 ft) ASL/flat	On 1868 Beers Atlas / foundry	Historic Industrial Resources Survey, Part I
07714.000065	C. Whitewood Boat Site (SUBi-2043, NYSM #11041)	3177 m (10,424 ft) west of pa/61 m (200 ft) east of unnamed tributary of Otego Creek which is 457 m (1500 ft) to the west/341 m (1120 ft) ASL/flat	Constructed between 1868 and 1903; destroyed prior to 1943 / Above ground fieldstone and mortar foundation, fieldstone firebox, wood boat, and wood box	3 STPs: 4 wire nails, 1 wire nail fragment
NYSM 6209	Gifford Hill	2766 m (9074 ft) southeast of pa/500 m (1640 ft) to unnamed creek, tributary of Susquehanna River/ 518 m (1700 ft) ASL/steep	No Information / Rockshelter? Camp?	Biface fragment and 2 debitage on exposed surface
NYSM 6451	No Information	3287 m (10,784 ft) west of pa/ on Otego Creek/329 m (1080ft) ASL/gentle	No Information / No Information	Frank Schambach. Upper Susquehanna River Reservoir, 1965
NYSM 4454	No Information	2450 m (8038 ft) southeast of pa/200 m (656 ft) to Susquehanna River/ 329 m (1080 ft) ASL/flat	No Information / Burial site, mound?	Parker 1922
NYSM 7029	No Information	1150 m (3773 ft) southeast of pa/500 m (1640 ft) to Susquehanna River/ 354-396 m (1160-1300 ft) ASL/moderate	Late Woodland? Owasco? / Village	Photo of sinewstone – Gifford collection



# 2.3 Prehistoric Context

The prehistory of New York State and the Northeast was characterized by two broad subsistence patterns, both of which influenced settlement and land use patterns, as well as material culture. The first, designated as the pre-agricultural hunter-gatherer, began with the arrival of highly mobile groups during the Paleo-Indian and Early-Middle Archaic periods around 10,000-4000 BC. Mobility was an important adaptation, as these groups relied on gathered plants, game animals, and fish for their subsistence. These groups often followed herds of animals, or migrated from one resource-rich landform (e.g., upland wetlands) to another. Starting in the Late Archaic period and extending through the Middle Woodland (4000 BC to AD 900), hunter-gatherers became seasonally nomadic. People created relatively large base camps in major river or lake valleys, from which daily foragers would radiate outward in search of local resources. During seasons of resource dispersal, the camps would break up into smaller, more mobile units capable of foraging for themselves. Sites associated with hunter-gatherers include the short term camps and resource processing stations used by the early nomads, as well as larger base camps and lithic scatters associated with the daily foragers of the seasonally nomadic groups.

Beginning around AD 900, the Late Woodland period is defined by the widespread shift towards agriculture as a subsistence base, along with the associated sedentism necessary for agricultural pursuits. While these groups continued to forage for plant and animal resources, they relied heavily on cultigens as a primary food source. Permanent villages developed in the region, along with a matrilineal kin structure. Increased needs for defense prompted many groups to develop their villages on elevated landforms situated above major waterways.

## Prehistoric Sensitivity Assessment

The current project area is located on the backslope of hills overlooking the valley of a small feeder stream for the Susquehanna River. This situates the project area within the Susquehanna River riverine system.

Research by Versaggi (1996) has identified base-line models of prehistoric hunter-gatherer settlement along the Upper Susquehanna Valley, and recognizes a set of site types that can be employed in an examination of hunter-gatherer sites. Versaggi's analysis identified four site groupings: base-camps, single-task field camps, multi-task field camps, and resource-processing stations.

- **Base-camps** are large sites with high frequencies of artifacts, tools, features, and spatial clusters. Base-camps were typically located at confluences near winter deer aggregation areas and dense spring fish runs.
- Single-task field camps are typically smaller size occupations that contain large numbers of artifacts and specialized tools. Bifacial reduction debitage is prominent as bifacial tool-kits are replaced and maintained. Single-task temporary camps appear to have been occupied by few people for a short duration, and there may have been little need to organize and divide space. Fewer spatial clusters would result and these would tend to be similar in composition, reflecting a focus on a single or limited range of tasks.
- Multi-task field camps are typically smaller size occupations that contain lower numbers of artifacts and tools. These sites resemble forager-like camps in which the occupants moved frequently in pursuit of low density and dispersed resources. Multi-task camps occur in a wide variety of contexts. Some were widely scattered within the valleys of major and secondary drainages, and others were mapped onto specific resource patches in the uplands.
- **Resource processing locations** and encounter-like hunting/butchering stations are small occupations with very low numbers of artifacts, tools, and spatial clusters. Expedient flake production and use characterize these small lithic sites. Generally, these sites are expected within the daily foraging radius around a camp or village, as well as around dispersed single- and multi-task camps.

