

TRANSLATING ARCHAEOLOGY INTO STORIES: CREATING A DIGITAL RESOURCE
FOR THE ONÖNDOWA'GA:' (SENECA) TOWNLEY-READ AND WHITE SPRINGS
SITES, OCCUPIED CIRCA 1688-1754

A Thesis

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by

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ABSTRACT

The goal of this project is to digitize and present archaeologically-recovered materials from two Onöndowa'ga:' (Seneca) Haudenosaunee sites— the circa 1688-1715 White Springs and circa 1715-1754 Townley-Read sites, both located near Geneva, New York— in an online platform in a way that will be useful to researchers and descendant communities. An initial partnership with the Great Lakes Research Alliance for the Study of Aboriginal Arts and Cultures (GRASAC) opened the door for discussions on the inadvertent assumptions held by non-Native researchers, the role of collaboration with Indigenous communities, and the utility of multivocality and digital media in creating a useful and meaningful resource. Collaboration with Onöndowa'ga:' community partners through a workshop at the Seneca Art and Culture Center in Victor, New York, identified how the descendant community wished to organize and present the wide variety of locally-produced materials, trade goods ultimately derived from Europeans (including those locally-reworked for different functions), commodities that were produced and exchanged by other Indigenous groups, and their spatial information. In conjunction with the Cornell University Library through the Digital Collections for Arts and Science Grants Program, the project is currently digitizing items to be presented through a multivocal website with a nested structure. This thesis focuses on the process of creating this resource, dealing especially with the ways myself and my advisor, Kurt Jordan, have chosen to rectify assumptions and missteps made during the beginning stages of the project.

BIOGRAPHICAL SKETCH

Dusti Bridges began her education at Texas State University, earning a Bachelor of Science in Anthropology and Physical Geography. While at Texas State, Dusti gained archaeological experience as a student lab technician at the Center for Archaeological Studies and participated in the Galway Archaeological Field School through the National University of Ireland--Galway. After graduation, Dusti moved to Ithaca, NY where she has worked with Dr. Kurt Jordan's White Springs Project while completing her Master's degree.

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TABLE OF CONTENTS

Biographical Sketch	iv
Acknowledgements	v
List of Figures	vii
Introduction	1
The Digital Project	5
The Digital Project at Cornell—Master’s Thesis.....	7
Project Beginnings	10
GRASAC Gathering at the Woodland Cultural Center, September 2016	13
Formulating a New Project: Theoretical Touchstones.....	16
Multivocality	17
Media and Websites—Moving Away from a Rigid Database Structure	21
Workshop—Consulting Members of the Onöndowa’ga:’ Community.....	25
Methods of Presentation	26
Sensitive Materials and Additional Inclusions	33
Current State of the Project.....	35
Website Planning	35
Ongoing Work and Future Considerations	40
Conclusions—Moving Forward.....	43
References	47
Appendix.....	51

LIST OF FIGURES

Figure 1. Locator Map	3
Figure 2. Long tubular shell bead; example of single object presentation	26
Figure 3. Brass/copper-alloy projectile points; example of grouping by artifact type	27
Figure 4. European and Native-made smoking pipe fragments; example of grouping by function	28
Figure 5. Various ceramic vessels; example of grouping by activity	28
Figure 6. Iron nails and wood building materials; example of grouping with related objects	29
Figure 7. Red stone artifacts; example of manufacturing sequence	29
Figure 8. Digitized color slide of Feature 5 at Townley-Read; example of an excavation photograph.....	31
Figure 9. American black bear with tooth and jaw bones; example of a presentation of animal remains	31
Figure 10. Website mock-up of the splash page, displaying both Townley-Read and White Springs.....	35
Figure 11. Website mock-up of the site-level page, displaying Townley-Read.....	37
Figure 12. Website mock-up of a locus-level page, displaying the midden at Townley-Read	37
Figure 13. Website mock-up of an artifact page for the midden at Townley-Read.....	38
Figure 14. Website mock-up of an object detail page, displaying a gray fox tooth from the midden at Townley-Read	39
Figure 15. Highly corroded iron musket finial from White Springs.....	41

Introduction

The goal of this project is to digitize and present archaeologically-recovered materials from two Onöndowa'ga:' (Seneca) Haudenosaunee sites— the circa 1688-1715 White Springs and circa 1715-1754 Townley-Read sites, both located near Geneva, New York— in an online platform in a way that will be useful to researchers and descendant communities. In consultation with Onöndowa'ga:' community partners, project participants have worked to determine a means of presentation that will help to reveal the meaningful stories the archaeological record can provide (which may include elements beyond the artifacts alone). In addition to the digitization of the materials, the metadata and framing for the project are intended to be multivocal, integrating academic knowledge with Onöndowa'ga:' community perspectives and language terms on material culture from the 17th and 18th century Onöndowa'ga:' sites. This project will provide information on a previously unpublished collection of archaeological materials from a poorly-understood era to researchers, provide an example of community involvement in multivocal digital knowledge production and presentation, serve as a resource for education on the Indigenous history of New York, and most importantly provide a means for descendant communities to access and explore their heritage.

The Townley-Read and White Springs sites hold important positions in the history of Onöndowa'ga:' people in New York State. The nucleated (tightly clustered) town of White Springs was built circa 1688-89 C.E., occupied until approximately 1715 C.E., and may have been encircled by a palisade (Gerard-Little et al. 2017:39; Jordan 2004:32). This defensible architecture is not unexpected for this period of Onöndowa'ga:' history. In the summer of 1687, immediately preceding the occupation of White Springs, the Onöndowa'ga:' were attacked by a French expedition led by the Marquis de Denonville. Denonville and his force of over two-

thousand men marched into Onöndowa'ga:' territory as retaliation against Onöndowa'ga:' attacks on French-allied Native groups (Jordan 2008:52). The Onöndowa'ga:' burned some of their towns and villages in order to preempt the French force, including that of Ganondagan, the precursor of White Springs (Jordan 2008:52; Parmenter 2010:194). Other settlements were eventually burned by the French, as were agricultural fields and food stores, although the reluctance of some of the French force's Native allies to destroy crops meant that some fields further from the towns and notice of the French were spared (Jordan 2008:52; Parmenter 2010:194).

The Onöndowa'ga:' at Ganondagan were unable to carry out the preparations that typically preceded the movement of an Onöndowa'ga:' community due to the abrupt invasion by Denonville. Archaeologist William Engelbrecht notes that village removal typically was a "gradual process," allowing villagers time to clear new fields for agriculture and build new structures for the town (2003:101). This forced move following the French invasion resulted in significant stress on the community— although some crops remained safe and unburned after the invasion, the Onöndowa'ga:' were unable to draw upon the full range of resources typically available during the moving process nor take advantage of the safety of an established settlement while preparing their new home. The town's position within the Onöndowa'ga:' homeland is another indicator of a time of stress. Charles Wray notes that the village moved approximately "10 or 15 miles eastward to an area more remote from Irondequoit Bay and nearer their allies, the Cayugas" (1983:41; see Jordan 2008:163-197 for more on Onöndowa'ga:' settlement patterns). Denonville began his expedition into Onöndowa'ga:' territory at Irondequoit Bay on Lake Ontario, so it is no wonder that the burned-out communities sought to move further away from the French and closer to their Haudenosaunee allies (Figure 1).

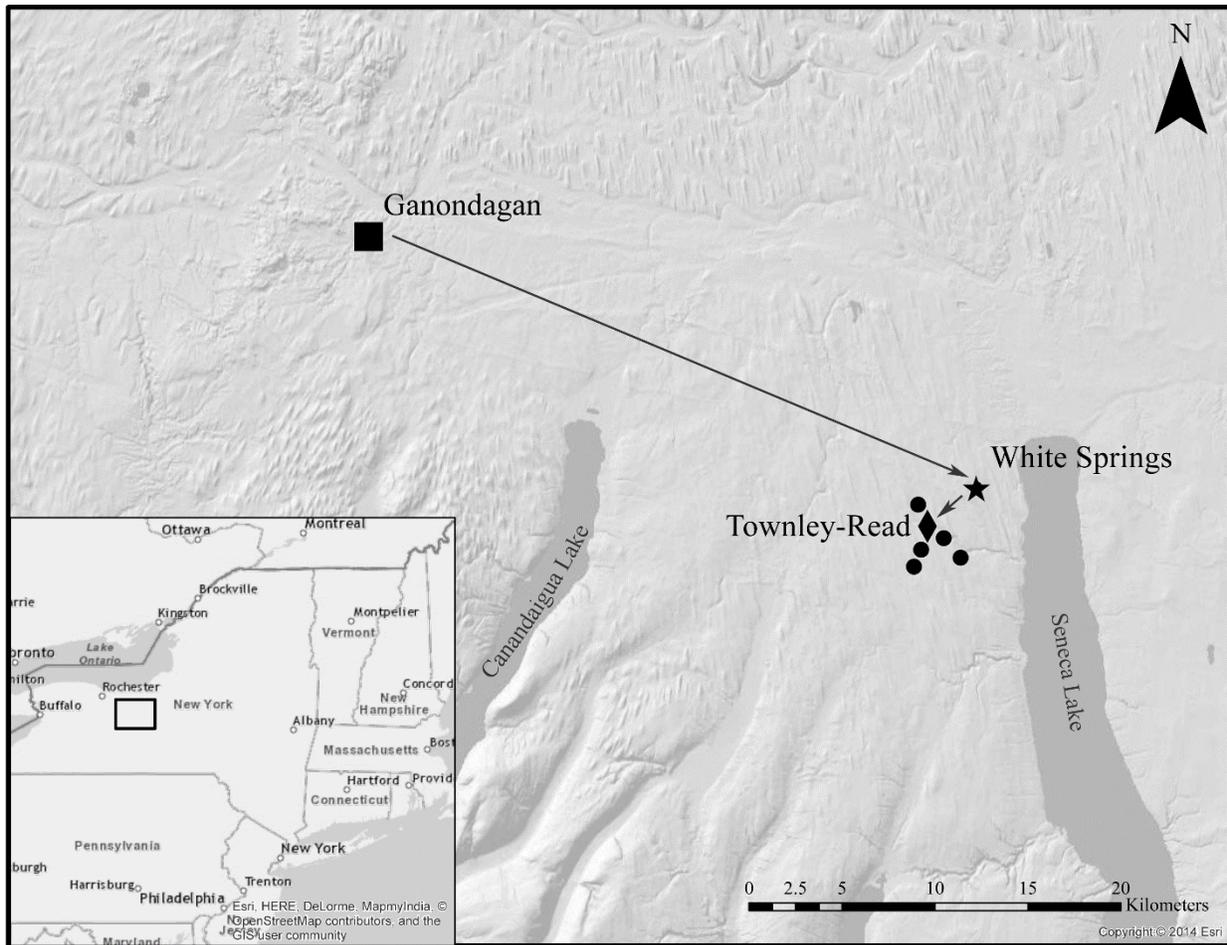


Figure 1. Map showing the move from Ganondagan to White Springs, then to Townley-Read and the other New Ganechstage complex sites. Map created by Peregrine Gerard-Little, 2016.

Following the typical pattern of occupation for Onöndowa'ga:' villages and community movements (excluding forced moves, like those of the Denonville expedition), the move away from White Springs was likely due to resource depletion and other ecological concerns (Jordan 2008:198). The characteristics of this move, from a nucleated and defensible town to dispersed *neighborhoods* in less defensible locations, marks a stark change from the tumultuous times the community had experienced recently (Jordan 2008:198). The Townley-Read site was occupied from around 1715 to 1754 C.E., and makes up part of a grouping of at least six neighborhoods

along a portion of Burrell Creek termed the New Ganechstage Site Complex, approximately 3.5 km from the White Springs town (Jordan 2008:146, 160-161). The settlement along Burrell Creek is much more dispersed than that of White Springs, on terrain where defense does not appear to have been a concern, and without defensible architecture like the possible palisade at White Springs (Jordan 2008:160-161). The time spent at Townley-Read and the other components of the New Ganechstage site complex was one of relative peace, with inhabitants experimenting with new settlement, architectural, and trade arrangements (Jordan 2008). The combined histories of White Springs and Townley-Read thus provide us with a narrative of a resilience, continuity, and ingenuity among a community at two successive sites, spanning nearly six decades from 1688 to 1754.