Analysis of the site files available through the New York State Museum (NYSM), Office of Parks Recreation and Historic Preservation (OPR&HP), and Public Archaeology Facility reveal that there are six previously recorded prehistoric sites located within a 3.2 km (2 mi) radius of the project area. The prehistoric sites included a number of different site types, including two resource processing sites, one Late Woodland village (with a possible Owasco component), one prehistoric village recorded by Parker (1922), a rockshelter and possible burial mound recorded by Parker (1922). The physiographic location of the proposed project on the hill slopes overlooking a stream valley indicate that there is a high probability of encountering small resource processing sites, single and multi-task field camps and rockshelter sites within the boundaries of the project area. Larger base camps and village sites are more likely to be located off the hill slopes near the confluences of waterways, such as the Susquehanna River and associated feeder creeks and streams.

#### 2.4 Historic Context

Euroamerican settlement in the Otsego County area began in the mid-18<sup>th</sup> century. The county was formally established in 1791 (Hurd, 1878). The Town of Oneonta was established in 1830, although settlement had been taking place in the Oneonta area for over half a century before that date. The area's economy was initially focused on agriculture, including cereal crops and dairy, as well as livestock (Hurd, 1878). Dairy was especially important, with nearly 60 butter and cheese factories established within the county during the nineteenth century. Oneonta benefited from an advantageous location along many transportation routes, including two turnpikes, and several river valleys, including the Susquehanna, which runs through the town. Numerous railroads were constructed through the county in the mid-1800s, which brought considerable economic prosperity to the region. Oneonta became the economic center of the region after 1865 with the completion of the Albany and Susquehanna Railroad.

Most commercial development in the area occurred within the Village of Oneonta. In 1889 the Oneonta Normal School was established, which grew throughout the early 20<sup>th</sup> century as more buildings and academic buildings were added to the campus. In 1951 the college was renamed the State University of New York at Oneonta, and has been a part of the New York state university system ever since.

#### Historic Sites Sensitivity Assessment

Analysis of the site files available through the New York State Museum (NYSM), Office of Parks Recreation and Historic Preservation (OPR&HP), and Public Archaeology Facility reveal that there are eight previously recorded historic Euroamerican sites located within a 3.2 km (2 mi) radius of the project area. All are associated with map documented structures (MDS) on 19th and early 20th century maps, and include grist mills, saw mills, feed mills, foundries and a site containing a foundation and associated wooden boat (the C. Whitewood Boat Site [SUBi-2043, NYSM #11041]. None of these sites are within or adjacent to the project area. There are nine National Register Listed properties and two National Register Listed Historic Districts within 3.2 km (2 mi) of the project area. The two districts are the Walnut Street Historic District (NRL: 90NR02185) and the Oneonta Downtown Historic District (NRL: 03NR05133). A total of 162 inventoried properties are located within 3.2 km (2 mi) of the project area. The majority of these properties are located within the City of Oneonta and portions of the campus of SUNY Oneonta, and are not within or adjacent to the project area.

Historic maps for the region were inspected to determine the types of landuse present and to identify historic structures within the project area. Historic maps available for the project area span the period of 1868 to 1982 (Figures 2, 5-7, pp. 3, 11-13). The successive historic maps show the gradual development of the Village and later City of Oneonta. The project area lies at the northern periphery of development associated with SUNY Oneonta, with residential structures present adjacent to but not within the project area.

**1856** Map of Otsego County – This map shows the region as an area of dispersed farms and homes north of the Village of Oneonta. No Map Documented Structures are present in the project area.



**1868 Beers** Atlas of Otsego County- This map shows the project area as largely the same as the previous map, with further expansion of the Village of Oneonta and surrounding areas. No Map Documented Structures are present in the project area.

**1903** New Century Atlas of Otsego County – this map shows the project area as largely the same as the previous map, with further expansion of the Village of Oneonta and surrounding areas. No Map Documented Structures are present in the project area.

**1918 USGS Oneonta 15' Quadrangle** – This map shows little further development of the Village of Oneonta and surrounding areas from the previous map. No Map Documented Structures are present in the project area.

**1943/1982 USGS Oneonta 7.5' Quadrangle** – The most recent USGS map (photorevised in 1982) shows the impact of the expansion of SUNY Oneonta and associated facilities to the north of the City of Oneonta. Residences, roads and athletic fields are adjacent to the current project area. One residence (<50 years old) is present in the southern section of the project area.

Based on the analysis of the site files and available historic maps, there is a low probability of encountering historic cultural material within the project area. Any historic material would likely be found in the southern section of the project area around the single standing structure in the project area. Such material would likely be less than 50 years old.



Figure 5. Approximate location of the project area on the 1856 Map of Otsego County.



Figure 6. Approximate location of the project area on the 1868 Beers Atlas of Otsego County.



Figure 7. Approximate location of the project area on the 1903 USGS New Century Atlas of Otsego County.