What ties these sites most poignantly to the present actually lies in their past—at Ganondagan, the town burned by Denonville that drove the eastern Onöndowa'ga:' to White Springs. Ganondagan is currently the location of a New York State historic site and the Seneca Art and Culture Center, a museum and interpretive facility telling the story of Ganondagan and Onöndowa'ga:' people past and present. These institutions are active sites for the Onöndowa'ga:' community, providing a space to gather, explore Onöndowa'ga:' history, and assert ongoing presence and cultural continuity in their traditional homelands. Excavations at both Townley-Read (from 1996 to 2000) and White Springs (from 2007 to 2015), led by Kurt Jordan (currently Associate Professor of Anthropology and American Indian and Indigenous Studies at Cornell University), used collaborative discussions with Onöndowa'ga:' community members to develop field methods and research protocols, and support was provided for Indigenous students' participation in the White Springs field school by Cornell's American Indian and Indigenous Studies Program (AIISP) (see Dewbury and Broadrose 2011 for a

discussion on the collaboration at White Springs). Research questions at White Springs were particularly driven by the interest among the Onöndowa'ga:' community about what happened after the forced relocation from Ganondagan. This interest in life after Ganondagan and the idea of a digital resource is shared by indigenous staff members at Ganondagan state historic site, staff at the Seneca-Iroquois National Museum, Seneca Nation (SNI) Archaeologist Jay Toth, the SNI Tribal Historic Preservation Office, the Haudenosaunee Standing Committee on Burial Rules and Regulations, and Seneca language learning classes at the Tonawanda Reservation. In keeping with community interests and concerns, the excavated materials from White Springs and Townley-Read will be curated at the Seneca-Iroquois National Museum when analysis at Cornell is finished (Jordan, personal communication 2016).

The Digital Project

Even given the collaborative nature of both the Townley-Read and White Springs excavation projects, it became clear that the process of archaeological analysis restricted access to the material culture and data from these sites to a certain set of people—particularly those who could physically be in the lab with the artifacts on the Cornell University campus where the collections currently reside. A method for making the materials more accessible to the descendants of the White Springs and Townley-Read communities was needed. This idea aligned with the goals of the Great Lakes Research Alliance for the Study of Aboriginal Arts and Cultures (GRASAC), who in 2015 joined with Cornell's AIISP in a research partnership.

GRASAC is a network of researchers across multiple disciplines in the United States and Canada who focus on research related to Great Lakes Indigenous communities. Part of the GRASAC initiative is to create a Knowledge Sharing Database of Great Lakes heritage items and documents, currently housed in institutions across the globe, for use and study by researchers

and members of Iroquoian and Anishinaabe descendant communities. This resource consists of an online database of Indigenous language research, oral narratives, archival documents, and visual and material culture and photographs. Most of these items are ethnographic, collected by researchers from a living community.

As part of the GRASAC-Cornell partnership, AIISP held a workshop titled “Grounding GRASAC at Cornell” in April 2016. Participants at this workshop, including Kurt Jordan, discussed the role of archaeology in the Knowledge Sharing Database going forward, concluding that there was a need to consider objects that were not ethnographic. As a result, GRASAC provided AIISP and Jordan with funding to begin the process of including archaeological entries in the database from Townley-Read and White Springs during the summer of 2016.

As with GRASAC’s existing ethnographic database, there are many benefits to creating a collection of archaeological materials from these sites that is available online. Digital access to the collections will provide descendant communities, researchers, and the general public with a representational sample of the kinds of artifacts recovered from Northeastern Indigenous sites occupied during the late seventeenth and early eighteenth centuries. Excavations at the sites recovered domestic context materials from house lots, middens, outdoor features, and a potential palisade area at White Springs. The assemblages contain an intriguing variety of locally-produced materials (such as ceramic smoking pipes), trade goods ultimately derived from Europeans (including glass beads, iron tools, and brass kettle fragments), locally-reworked trade goods (such as brass arrowheads and beads, and locally-made glass pendants), and commodities that were produced and exchanged by other Indigenous groups (such as red pipestone and marine shell ornaments). A digital collection would provide a resource for artifact identification and dating, while also promoting comparative studies between this collection and other

Haudenosaunee sites, further analysis into the daily lives of the inhabitants of Townley-Read and White Springs, and other research aimed at understanding Onöndowa'ga:' history and culture by, with, and for descendant Onöndowa'ga:' communities. While the materials in these collections will eventually be physically returned to the Onöndowa'ga:' community via the Seneca-Iroquois National Museum, a digital collection would provide access to the materials during the interim while also providing access to those unable to travel to the museum.

Perhaps most importantly in the current critical moment in the context of the archaeology of the Indigenous peoples of North America, digital resources also provide an important venue in which to address the historical disregard of ownership and rights to heritage of descendant Indigenous communities. Attempts to bridge the divide between archaeologists and Indigenous communities have become increasingly prevalent throughout archaeological research (Colwell-Chanthaphonh 2012; Phillips and Allen 2010). Whether the approach is called collaboration, community-based archaeology, or Indigenous archaeology, this work aims to return the control of Indigenous heritage to Indigenous people (Atalay 2012; Silliman 2008; Nicholas 2008; Watkins 2001). An accessible and meaningful digital collection of the materials from Townley-Read and White Springs can contribute to this broader goal in addition to continuing the collaborative practice of the excavation projects.

The Digital Project at Cornell—Master's Thesis

The funding from GRASAC for the summer of 2016 is my point-of-entry into this narrative. I came to Cornell to pursue a Master's degree in Archaeology supervised by Kurt Jordan, and was offered the position for the initial GRASAC-funded research. The process of creating a digital resource became my Master's thesis project, although it was not as straightforward as expected. My thesis was originally meant to report on the process of creating

the digital project, and I expected it to be mostly about the technical side of digital humanities research. Instead, it turned into a reflexive exercise— a study of the products of archaeology, and a report on the process of making mistakes and revealing the nature of unquestioned assumptions that permeate mainstream practice.

Uncritical creation of archaeological products, even digital ones, results in the continuation of the assumptions and biases of the researchers. This thesis aims to present a critical examination of these biases and assumptions in operation at each stage of the process of creating a digital archaeological resource. This approach is informed by the scathing and oft-cited example of the disconnection between anthropologists and Native communities presented in Lakota scholar and activist Vine Deloria Jr.'s 1969 manifesto, *Custer Died for Your Sins*. Deloria provides invaluable insight into the way archaeologists and anthropologists were viewed by Indigenous communities in North America—as self-serving, appropriating colonialists. In Deloria's own words, "Academia, and its by-products, continues to become more irrelevant to the needs of people" (Deloria 1969: 93).

As a result of these critiques, researchers have begun to address the marginalization of Indigenous societies in the control of their own history, recognizing that the discipline of archaeology is rooted in colonialism and appropriation (McNiven and Russell 2005:2-10). Indigenous societies have been a constant subject in archaeological research, although living descendants have had little say in the process. In the United States, early laws regarding heritage commoditized Native American history, treating the stories of Indigenous peoples as public goods (Colwell-Chanthaphonh 2012:269). Outcry from Indigenous communities and non-Native allies resulted in the passage of the Native American Graves Protection and Repatriation Act (NAGPRA) in 1990, which mandated that archaeologists work with descendant communities in

certain situations. This was a major step in including Indigenous communities as participants in archaeology instead of mere subjects, although communities and archaeologists had occasionally collaborated before this (Colwell-Chanthaphonh 2012:270). In addition to its protection of Native American graves and its goal of repatriation, NAGPRA has affected all aspects of the relationship between Indigenous communities and archaeologists (Colwell-Chanthaphonh 2012:270-271). The Act opened dialogue between the two groups, facilitating cooperation, although sometimes grudgingly, and supported the inclusion of Indigenous worldviews and values into archaeological work (Colwell-Chanthaphonh 2012:270-271). The intentions of archaeologists engaging in collaboration, community-based archaeology, and Indigenous archaeology are to challenge the current system of archaeology rooted in western epistemologies; provide communities the tools needed to employ archaeology to their benefit; incorporate Indigenous concepts such as the interconnectivity of the past with the present; highlight persistent ties with the landscape; and demonstrate the validity of multivocality in knowledge production and sharing (Colwell-Chanthaphonh 2012:273-278).

Through a reflexive study of my and my advisor's (Jordan) work as non-Native archaeologists producing a resource for a Native community, this thesis aims to contribute to these ongoing projects. This elaboration of developments that occurred within the creation of this resource—the theoretical, political, and cultural challenges that we as researchers grappled with—hopefully will lend new insights and models for the creation of such resources in the future. I will not report on the “pristine” outcome of the project—instead, I will discuss and analyze the messy, sometimes confrontational, and reflexive process of creating this resource as non-Native archaeologists acting as the lead in a community-driven project. This thesis analyzes the development of the project, including the initial formulation, the moments when our

assumptions were challenged by both Indigenous and non-Indigenous scholars, and the subsequent reformulations and restructurings.

Project Beginnings

The idea of producing a digital resource began very simply—Jordan and I, as researchers and “experts” proposed to select between 200-300 artifacts to be digitally photographed and included in the GRASAC Knowledge Sharing Database as part of the AIISP-GRASAC partnership. The range of 200-300 artifacts was chosen first with the idea that it would be a reasonable number to photograph. We decided that 100 objects from the smaller and mostly cataloged Townley-Read assemblage would be enough to accurately provide a representational sample, while the much larger and less fully cataloged White Springs assemblage would need roughly twice that to provide the same representation. We thought that figuring out how to include fragmentary, possibly unidentified or unidentifiable, and often-redundant materials in a database was going to be the main challenge—how could archaeological remains be included to fit the existing database structure that emphasized and was designed for ethnographic items? We would discover further on in the project that our planning during this stage was greatly constrained by the existing structure of the GRASAC database. Ethnographic items differ from archaeological artifacts in their completeness, provenience information, and often, what might be called their “shock-and-awe” value. An ethnographic item, even if little is known about its origin, often immediately gains the attention of the viewer based on its aesthetic qualities, while broken and decayed archaeological items may be skipped over. What sets archaeological items apart, however, and makes them worth attention, is the information that comes with them: the precise spatial data and the array of other materials they were found with. Because the GRASAC

database is tailored to ethnographic items, there was very little in the way of possibilities for displaying the spatial and relational information that would do the archaeological materials justice. Because of this, our solution was to pick the “Greatest Hits” of Townley-Read and White Springs— essentially, the most complete, recognizable objects that would most closely mimic ethnographic items.

The entirety of the project as originally conceived can be summarized in four steps: first, my funded work during the summer of 2016 would include establishing criteria and selecting approximately 200-300 artifacts for further study. Once chosen, we would complete detailed academic and archaeological-style cataloging of these objects using standard typologies, chronologies, and sourcing information. This step was complicated by the fact that the two assemblages were in very different states of analysis. Cataloguing and analysis of Townley-Read was mostly complete, while the more recently excavated materials from White Springs remained only partially catalogued. This step would be followed by digital photography of the artifacts, completion of their database entries, and finally the undertaking of a series of one or more workshops that would bring experts (from the academy, descendant communities, and other groups) together to discuss the items. We intended these discussions to be captured on video for possible inclusion in the GRASAC database.

I decided the criteria for selection would be based on artifact proportions, making sure that the sample collection generated would be representational of all of the material types and forms within the overall assemblage. The artifacts were tallied based on their material (copper-alloy, iron, ceramic, glass, etc.) and form (bead, nail, kettle part, etc.). Forms could be represented across multiple materials, like glass, brass, and red stone beads, and a representative sample would be generated from all of the bead material categories. For instance, if 20 (4%) of

the 500 artifacts from Townley-Read were red stone beads and a representative sample of 100 artifacts were to be digitized, 4%, or 4 red stone beads would be selected for digitization. The same calculations would be made for the glass beads and brass beads, as well as the other artifact materials and forms. Artifact types whose proportion represented less than 1% of the whole, such as unique items or those with small overall numbers, would receive one selection for digitization. The material and form types were also organized into functional categories, like “Adornment,” “Cooking,” “Architecture” (based on Rogers 1990) with the idea that this classification would be the most useful way to organize the artifacts in the database. However, at that time I excluded botanical and faunal remains on the basis that the inclusion of these items would require even further complex consideration on how they would fit within the existing database structure.

One significant problem with this initial project lay in the order in which we had envisioned the steps—collaboration or consultation with community partners came only at the end of the project, after we (as non-Native archaeologists) had made almost all the decisions about the structure of the database and the items included within it. Although we perceived that there were issues within the project, we did not fully recognize our main assumption—that we, as archaeologists, would know the best way to include archaeological materials in a database intended for the use of descendant communities and researchers working with those communities. As researchers, we focused our discourses on one issue—how to incorporate archaeological materials into an ethnographic database structure, which remains an ongoing area of research at GRASAC. We aligned our organization of the materials to the default GRASAC Knowledge Sharing Database organization, mimicking typical object-by-object museum catalog records without questioning whether this organization was as equally suited to archaeological materials as it was to ethnographic objects. In doing so we inadvertently failed to investigate the

project's place in ongoing political discourses surrounding the archaeology of Indigenous peoples, the rights to heritage, and self-representation in museums and cultural institutions. Fortunately for this project, the opportunity to discuss our concerns (and have these unknown assumptions pointed out to us) came relatively early on.

GRASAC Gathering at the Woodland Cultural Center, September 2016

In September 2016, Jordan and I had the opportunity to attend a gathering of GRASAC partners and participants at the Woodland Cultural Center in Brantford, Ontario. The purpose of this meeting was to discuss and brainstorm pilot projects funded in whole or part by GRASAC, one of which was our own White Springs/Townley-Read "Greatest Hits" endeavor. The handout we prepared for this meeting expressed our main concerns at that time:

Given the large size of archaeological assemblages, how does one decide what is "significant" or "tells a story"? What should archaeologically-related database items look like? Will entries be solely for individual artifacts? Or would archaeological features (like traces of an individual house or large firepit) or even entire sites also be appropriate for inclusion? If several stages of a manufacturing process can be reconstructed with archaeological materials, is that chain of items worthy of inclusion as an entry in the database? How can we prevent or limit redundancy within the selection? How should we handle certain artifacts with which we have limited knowledge or uncertain dates (such as lithics, unidentifiable metal artifacts, heavily eroded ceramics, etc.)? Presumably, various items' appropriateness for inclusion in a public database will be assessed during the community consultation. Is this too late in the process? Since these are Seneca sites, we propose to engage Seneca cultural specialists. The Haudenosaunee language currently represented in GRASAC is Cayuga, so how would

any Onöndowa'ga: '-language terms introduced to the project fit with the existing database? How should artifact categories like botanical remains, faunal remains, and wood charcoal be handled in the context of this project? They potentially would be of great interest to communities for purposes of understanding past environments and resource use (Handout created in September 2016, in the author's possession).

These are important questions for those creating a digital resource, and have remained so for our project through the current stage. One can see that we were already starting to realize that we had gotten ahead of ourselves with the planning of this project; we started to question the place of collaboration and consultation within the workflow, the ability of what we were doing to provide narratives and tell a story, and the appropriateness of the items we had selected and how we were planning to present them. Our concerns were quickly brought up among our working group at the GRASAC Gathering, who provided an invaluable discussion about our assumptions at this stage.

The combination of Indigenous and non-Indigenous scholars in our working group, including John Norder from Michigan State University, Anong Beam from the Ojibwe Cultural Centre, Craig Cipolla from the Royal Ontario Museum, and Neal Ferris and Josh Dent from Western University, were able to point out several flaws in our initial conception of the project. Their observations gravitated around three key issues: how we, as researchers, assumed we knew what would be most interesting to descendant communities; that we weren't paying enough attention to the importance of narrative and stories; and that the specialized technical language we were using was opaque and confusing.

The main concern to come out of our working group, first noted by Norder, was the fairly low level of community collaboration to date within the project. We assumed to know what would be the best objects to present and the best way to organize their presentation, without

questioning our position as non-Native researchers. This issue stemmed from an assumption of authority—that archaeologists knew which archaeological materials could tell a story. Cipolla suggested that archaeologists need to “let it breathe,” or give up the authority of what to research and what story to tell. Ferris concurred, noting that the utility of archaeology for descendant communities lies in its translation, which, logically, should be decided by the people who want to access the information, not necessarily the archaeologists.

Beam first called attention to the second issue of our project, stemming from our assumption of authority—that there was little focus on the creation of meaningful narratives or ability of the artifacts to tell a story. Beam explained that interest among descendants, garnered through her own experience and discussions with First Nations elders from her community, centered on the stories behind the artifacts and what they can portray about “life before.” While Jordan and I used the phrase “tell a story” in our considerations for the original project, it wasn’t until Beam’s input that we really began to understand what it truly meant for artifacts to tell a story. My idea of stories at that point remained rooted in scientific archaeological analysis, focusing on the objects themselves and not necessarily the people behind them. Presentation of individual artifacts, separate from any spatial and historic context, does not provide a holistic picture from which the viewer can begin to draw meaningful information. The focus of Beam’s critique was not that archaeologists should offer stories as their interpretation, but to build in possibilities for the viewer to create their own. Such a structure would provide a space for dialogue between the artifacts and the viewer, allowing for the creation of meaningful narratives and challenging the archaeological perspective as the ultimate authority.

The third issue, interwoven with the first two, centered on the technical language we, as archaeologists, used to describe and discuss the artifacts—the same kind of language we at this

point intended to include in the digital collection. Our group discussed how the products of archaeological research can often be opaque and confusing, alienating those without the knowledge and training necessary to wade through highly specialized terminology. This often makes the creation of narratives that are meaningful to non-archaeologists difficult or even impossible.

Our working group developed several goals for this project moving forward. Norder and Ferris perceived a need for new protocols and ways of presenting archaeological data, focusing on the ability of the user to control what they see and uncover relationships between objects and their historical and spatial contexts. The new focus should be on making archaeology accessible and meaningful—able to generate not only narratives but possibilities as well. Archaeological products, in this sense, should be dynamic and dialogic—they should provide the opportunity, as Beam asserts, for people to put objects together in a way that will tell a story for themselves and their communities. The starting point for creating meaningful archaeological products, in this sense, lies in the community. Our working group suggested we start reformulating the project with workshops with descendant community members to determine the best way to approach and structure the digital resource.

Formulating a New Project: Theoretical Touchstones

The discussion with our working group revealed that the initial formulation of the project had been undertheorized. Our considerations focused on method—how to select the items, digitize, and organize them in a database. In focusing on method, we failed to recognize the wider implications of the work and the project's place among the discourses surrounding the archaeology of Indigenous peoples and the politics of representation. This was in part due to my

own unfamiliarity with these discussions, which I was able to remedy during my coursework over the following year. During my studies, I was introduced to the works of scholars aiming to address the colonial history of archaeology, working collaboratively with Indigenous communities to carry out projects that respected community values and resulted in products that were meaningful and useful. Through the work of Ian J. McNiven and Lynette Russell (2005) I was introduced to the colonial legacy of archaeology, while archaeologists such as Stephen Silliman (2008) and Sonya Atalay (2012) provided examples of community collaboration. Moira Simpson (2012) introduced me to the politics of the representation of Indigenous peoples in museum-type settings while the works of Natasha Lyons and colleagues (2016) and Chip Colwell-Chanthaphonh and colleagues (2011) tied digital media and representation together with archaeology. These works, and others, informed a new formulation of the project—one that employed the concept of multivocality as an anti-colonial strategy and more closely considered the use of digital media.

Multivocality

The suggestion by our working group to hold community-based workshops draws upon years of scholarship attempting to bridge the divide between non-Indigenous archaeologists and Indigenous communities. The gathering highlighted the need to critically consider the place of the proposed website within this ongoing dialogue—where does it fit within the reconciliation of Indigenous peoples and archaeologists? Is there potential to engage with ideas of decolonial methodologies, anticolonial strategies, the struggle for self-determination and self-representation? Before this meeting we were uncritically working from a position of power—as non-Native researchers at an academic institution. The materials from these sites, the physical traces of heritage, of ancestors, were readily available for me as an outsider to handle, research,

and pick to be digitized. This follows the long history of archaeology and Indigenous peoples and the question of “who owns the past?” (McNiven and Russell 2005:5). By recognizing and rectifying this, we are able to contribute to the decolonization of the discipline of archaeology and mending of relationships between Indigenous peoples and archaeologists.

One of the main conflicts underlying the disconnection between Indigenous peoples and archaeologists is the perceived inability to reconcile Indigenous knowledge systems and traditions with Western ideas of science (Atalay 2012:56-59; McNiven 2016:29). Past archaeologists viewed the perceived dichotomies of “subjectivity versus objectivity, spiritualism versus secularism, and tangible versus intangible” as irreconcilable with standard archaeological practice (McNiven 2016:29). In more recent years, however, archaeologists have begun to assert that this dichotomous view has ostracized Indigenous epistemologies when, in fact, those epistemologies and objective science have significant overlap (McNiven 2016:29). Researchers have begun to engage with multivocality and develop ways in which multiple voices and Indigenous epistemologies can be included in archaeological practice as a way to bridge this gap (Atalay 2008; Hodder 2008).

The concept of multivocality has been employed in several different contexts in diverse ways. In general, it denotes a plurality of voices or perspectives. The development of this concept coincides with the growth of social movements and increasing social awareness of the experiences of marginalized groups (Fawcett et al. 2008:3). Movements like those for Civil Rights and Women’s Rights advocated for social, political, and economic changes that would provide power to marginalized, and often silenced, groups (Fawcett et al 2008:3). As part of these changes, activists and theorists began developing ways for marginalized voices to be heard. As a tool of this movement, multivocality became an effective weapon against cultural

hegemony because it “undermines the notion of a central perspective or narratively controlling angle of vision” (Slethaug 1999:18).

One of the first explorations of multivocality came from Russian philosopher Mikhail Bakhtin, who theorized how multiple voices could be placed together within one text (Colwell-Chanthaphonh 2012:274). Although Bakhtin’s thoughts on dialogism and multivocality, (originally published in 1929) anticipated the concerns of the Civil Rights and Women’s Rights movements, the political climate in the Soviet Union at that time meant his work did not become widely known in his native country until the 1960’s, and did not become popular in American academic circles until the 1980’s when it was translated into English (Holquist 2003:30-32). Bakhtin’s conception of multivocality rests on the nature of consciousness— he theorized that life itself is dialogic, that “to live means to participate in dialogue: to ask questions, to heed, to respond, to agree, and so forth” and as such the very nature of one’s own consciousness is dialogic (Bakhtin 1984[1929]:293). Therefore, according to Bakhtin, the “single adequate form for verbally expressing authentic human life is the open-ended dialogue” (Bakhtin 1984[1929]:293). Monologism, or the presentation of one voice, “denies the existence outside itself of another consciousness with equal rights and equal responsibilities” (Bakhtin 1984[1929]:293). Monologic approaches (including most archaeological writing) reduce the ability to include other voices and perspectives, pretending to be the “ultimate word” (Bakhtin 1984[1929]:293). In essence, monologic approaches claim authority and fail to represent the reality of dialogic life, resulting in the reduction of perspectives and incomplete representations. Monologue is “finalized and deaf to the other’s response” (Bakhtin 1984[1929]:293) much in the way that Indigenous voices and perspectives have been ignored in the wake of colonialism, reflecting the power imbalance between Western and Indigenous voices.