Figure 8. Approximate location of the project area on the 1918 USGS Oneonta 15' Quadrangle.

p. 12

# **III. METHODOLOGY**

The Phase 1A methodology included a walkover of the proposed project area (Figure 6), the excavation of five judgmental shovel test pits (STPs) to determine if fill soils were present, and photo-documentation of current ground conditions. The goal was to visually examine the entire project area to identify any existing cultural features, determine if there has been any prior ground disturbance, and assess suitability for subsurface testing. Kevin Sheridan and Dylan Pelton conducted the walkover on December 14, 2012.

# IV. PHASE 1A ASSESMENT RESULTS

The proposed project will affect approximately 14 acres of land adjacent to the campus of SUNY Oneonta. The parcel is located on a hillside area alternating between steep slope and terraces overlooking the northernmost campus baseball field (located to the east). The parcel is currently wooded, though no old growth trees were apparent. Observation of the area suggests that there is little soil development on the hillside and terrace portions of the project area (bedrock outcroppings are apparent throughout the area). The project area is traversed by two built-up dirt roads leading off of Blodgett Drive. These roads were initially constructed approximately 20 years ago, when the previous owner of the parcel planned to develop the area into suburban housing tracts (Jeff Smetana, personal communication). Visual inspection of the roads. Portions of the project area adjacent to either road are therefore likely to have been scrapped of any A-horizon soils. In addition, the portions of the project area adjacent to the eastern side of Blodgett Drive contains a drainage ditch extending approximately 3 m (9.8 ft) off the side of the road. In total, approximately 60% of the total project area is untestable due to the presence of slope greater than 15%, prior scrapping and the presence of built-up roads and a drainage ditch.

The remaining 40% of the project area consisted of flat to gently sloped terraces interspersed throughout the southwestern portion of the project area, as well as a small section of the northeastern corner. A total of five arbitrary STPs were excavated throughout various sections of the project area (Figure 9). The A-horizons were very shallow, and consisted of dark brown, dark grayish brown and black humic silt loam. The A-horizon averaged 9 cm throughout the testable areas in the project area. This was followed by a B horizon of strong brown or yellowish brown silty loam with heavy gravel and rocks. STPs averaged 29.2 cm in depth. No cultural material was recovered from any STP.

Shovel Probe	Soils	
1	0-13 cm: very dark grayish brown silty loam with dense rock	
	13-30 cm: yellowish brown silty loam with dense rock	
2	0-6 cm: black humic silty loam with rock and gravel	
	6-21 cm: strong brown channery silty loam with rocks and gravel	
3	0-10 cm: very dark grayish brown silty loam with dense rock	
	10-30 cm: strong brown silty loam with dense rock	
4	0-8 cm: dark grayish brown silty loam with heavy pea gravel (fill)	
	8-18 cm: dark grayish brown silty loam with gravel	
	18-36 cm: reddish brown silty loam with gravel, rock	
5	0-9 cm: dark brown silty loam with dense rock	
	9-29 cm: strong brown silty loam with dense rock	

Table 3. Description of STP profiles.

# V. RECOMMENDATIONS

Nearly half of the project area lies on land with 25-50% slope. In addition, two built-up, gravel roads lie within the project area, as well as a drainage ditch in the southern terminus. Approximately 60% of the project area is thus untestable. The remaining 40% is situated in areas between 8-15% slope, with shallow soil horizons consistent with channery, upland hill slopes displaying little soil development. We recommend that a survey consisting of approximately 90-100 STPs would be sufficient to adequately test for buried cultural resources.





Figure 9. Phase 1A Project Map showing shovel probes and photo angles.



Photo 1. View of terrace in the northeast corner of the project area, facing south.



Photo 2. View of project area showing area of 25-50% slope, facing west.



Photo 3. View of western section of the project area, facing west.



Photo 4. View of southern end of the project area, facing north.

# APPENDIX I. BIBLIOGRAPHY

# Beers, F.W.

1868 Atlas of Otsego County, New York. New York: Beers, Ellis and Soule.

#### Century Map Company

1903 New Century Atlas of Otsego County, New York. Philadelphia: Century Map Company.

## Geil, Samuel and Hunter, B.J.

1856 Map of Otsego County, New York. Published by Robert P. Smith, Philadelphia.

#### Hurd, Duane Hamilton 1878 Histo

History of Otsego County with illustrations and Bibliographical Sketches of Some of its Prominent Men and Pioneers. Philadelphia: Everts and Fariss.

#### National Park Service

2000 National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Washington D.C.: National Park Service.

# Parker, A.C.

1922 History of the Archaeology of New York State. NYS Museum Bulletins 238-239: 1920-1922.

# United States Geological Survey (USGS)

- 1918 Oneonta, New York 15 Minute Quadrangle
- 1943 (Photorevised 1982) Oneonta, New York 7.5 minute quadrangle.

# Versaggi, Nina M.

1996 Prehistoric Hunter-Gatherer Settlement Models: Interpreting the Upper Susquehanna Valley. In: *A Golden Chronograph for Robert E. Funk*, edited by C. Lindner and E. Curtin, Occasional Publications in Northeast Anthropology, No. 15:129-140.

Web Soil Survey - http://websoilsurvey.nrcs.usda.gov/app/. Accessed December 2012.