Some archaeologists (both Native and non-Native) have begun to embrace the concept of multivocality as a way of correcting the absence of Native voices in representations of Native history and culture. Ian Hodder maintains that multivocality can produce interpretations of the past and present that “challenge existing power structures” (2008:197). The oppositional practice of multivocality inserts marginalized voices into narratives that would have otherwise remained rooted in the discourses of the dominant culture. Sonya Atalay advocates for a “comprehensive multivocality” based in participatory research (Atalay 2008:36). The goal of this application of multivocality is to create an archaeology that speaks to a wider array of people and societies, not just those who advocate western concepts of history and knowledge production (Atalay 2008:33-34). A multivocal archaeology acknowledges that western epistemologies are not superior to others, and that ways of knowing are produced, disrupted, and changed through social practices (Atalay 2008:34). Atalay does not aim to replace western ways of knowing, but to create a pluralistic approach that acknowledges the validity of other worldviews (Atalay 2008:33-34). Atalay asserts that conflicting interpretations are not necessarily problematic and ambiguity is “useful for thinking of multivocality in archaeology” (Atalay 2008:35). Engaging the concept of multivocality in a digital resource such as our own contributes to the resolution of two issues in our original project: the unequal power relationships inherent in our lack of collaboration with Onöndowa’ga:’ community members, and the opaque nature of archaeological language. By including community perspectives alongside those of archaeologists, the resource will challenge the assumption that the archaeological perspective is the sole determinant of the interpretation. Additionally, the multivocal writing involved in such an endeavor aims to not only provide alternatives to the specialized technical language of archaeology, but a space of dialogic writing more akin to traditional storytelling among Indigenous communities—writing where a

relationship between the speaker and listener allows unique, subjective interpretations and stories.

Archaeological texts have the power to influence narratives of history, Native identity, and to present and privilege marginalized perspectives. By providing a space in which Indigenous readers can fill in the gaps of interpretation, the digital resource will subvert the power structure that typically presents the archaeologist as the sole producer of interpretation. While the inclusion of multiple voices and perspectives may not eliminate all authority, as the perception of authority is highly subjective and dependent on the individual, multivocality explicitly allows for this subjectivity to be a part of the interpretation. Although this may result in conflicting interpretations of the same data, a multivocal presentation would reduce any hierarchy that automatically would place one interpretation over another. This style of archaeological writing and presentation can allow readers in the community to develop their own understandings and interpretations of archaeological findings informed by their own experiences and points of view. This in turn contributes to the projects of self-determination, self-representation, and healing, and places the contemporary implications of historical narratives firmly in the control of descendant communities.

Media and Websites—Moving Away from a Rigid Database Structure

Creating a multivocal space for the resource contributes a great deal to the creation of stories, but there remains a structural barrier for the reader to place the artifacts in context. The issue of the absence of narratives was primarily a result of how we were presenting the artifacts and data—as a static array of sequentially-viewed objects in a database. It became clear that an alternative digital platform might be more suited to this endeavor. Fortunately, we were able to secure a grant from the Cornell Library Digital Collections program in 2017 and now had the

flexibility to move beyond a rigid database structure. The possibilities inherent in a website, the different pathways, organization, and design, became the ideal platform for the type of project this was shaping up to be. We took cues from archaeologists elsewhere who have begun to investigate websites as a space for archaeological presentations.

The San Pedro Internet Project, led by Chip Colwell-Chanthaphonh, T.J. Ferguson, and Douglas Gann aimed to find a method of presenting archaeological data that was useful to the communities (Colwell-Chanthaphonh et al. 2011). To do so, the researchers explored the capacity of multimedia and websites to convey the multi-faceted interpretations of the past they discovered in the San Pedro Ethnohistory Project. Their goal was to design a website that portrayed the complementary and contesting viewpoints found within the community, engage different perspectives to facilitate a more complete and complex story, and communicate these ideas with a wider audience (2011:243-244). The team intended to use Native designs, as well as infrastructure that would allow dialogue and user collaboration, audio and video contributions, English and Native languages, photography, Indigenous music, and other interactive features (2011:245). Unfortunately, the project did not receive the funding it needed and a website has yet to be produced (2011:245).¹

I also drew inspiration from the Digital Sq'ewlets website, which was produced as a way to bring together archaeological collections from the ancestral Stó:lō-coast Salish site of Qithyil (<http://digitalsqewlets.ca/>). The team behind the website included community members and elders, archaeologists, anthropologists, historians, media specialists, and others who worked together to build a website that would place the stewardship of these artifacts and the knowledge

¹ Colwell-Chanthaphonh et al. received initial funding for the San Pedro Internet Project in 2004 and the article discussed here was published in 2011. The website appears to have remained undeveloped as of June 2018 based on an internet search.

gleaned from them back into the hands of the Sq'ewlets community, particularly the youth (Lyons et al 2016:361). The website states that the project was important to the elders because it presented their view of their own history, instead of the biased perspective typically found in museums of western design (Stó:lō Research and Resource Management Centre/Stó:lō Nation 2016). Chief Andy Phillips is quoted on the website as saying how important it is to have “our traditional teachings, customs, and practices taught within the home, rather than from outside” (Stó:lō Research and Resource Management Centre/Stó:lō Nation 2016). Not only was this website important in providing access to these artifacts, but it contributed to the much larger project of self-representation.

The Digital Sq'ewlets website exhibits ways in which the multimedia capabilities of the Internet have been used to serve the needs of Indigenous communities. As a virtual composition that draws upon design, video, and photography, websites are analogous to the kinds of new media that Michelle Raheja cites as exciting platforms to explore how “sovereignty is a creative act of self-representation” that can potentially “undermine stereotypes of Indigenous peoples” and strengthen the community (2007:1161). Harald Prins contends that the capabilities of the Internet provide the ideal venue for facilitating engagement with heritage and presenting Indigenous communities in ways that align with their own goals and traditions (2002:70). The possibilities of multimedia, the scope of the potential reach of the web, and democratizing effect of the internet provide Indigenous communities with a powerful platform to explore ways of self-representation. As Laurel Dyson and Jim Underwood have stated, the multimedia capabilities of websites are “particularly suited to the needs of peoples whose cultures are rooted in the oral and visual” (2006:73). In this website, the Sq'ewlets community has reshaped and employed media

to suit their needs—in particular, providing a space of self-representation and history based in their own voices.

In her work *Making Representations: Museums in the Post-Colonial Era*, Moira Simpson states that museum exhibits focusing on Indigenous societies have often been criticized for their inability or refusal to show those societies as “dynamic, living cultures,” instead portraying them “as they were seen in the past,” resulting in the message that these cultures have either “vanished,” or that “their lifestyles persist, unaltered, in the manner of their nineteenth century ancestors” (Simpson 2012:35). The ability of websites to counteract this, as seen in the Digital Sq’ewlets project, ties the Townley-Read and White Springs digital project directly to ongoing goals of the Onöndowa’ga:’ community, particularly the mission of the Seneca Art and Culture Center to tell the story of Onöndowa’ga:’ people past and present. The flexibility of the website to produce narratives of cultural continuity and resilience, the ability to include present-day community perspectives, and the privileging of the utility of the website to descendant communities over that of non-Native researchers allows this project to contribute to larger projects of self-representation and asserting ongoing presence.

Additionally, websites allow the presentation of multiple points of view, an ideal platform for our employment of multivocality. Dyson and Underwood assert that the internet’s “lack of any defined hierarchy” allows for the presentation of viewpoints that would be repressed in other forms of media (2006:66). This opens the way for “Indigenous people to have knowledge placed back in their hands, rather than being interpreted through scientists, anthropologists, and others” (Dyson and Underwood 2006:66).

The movement away from a database structure that presents single, static artifacts has allowed this project to more fully engage with the creation of narratives—of the placement of

artifacts back into their spatial, historical, and cultural context, both past and present. Websites, with their malleable structure, provide spaces for feedback and additional perspectives. The potential of websites to be manipulated by users allows us to work towards at least partly resolving all three of the issues brought up in our working group at the 2016 GRASAC gathering. With this new platform in mind we began to rebuild the project, beginning with a workshop with community partners to discuss the possibilities for organization and presentation of the two sites.

Workshop—Consulting Members of the Onöndowa’ga:’ Community

After securing the funds needed to hold a workshop (for travel expenses, refreshments, and honoraria for participants’ time) from the Cornell Institute of Archaeology and Material Studies (CIAMS) and Cornell’s AIISP, we contacted community members who might have interest in the project to assess interest.² The invitations sent out included an introduction to the funding we had secured from the Cornell Library Digital Collections grant and a brief sketch of the project up to that point. We planned to hold two workshops, one at the Seneca-Iroquois National Museum (SINM) and one at Ganondagan, to limit the need for participants to travel. The invitations were positively received, however, limited availability, scheduling issues around summer events, and an approximately 50% RSVP rate for the workshops resulted in our decision to have only one workshop at Ganondagan in August 2017. Workshop attendees included Onöndowa’ga:’ cultural leader Peter Jemison; Chair of the Haudenosaunee Standing Committee

² Invitations were sent to the Seneca Nation of Indians Archaeologist, the acting chair of the Haudenosaunee Standing Committee on Burial Rules and Regulations, a language specialist from the Tonawanda Band of Seneca, a replica material culture specialist, and staff from the Seneca-Iroquois National Museum and Seneca Art and Culture Center.

on Burial Rules and Regulations Christine Abrams; Seneca-Iroquois National Museum Director David George-Shongo; and historian and replica material culture manufacturer Mike Galban.

The relationships established prior to this workshop were essential to its occurrence. Jordan, who was known to the community and had established relationships through previous collaborative projects, suggested (based on the results of previous student projects) that the invitations should originate from him, as an invitation from someone unknown (me, at that time) might go unanswered. His prediction served as a reminder of the importance of sincere and longstanding relationships to collaborative archaeological work.

Methods of Presentation

Prior to the workshop we began exploring the different ways we might present and organize the artifacts, paying closer attention to the stories they might tell and to items we had not adequately considered previously, like the faunal and botanical remains. I prepared a document, distributed to workshop participants along with the invitations and again with the agenda, describing potential units of organization and their individual benefits. The nine different units I came up with were meant to be a starting point from which we could build the



Figure 2. Long tubular shell bead from Townley-Read (Catalog number 2440.TR723.1), an example of a single-artifact style presentation. Photographed by the author for use in workshop handout

organization of the website—they were not, in that sense, a list from which our community partners had to choose from, but an array of possibilities, open for discussion and modification.

We began discussing the merits of a single-artifact style presentation, as we had planned originally. This method of presentation would showcase important and unique items within the collection, like a long tubular shell bead or an effigy pipe fragment (Figure 2). However, not all items would be suited for this type of presentation, and this mode of presentation inherently risks alienating items from their context and potential for narratives. As a result, we moved on to ways in which we could group artifacts—by artifact type, provenience, function, and activity.

Organizing by artifacts of a certain type, like all brass bangle cones or all white clay smoking pipes, would allow the digitization of groups of artifacts with little stylistic variation between individual pieces, and show the frequency and volume of these pieces at the site (Figure 3). Grouping by provenience would highlight all materials from a certain portion of the site, feature, or unit/level, allowing the viewer to see clusters of different artifacts in parts of the site. Organizing by function (Figure 4) would group all artifacts used for certain tasks, like



Figure 3. Brass projectile points from White Springs, photograph used in workshop handout to illustrate grouping artifacts by type. Photographed by author for use in workshop handout

cutting, regardless of material, based on the classification used by Rogers (1990). This method of organization could be particularly fruitful because it allows for the presentation of artifacts and functions that present narratives of cross-cultural interaction and trade, continuity of activities and daily life, and ingenuity in using foreign materials to serve new functions. Lastly, grouping by activity differs from the grouping of function in that multiple tasks could be part of one activity, i.e. hunting, fishing, or harvesting (Figure 5). This kind of grouping would group items that would not necessarily make sense to delineate in terms of function. For instance, items used for consuming, storing, and cooking, which may be items like cutlery, plates, bowls, jars, and kettles, could be grouped into broader activity of “food preparation and consumption.”



Figure 4. European and Native-made smoking pipes from White Springs, used in workshop handout to illustrate grouping artifacts by functions, such as “smoking.” Photographed by author for use in workshop handout.

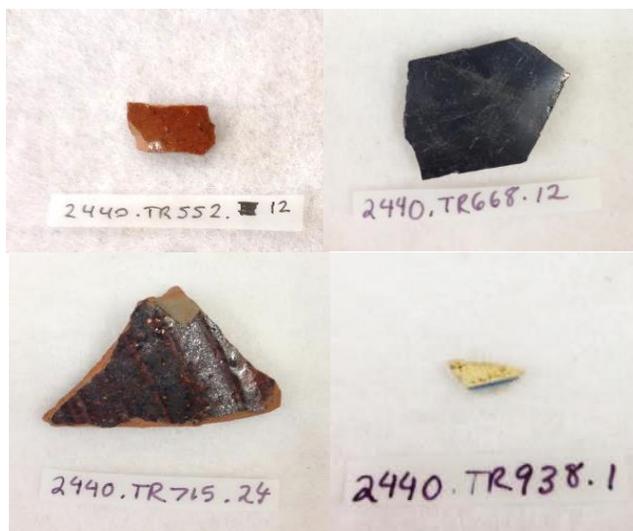


Figure 5. Different forms of ceramics recovered from Townley-Read, grouped to illustrate the activity of “food preparation and consumption.” Photographed by author for use in workshop handout.



Figure 6. Sample of nails from Townley-Read and an elm, whose planks, logs, or bark could have been used in conjunction with iron nails in the construction of the short-longhouse structure at Townley-Read. Photograph used in workshop handout to illustrate grouping artifacts with associated materials. Nails photographed by author, image of elm by Matt Lavin, downloaded from Flickr.com.



Figure 7. Assortment of red stone artifacts from Townley-Read and White Springs, used in workshop handout to illustrate a possible manufacturing sequence. Images provided by Kurt Jordan.

We then considered other ways we could make connections between artifacts—through connecting them with other objects they would typically be associated with, or through recreating manufacturing sequences. Identifying connections between artifacts and associated materials would present a specific artifact, or a type of artifact, together with any other items that would have been used on or alongside (Figure 6). This could include items that would not have been preserved in the archaeological record, or artifacts from the assemblage that are related to the same activity. For instance, an awl could be showcased with the materials or other archaeological items it could have been used to perforate, lithic tools and debitage could be presented with a hammer stone or other flaking tools, or glass beads could be presented with the materials used to string or attach them as items of adornment. Additionally, we could also make connections between artifacts spread across the sites to recreate manufacturing sequences (Figure 7). For example, we have recovered raw red stone materials, in-process bead blanks, failed perforations, and finished beads. By presenting these stages of the manufacturing sequence together, we recreate the process for the viewer.

The last two units we presented consisted of materials we had previously overlooked when selecting items to be included in the GRASAC database. We realized we had the opportunity, and perhaps need, to include documents from the site, including aerial photos, site maps, plans and profiles of features and units, and field photographs of features and post molds (Figure 8). These units would provide context to the viewer, both in terms of geographic location, layout, and the surrounding environment. Additionally, photos of the excavations and features present the viewer with information that isn't necessarily recorded in artifact collections. Lastly, we considered the inclusion of plant and animal remains (Figure 9). These items could be included in the other units of presentation, associated with their provenience, activity, and other



Figure 8. Digitized color slide of Feature 5 at the Townley-Read site, an example of an excavation photograph. Original photo taken by Kurt Jordan.



Figure 9. Jaw and teeth from a black bear, *Ursus americanus*, recovered from Townley-Read. Example used in workshop handout to illustrate possible method of presentation for animal remains. Jaw and teeth photographed by author for use in workshop handout, black bear photographed by user Valerie, downloaded from Flickr.com.

aspects of daily life. This presentation could include photographs of the archaeological remains, as well as photographs of living plants and animals to provide a present-day connection.

Our discussions at the workshop quickly led to the realization that this digital project required a different structure than what was allowed within the GRASAC database. The website we were brainstorming about required a nested structure more conducive to presenting the spatial and relational information that set the archaeological objects apart from ethnographic items. The workshop participants concluded that ideally there should be a way to include aspects of *all* of these units in the digital project as they each enabled different connections and narratives. Above all, however, the grouping based on provenience became the main organizing factor. The participants advocated for a grouping of artifacts from specific areas of the site in order to create snapshots of Onöndowa'ga:' life at those places. Each area, referred to by Jordan's projects as a *locus* (*loci* when plural), is defined based on the interpretation of features as specific structures or areas of use (such as a house or trash midden). A selection of artifacts and plant and animal remains from loci such as a house lot, a midden, or a palisade area would place said items immediately in their spatial and cultural context, providing the background information necessary to create narratives. Within these areas a sample of all types of artifacts and all represented plant and animal species would be selected, allowing the production of narratives specific to that locus while also solving our concern of selecting items to be digitized based solely on the subjective point of view of the archaeologist. Within these loci the other types of units could be arranged using metadata tags and other organizing facets of the website platform.

This organization also solves a significant concern of the project since the beginning: redundancy. In the original conception of the project our concern with the proportional system of selection lay in the possibility that, if the selection was to be representative, too many objects of

a single type would be included. In other words, we were worried about the selection of too many “boring” artifacts—artifacts that wouldn’t catch the eye of the viewer and might ultimately deter them from looking any further. This concern seems to echo that of GRASAC and their Knowledge Sharing Database, where recently a flood of individual “Arrowhead” entries at the start of alphabetized lists has caused some complaint (Heidi Bohaker, personal communication 2018). Our solution, to select one representative artifact of each material and type from each locus, limits the number of redundant entries while still providing a representative array of artifacts.

Sensitive Materials and Additional Inclusions

In addition to discussing these methods of presentation, we discussed how to approach sensitive materials found at the sites—what might not be appropriate to include for public display. In keeping with earlier collaboration for research methods and protocols during excavation, none of the materials in the collection from either site came from burials, but there were still some pieces that needed additional consideration. We are particularly concerned with the presentation of wampum, short tubular beads made from marine shell and made into belts and other ceremonial items. The participants concluded that it was fine to publish photographs of the wampum recovered at the two sites since it had been buried and was culturally, for lack of a better word, “dead.” While we plan to move forward with this in mind, we anticipate discussing this further as the website moves towards completion, and will pull any items deemed sensitive by community partners before the website is released publicly. In order to still provide a representative sample of items from the loci, our preliminary plan in the event that sensitive materials do need to be removed, if it is appropriate, is to provide a placeholder image that explains why the item is not being shown. Such an image would allow the presence of the item

to be known while respecting community wishes and teaching others about appropriate cultural protocol surrounding certain items.³

Also discussed at the workshop were ideas on whether or not the resource should include, in a similar fashion to sensitive items, items that would be expected to have been used at the sites but have not preserved in the archaeological record. These items would include basketry, cloth, hides/furs, and other items less likely to preserve in the ground but nonetheless important parts of daily life at the site. In order to provide a holistic picture, the group was amenable to the idea of representing such things with replica material culture, something we may or may not be able to incorporate into the current digital resource due to time and funding constraints. These inclusions would, of course, also be accompanied by an explanation of the origin of the material and why it is not represented in the archaeological record.

Lastly, as expected, our partners expressed a desire for Onöndowa'ga:' language to be a part of the resource. Onöndowa'ga:' terms for objects, plants, animals, and places should be present throughout the resource so that it contributes to language learning and revitalization efforts within the community. We decided that the Onöndowa'ga:' vocabulary, accompanied with pronunciation audio, should be placed prior to any English words or explanations. The privileging of the Onöndowa'ga:' language over English contributes to the efforts of employing multivocality in the resource by asserting the importance and persistence of Onöndowa'ga:' language and knowledge rather than its presence as a novelty or secondary addition.

³ The "Caring for Ancestors" section in the "Our Belongings" page of the Digital Sq'éwlets website does this particularly effectively. A placeholder image is used for the entry of "Human Remains," while the text explains the sacred nature of the remains and how the community regards them.

Current State of the Project

Website Planning

Armed with input from our community partners, we began work with the Cornell Library Digital Consulting and Production Services (DCAPS) on a project funded through the Cornell Digital Collections in Arts and Sciences Grant Program. The grant included funding for the work of professionals in digitization, metadata, and web design and development. Our team consisted of Jordan and myself, digitization specialists Rhea Garen and Simon Ingall, metadata specialist Jasmine Burns, web design and development specialist Melissa Wallace, and Project Coordinator Dianne Dietrich. Before work on the website could begin, we first had to determine the best configuration of the website to fit with the desired organization of the workshop participants.

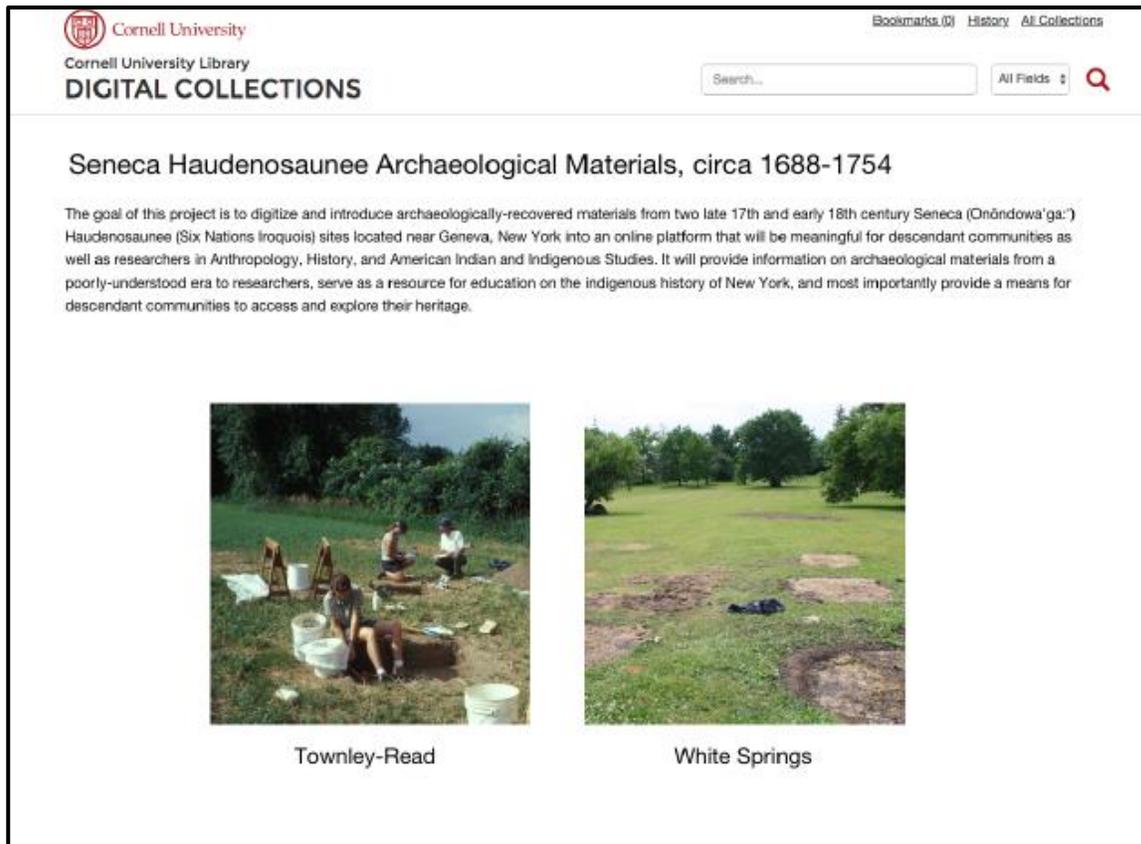


Figure 10. Mock-up of the website splash page, showing both sites. Image provided by Melissa Wallace.

We decided a series of nested platforms, or levels, would best convey the desired organization. The visitor would first be greeted by a splash page introducing the sites and the collections, then given the option to move on to either Townley-Read or White Springs (Figure 10). The next page would then give information on the site and provide options to investigate further—to choose one of the loci within the site, and view the related information and artifacts (Figure 11). The loci chosen for the site were picked based on the completeness of their analysis and the ability of the area or feature to represent a certain aspect of Onöndowa'ga:' daily life at the sites. For Townley-Read this includes House 1, a short longhouse residence; a large outdoor firepit, interpreted as a locus of bone grease production and women's control (Jordan 2014); a midden, or trash deposit; and general site finds, encompassing any interesting or unique items found at the site outside the featured loci. For White Springs, the loci chosen include House 3, House 4, the possible palisade area, a large outdoor firepit (Feature 6), and general site finds. Because the analysis of White Springs is ongoing the amount of interpretation for certain loci is not as extensive as those at Townley-Read, but will be updated as analyses are completed.

Once the visitor chose a locus to view, they would then be taken to a page with five preliminary options: maps, diagrams, and photographs (all together); artifacts; animal remains; plant remains; and “view all” (Figure 12). I selected the artifacts, animal remains, and plant remains for the resource by tabulating everything recovered from each loci, then choosing a representative item for every type of artifact, plant, and animal represented in the loci assemblages. For the general site finds list, any object found at the site but not represented in the lists from the loci was selected (see Appendix for current list of entries to be included in the digital collection, subject to change as the cataloging of the White Springs assemblage continues). After selecting a category, the user would then be taken to a screen with thumbnails

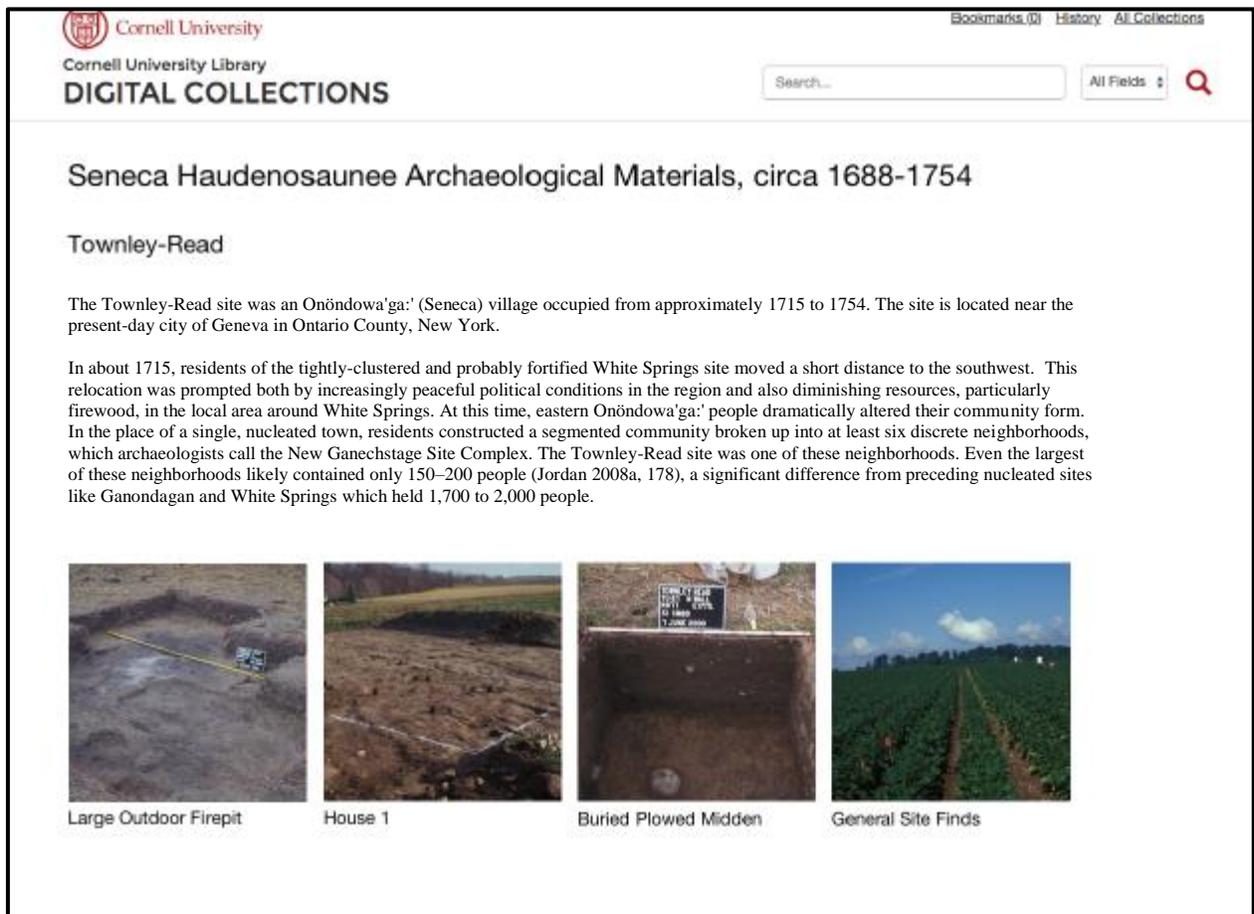


Figure 11. Website mock-up of a site-level page, displaying information on Townley-Read (the full text to be displayed on this page is currently being written) and the four loci. Image provided by Melissa Wallace.

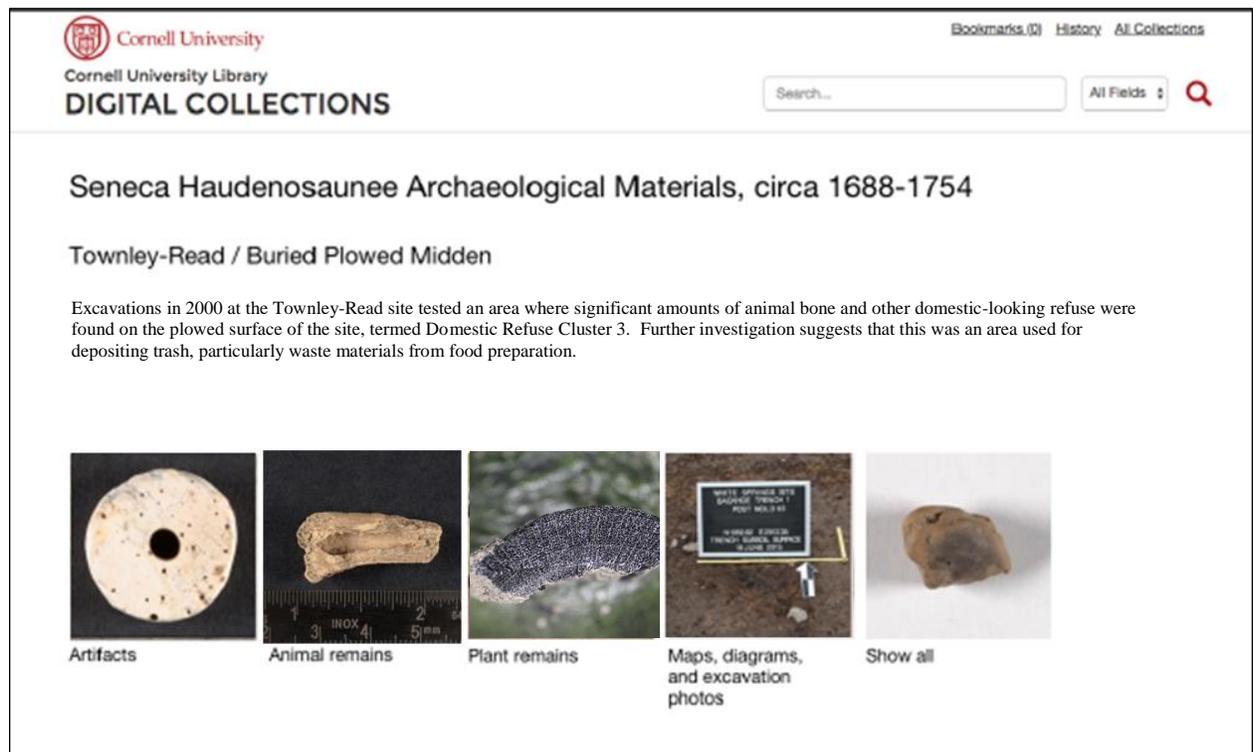


Figure 12. Website mock-up of the locus-level page for the midden at Townley-Read, displaying information on the locus (the full text to be displayed on this page is currently being written) and the different categories of objects. Image provided by Melissa Wallace.

of the entries and a panel allowing them to sort and filter as desired (Figure 13). Clicking through these images would provide the visitor with multiple high-quality images of each entry along with cataloging information, descriptions, Onöndowa'ga:' language terms, and community perspectives (Figure 14). Multivocal descriptions, consisting of separate entries for archaeological and community knowledge (in English), will be facilitated through future workshops with the community to discuss the items as well as a feedback or comment option for visitors to the website. The visitor would then be able to sort based on the units discussed previously—by function, activity, type, etc. This organization would provide the main structure, but viewing different configurations (say, all entries across both sites, or all items from the house loci across both sites) would be enabled through the sorting panel on the thumbnail screen.

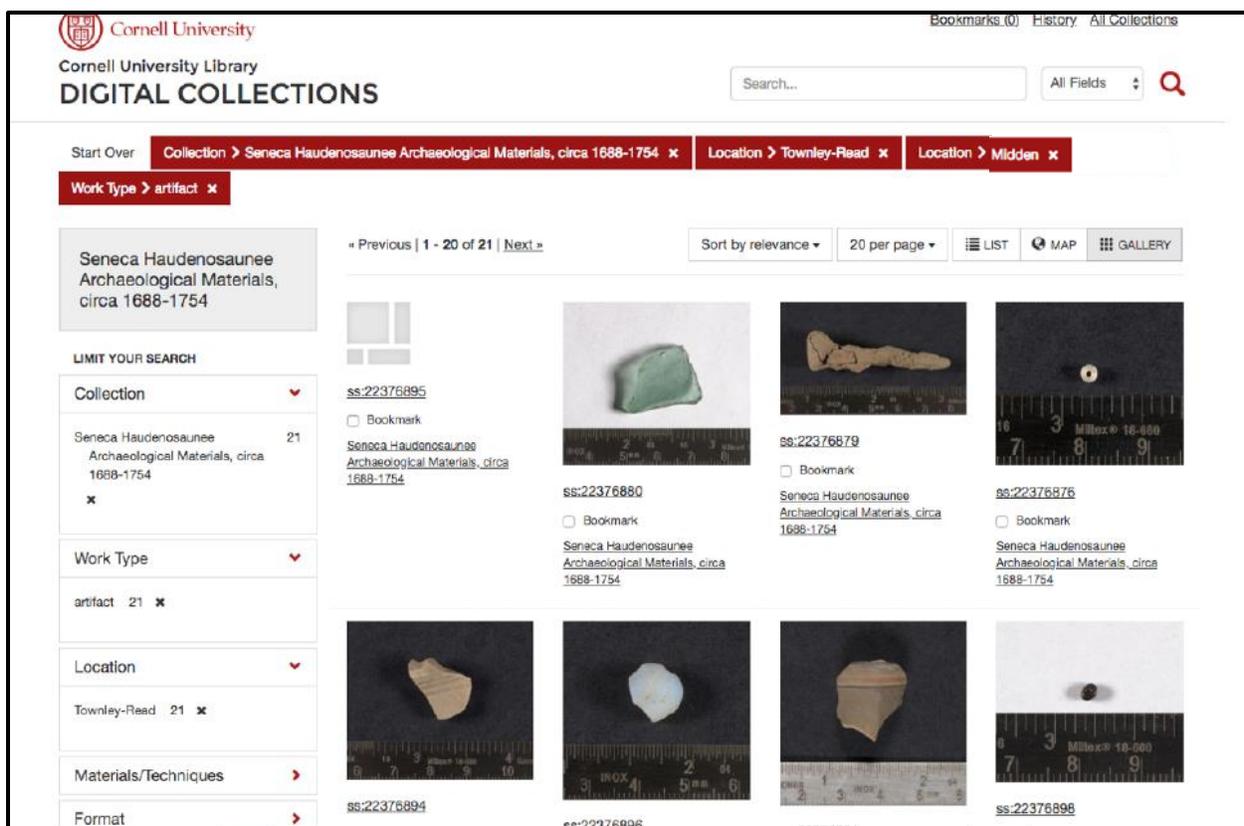


Figure 13. Website mock-up of artifact list from the midden locus at Townley-Read. Descriptive titles will take the place of the record identifiers currently displayed under the images. Image provided by Melissa Wallace.

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= Previous | 11 of 34 | Next =

Bookmark

Gray Fox Canine



Collection: [Seneca Haudenosaunee Archaeological Materials, circa 1688-1754](#)

Description: This image shows a lower left canine of a gray fox. The tooth was reassembled from fragments recovered during excavation.

Location: [Midden](#)

Site: [Townley-Read](#)

Materials/Techniques: [tooth](#)
[gray fox](#)
[lower canine](#)

Species: [Urocyon cinereoargenteus](#)

Identifier: 2440.TR950.8|2440.TR0950.008

Figure 14. Website mock-up of an object detail page for a gray fox tooth from the midden at Townley-Read. The metadata to be displayed on these pages (title, description, dimensions, materials) are works in progress. Image provided by Melissa Wallace.

The organization, in this way, becomes a sort of “choose your own adventure” in that the user decides what narrative they want to create based on the direction they choose and the sorting method they employ. Visitors to the site will be able to inquire into the kinds of plants found within the houses, discover the kinds of animal remains found within the outdoor firepit and the

associated activities they indicate, and study the different loci of manufacturing and other types of work and compare them across the communities and other parts of the site. Within these narratives the visitor is able to study the artifacts, hear the Onöndowa'ga:' words for them, see photographs of the features within which they were discovered, and read both the archaeological and community knowledge that surrounds them. Although protocols established with community partners during the excavation of the sites (the avoidance of all material associated with burials, and the collaboration on research questions) likely limited possible areas of conflict in interpretation, the multivocal descriptions will allow multiple points of view, potentially discordant, to be presented to the viewer for their own interpretation. This organization works toward the ideas brought forth by our working group at the 2016 GRASAC gathering—that the product needed to be dynamic, manipulable, and dialogic in order to produce meaningful narratives for the community.

Ongoing Work and Future Considerations

At the current moment, the process of photographing the items for the website is nearing completion and work on designing the website structure itself is beginning. Getting to this point required months of populating the incomplete White Springs catalog, carried out by myself and fellow Cornell graduate student Liam Murphy, compiling inventories of the loci chosen for the website, and selecting and pulling artifacts for the digitization process. I chose representative artifacts within each locus that were the most complete and recognizable, keeping in mind the potentially limited archaeological knowledge base of those who will be visiting the website. Additional ways to present fragmentary or unrecognizable artifacts, like the highly degraded iron musket trigger finial in the collection at White Springs (catalog number WH128.1), remain to be considered (Figure 15).



Figure 15. This highly corroded iron gun finial (1952.WH128.1) from the White Springs site demonstrates the potential need for more illustrative forms of interpretation. Photographed by Rhea Garen.

A solution to this problem may lie in how faunal and botanical remains will be presented on the website. Plant and animal entries will be accompanied by images of living examples of the plant or animal species, providing a better context for the viewer. Botanical information recovered from charcoal will be accompanied by cross-section images, provided by archaeologists Peregrine Gerard-Little and Natalie Mueller. As faunal and botanical remains require more specialized knowledge for full analysis, we expect more entries will be included on the website as these analyses near completion. In addition to the botanical analyses of Gerard-Little and Mueller, American Museum of Natural History zooarchaeologist Adam Watson is currently conducting analyses of the faunal remains from White Springs.

Throughout this process, Jordan and I have closely considered the language used for the website. Use of colloquial terms like “plants” and “animals” on the finished website instead of the cataloguing terms of “faunal” and “botanical” may seem like a minor change, but is

important in addressing the opacity of archaeological technical language. In some instances, such as using “house” instead of “structure,” or “town” instead of “site,” addressing the connotations of common archaeological terms— terms that may present living areas as sterile or large communities as trivial— becomes an important point of consideration. Special attention to language will play a prominent role in my next assignment for this project— converting the fragmentary cataloguing notes for each entry into publishable descriptions for the archaeological commentary on the website.

Consideration of the English language terms used in the resource is not the only language-related issue to have come up at this stage in the process. The use of Onöndowa’ga:’ language terms is not as straightforward as consulting a Seneca-English dictionary. Jordan and I attended another GRASAC gathering in May 2018 at the University of Toronto, where we had the opportunity to meet with Seneca-Iroquois National Museum Director and previous workshop participant David George-Shongo. The purpose of this gathering was to brainstorm goals and plan for an upcoming grant application to expand GRASAC’s work with the Knowledge Sharing Database, and we found that many of the discussions were pertinent to our digital project. George-Shongo noted that the use of language terms to describe archaeological materials would require more consideration than choosing the correct word— there would be different terminology used for objects that had been buried, and more than just a simple noun to fully describe an object. For instance, a glass bead might require a word that denotes the bead, the bead shape, color, and that it had been buried instead of simply the Onöndowa’ga:’ word for “bead.” In addition, different words may be used by different members of the community based on age and gender, and a complete resource would need to include all these possibilities, including different pronunciations. Based on George-Shongo’s suggestions, we plan to do our

best to start the translations into Onöndowa'ga:' using standard dictionaries and then hold more workshops, potentially at the Seneca-Iroquois National Museum. These workshops would bring together community members to determine how to discuss ancestral materials that had been in the ground, which, according to David George-Shongo, is relatively uncharted territory for the Onöndowa'ga:' language.

Conclusions— Moving Forward

This thesis has documented how the process of creating this digital resource has not been straightforward. Our original plan for the project did not consider the issue of the authority our assumptions created, nor the necessity of involving the descendant community at a very early stage in order to create a useful resource. Our discussions with Native and non-Native scholars involved with GRASAC pointed us toward more community involvement and a stronger focus on creating a resource that facilitated the production of meaningful narratives. The group recommended that we relinquish authority in the organization of the objects and explore digital platforms that can be manipulated by the user. The September 2016 GRASAC meeting led me to explicitly consider the potential of this project in the ongoing dialogue of decolonization, self-representation, and other prominent issues in Indigenous Studies. The original conception of this project reflected, albeit unintentionally, the ongoing disconnection between archaeologists and Indigenous peoples and an inattention to the needs of the community. The use of multivocality by other scholars attempting to reconcile this division seemed particularly relevant to this project, as it challenges the authority of a single (archaeological) perspective just as the GRASAC group recommended. By incorporating multivocality into this resource, we will be able to present multiple points of view and enable more than one story to come from the sites.

The website platform we've chosen to house the digital collection allows multiple points of view particularly well, but also takes part in discussions about self-representation and the use of the web as a democratic medium for marginalized Indigenous communities. Other communities have chosen to explore this medium and the way it can counteract stereotypes and narratives of decline, such as the Sq'ewlets people of British Columbia. That community's Digital Sq'ewlets website has proved an invaluable resource for this project.

The Onöndowa'ga:' community input we sought after the recommendations of the GRASAC group has directed the restructuring and ongoing process of the project to date. Participants in our workshop at Ganondagan were most interested in the spatial distribution of artifacts in different areas of the sites and what stories they can tell. It is this very quality, the spatial information, of archaeological items that sets them apart from the ethnographic objects in the GRASAC database and required us to seek out a different structure. As a result, the website we are currently in the process of creating is organized by loci such as houses and fire pits, with representative samples of each kind of artifact, plant, and animal remain found in that area. This organization provides the viewer with snapshots of the material culture of daily life in each specific area and reduces the amount of redundancy among the digitization entries. Additionally, the viewer will be able to organize the entries based on the different units of presentation we discussed at the workshop, giving the viewer the power to manipulate the presentation and develop their own interpretation and narratives.

While the direction of this project may serve as an example, the conclusions of our workshop and decisions in producing the resource should not serve as an exact template for researchers interested in similar projects. Each community of descendants has different relationships with researchers and archaeologists, different histories, and different needs. To

assume all digital collections should be presented in the way we have chosen would ignore the diversity of Indigenous peoples and perpetuate the divide between descendant communities and archaeologists. There are, however, key takeaways one may receive from this project. First, question all assumptions of authority—in the selection of the objects, in the way they are going to be presented, and in the voicing of text presented alongside. Second, it is of the utmost importance to remain open to reflection and receptive to criticism. Third, and perhaps most importantly, the only way to produce a meaningful and useful resource is through active collaboration, no matter the experience, knowledge, and good intentions of the researcher.

The current state of this project highlights the need for continued involvement of the descendant community throughout the entire process if any resource is to be truly useful. Do the various entries provide enough context and description to facilitate the creation of narratives for the non-archaeologist? Is the language of the archaeological descriptions accurate and appropriate? Does the inclusion of community perspectives alongside archaeological commentary truly provide a multivocal and dialogic space? What community knowledge should, and should not, be made available to outsiders? What are we missing, as a non-Indigenous team of archaeologists and library professionals, in the same way we did not understand the nuances of the Onöndowa'ga:' language?

The idea of community collaboration is not without its own issues, however, and researchers should pay close attention to how their project fits into these discourses. In planning for future community collaboration with the Knowledge Sharing Database at the May 2018 GRASAC gathering, a common theme emerged—reciprocity. Garnering input from the community on how to contribute to the Knowledge Sharing Database, even when carried out by Indigenous community members affiliated with GRASAC, risks being extractive. Using

community input to create an excellent resource, even if done with community interests in mind, remains extractive if there was not a reciprocal sharing of knowledge. This reflects the aforementioned critique of Vine Deloria Jr. that the products of academia (i.e. books, articles, digital collections such as this one) are too often irrelevant to the needs of the people (Deloria 1969: 93). This is the result of an extractive mindset within the discipline, where knowledge, ideas, and archaeological remains are collected in the name of preservation or science, with little thought to the actual needs of the community (McNiven and Russell 2005:2-10) As uncomfortable as it may be, this highlights the need to even further reflect on our decisions within this project—to hold workshops, to ask for community commentary to make it multivocal— and determine if our project remains extractive, even if well-meaning. In the grand scheme of things, perhaps a bit of discomfort on the part of non-Native archaeologists working to develop resources for descendant communities is perfectly appropriate.

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APPENDIX

Townley-Read	
Locus: Midden	
Animal Remains	
<i>Context number</i>	<i>Title</i>
2440.TR804.2	Beaver (<i>Castor canadensis</i>) incisor
2440.TR900.15	Fish scale
2440.TR907.6	Pig (<i>Sus scrofa</i>) molar
2440.TR908.6	Dog (<i>Canis familiaris</i>) incisor
2440.TR910.3	Black bear (<i>Ursus americanus</i>) cranial bone
2440.TR914.23	Tundra swan (<i>Cygnus columbianus</i>) humerus
2440.TR923.6	Cattle (<i>Bos taurus</i>) ulna
2440.TR931.11	Mink-sized mammal (<i>Mustela sp.</i>) premolar
2440.TR933.6	White-tailed deer (<i>Odocoileus virginianus</i>) femur
2440.TR939.13	Pig (<i>Sus scrofa</i>) metapodial
2440.TR939.31	Bird bone
2440.TR947.16	Non-mammalian bone
2440.TR950.8	Gray fox (<i>Urocyon cinereoargenteus</i>) canine
Artifacts	
2440.TR813.1	White drawn glass bead
2440.TR889.2	Handwrought iron nail
2440.TR889.3	Emerald green bottle glass
2440.TR896.3	Brass/copper alloy scrap
2440.TR897.2	Native-made ceramic pipe bowl
2440.TR900.18	Glass pendant manufacturing debris
2440.TR902.18	Lead manufacturing debris
2440.TR913.3	Native-made ceramic pipe bowl
2440.TR914.3	Brass/copper alloy object
2440.TR914.36	Native-made ceramic pipe bowl
2440.TR915.1	Biconcave red pipestone bead
2440.TR915.27	Pale blue wire-wound glass bead
2440.TR916.21	Black drawn glass bead
2440.TR916.22	Red drawn glass bead
2440.TR921.2	Native-made ceramic pipe bowl
2440.TR931.16	Clear flat glass
2440.TR931.18	Slag
2440.TR938.1	Buff paste earthenware ceramic
2440.TR939.2	White clay ceramic pipe bowl

2440.TR940.19	Chipped lithic core/hammerstone
2440.TR953.2	Red paste earthenware ceramic

Townley-Read	
Locus: House 1	
Animal Remains	
<i>Context number</i>	<i>Title</i>
2440.TR527.8	White-tailed deer (<i>Odocoileus virginianus</i>) tooth
2440.TR529.6	Porcupine (<i>Erethizon dorsatum</i>) humerus
2440.TR529.32	Non-mammalian bone
2440.TR529.33	Southern red-backed vole (<i>Clethrionomys gapperi</i>) molar
2440.TR554.10	Black bear (<i>Ursus americanus</i>) molar
2440.TR565.7	White-tailed deer (<i>Odocoileus virginianus</i>) vertebra
2440.TR566.20	Meadow vole (<i>Microtus pennsylvanicus</i>) ulna
2440.TR624.7	Muskrat (<i>Ondatra zibethicus</i>) incisor
2440.TR642.12	Fish scale
2440.TR649.15	Fish spinous process
2440.TR649.18	Raccoon (<i>Procyon lotor</i>) maxilla
2440.TR654.8	Deer mice (<i>Peromyscus sp.</i>) tooth
Artifacts	
2440.TR526.10	Native-made ceramic pipe stem
2440.TR527.12	Black drawn glass bead
2440.TR529.14	Brass/copper alloy scrap spiral
2440.TR529.15	White wampum
2440.TR529.17	White drawn glass bead
2440.TR529.18	Navy drawn glass bead
2440.TR542.5	Handwrought iron nail
2440.TR545.5	Flat mirror glass
2440.TR547.6	Chipped lithic flake fragment
2440.TR561.7	Red slate manufacturing debris
2440.TR564.9	White clay ceramic pipe stem
2440.TR566.10	Green drawn glass bead
2440.TR569.8	Triangular brass/copper alloy projectile point
2440.TR574.2	Olive bottle glass
2440.TR576.3	glass pendant manufacturing debris
2440.TR576.4	Brass/copper alloy bangle cone
2440.TR666.1	White drawn glass bead
2440.TR666.2	Pale blue wire-wound glass bead
Plant Remains	

2440.TR529.35	Sumac (<i>Rhus sp.</i>) seed
2440.TR529.38	Green bean (<i>Phaseolus vulgaris</i>) seed
2440.TR529.43	White ash (<i>Fraxinus americana</i>) charcoal
2440.TR529.45	Ash (<i>Fraxinus sp.</i>) charcoal
2440.TR529.46	Tulip poplar (<i>Liriodendron tulipifera</i>) charcoal
2440.TR529.47	Hophornbeam (<i>Ostrya virginiana</i>) charcoal
2440.TR529.49	Red oak (<i>Quercus rubra</i>) charcoal
2440.TR529.50	Elm (<i>Ulmaceae</i>) charcoal
2440.TR624.5	Ash/cinder
2440.TR624.12	Bottle gourd (<i>Lagenaria sp.</i>) rind
2440.TR624.13	Hickory (<i>Carya sp.</i>) nut
2440.TR624.14	Maple (<i>Acer sp.</i>) charcoal
2440.TR624.16	Sycamore charcoal (<i>Platanus occidentalis</i>)
2440.TR624.17	Cherry tree (<i>Prunus serotina</i>) charcoal
2440.TR624.19	Grape (<i>Vitis sp.</i>) charcoal
2440.TR642.8	Raspberry (<i>Rubus sp.</i>) seed
2440.TR642.10	Butternut (<i>Juglans cinerea</i>) nutshell
2440.TR642.20	Birch (<i>Betula sp.</i>) charcoal
2440.TR642.21	American chestnut (<i>Castanea dentata</i>) charcoal
2440.TR642.22	American beech (<i>Fagus grandifolia</i>) charcoal
2440.TR642.26	Slippery elm (<i>Ulmus rubra</i>) charcoal
2440.TR654.14	Corn (<i>Zea mays</i>) kernel
2440.TR654.17	Hickory (<i>Carya sp.</i>) charcoal
2440.TR654.19	Hackberry (<i>Celtis sp.</i>) charcoal
2440.TR654.20	Black ash (<i>Fraxinus nigra</i>) charcoal
2440.TR654.21	Walnut (<i>Juglans sp.</i>) charcoal
2440.TR654.23	Pine (<i>Pinus sp.</i>) charcoal

Townley-Read	
Locus: Fire Pit	
Animal Remains	
<i>Context number</i>	<i>Title</i>
2440.TR404.4	White-tailed deer (<i>Odocoileus virginianus</i>) mandible
2440.TR480.10	Amphibian long bone
2440.TR480.20	Marten (<i>Martes americana</i>) long bone
2440.TR486.11	Gray fox (<i>Urocyon cinereoargenteus</i>) maxilla
2440.TR487.37	Ruffed grouse (<i>Bonasa umbellus</i>) humerus
2440.TR487.41	Meadow vole (<i>Microtus pennsylvanicus</i>) molar
2440.TR488.8	Fish scale

2440.TR488.19	Raccoon (<i>Procyon lotor</i>) humerus
2440.TR488.24	Cattle (<i>Bos taurus</i>) phalanx
2440.TR490.3	Hairy-tailed mole (<i>Parascalops breweri</i>) humerus
2440.TR510.5	Fisher (<i>Martes pennanti</i>) metacarpal
2440.TR519.41	Beaver (<i>Castor canadensis</i>) incisor
2440.TR519.44	Fish vertebra
2440.TR521.14	Black bear (<i>Ursus americanus</i>) mandible
2440.TR521.57	Passenger pigeon (<i>Ectopistes migratorius</i>) tarso-metatarsus
2440.TR522.29	Dog (<i>Canis familiaris</i>) phalanx
2440.TR532.3	Gray wolf (<i>Canis lupus</i>) sesamoid
2440.TR538.10	Pig (<i>Sus scrofa</i>) molar
Artifacts	
2440.TR477.1	White drawn glass bead
2440.TR486.21	Tubular shell bead
2440.TR487.27	White drawn glass bead
2440.TR515.7	Amber wire-wound glass bead
2440.TR518.33	Black drawn glass bead with white stripes
2440.TR518.34	Red drawn glass bead with white stripes and green core
2440.TR518.36	Brass/copper alloy mouth harp
2440.TR521.33	Brass/copper alloy scrap
2440.TR522.39	Tubular shell bead
2440.TR525.1	Chipped lithic debris
2440.TR538.11	Brass/copper alloy ring face
2440.TR571.12	Diamond-shaped brass/copper alloy projectile point
2440.TR571.16	Aqua flat glass
2440.TR572.9	Triangular brass/copper alloy projectile point
2440.TR589.23	White clay ceramic pipe bowl
2440.TR589.24	Olive bottle glass
2440.TR589.36	lead shot
2440.TR592.14	Native-made ceramic pipe stem
2440.TR593.8	Handwrought iron nail
Plant Remains	
2440.TR490.11	Fungus
2440.TR490.21	Maple (<i>Acer sp.</i>) charcoal
2440.TR490.22	Birch (<i>Betula sp.</i>) charcoal
2440.TR490.23	Beech (<i>Fagus grandifolia</i>) charcoal
2440.TR490.24	Sycamore (<i>Platanus occidentalis</i>) charcoal
2440.TR523.8	Grass (<i>Poaceae</i>) seed
2440.TR523.17	Sumac (<i>Rhus sp.</i>) seed

2440.TR523.18	Bottle gourd (<i>Lagenaria sp.</i>) rind
2440.TR523.19	Raspberry (<i>Rubus sp.</i>) seed
2440.TR523.20	Cherry (<i>Prunus sp.</i>) seed
2440.TR523.21	Gourd (<i>Cucurbita sp.</i>) seed
2440.TR523.23	Corn (<i>Zea mays</i>) cupule charcoal
2440.TR523.26	Hackberry (<i>Celtis sp.</i>) charcoal
2440.TR523.27	Persimmon (<i>Diospyros virginiana</i>) charcoal
2440.TR523.28	Black ash (<i>Fraxinus nigra</i>) charcoal
2440.TR523.29	Ash (<i>Fraxinus sp.</i>) charcoal
2440.TR523.30	Tulip poplar (<i>Liriodendron tulipifera</i>) charcoal
2440.TR523.31	Hophornbeam (<i>Ostrya virginiana</i>) charcoal
2440.TR523.33	Cherry tree (<i>Prunus sp.</i>) charcoal
2440.TR523.34	Red oak (<i>Quercus rubra</i>) charcoal
2440.TR525.17	Hickory (<i>Carya sp.</i>) nutshell
2440.TR525.18	Corn (<i>Zea mays</i>) kernel
2440.TR525.23	American hornbeam (<i>Carpinus caroliniana</i>) charcoal
2440.TR525.24	White ash (<i>Fraxinus americana</i>) charcoal
2440.TR525.27	Grape (<i>Vitis sp.</i>) charcoal

Townley-Read	
Locus: General Site Finds	
Animal Remains	
<i>Context number</i>	<i>Title</i>
2440.TR880.5	Red fox (<i>Vulpes vulpes</i>) tooth
2440.TR632.10	Eastern cottontail (<i>Sylvilagus floridanus</i>) incisor
Artifacts	
2440.TR428.3	Iron gun barrel scraper
2440.TR551.6	Pale blue wire-wound glass bead
2440.TR602.1	Tubular brass/copper alloy bead
2440.TR639.1	Purple wampum
2440.TR663.9	Red pipestone manufacturing debris
2440.TR668.7	White clay ceramic pipe bowl
2440.TR712.1	White clay ceramic pipe bowl
2440.TR713.1	Native-made ceramic pipe stem
2440.TR715.4	Trapezoidal red slate bead reject
2440.TR715.5	Gunflint
2440.TR715.10	Olive bottle glass
2440.TR716.1	Trapezoidal red slate bead reject
2440.TR717.1	Square red slate bead reject

2440.TR719.1	Lilac wire-wound glass bead
2440.TR723.1	Massive tubular shell bead
2440.TR759.1	Tubular red pipestone bead reject
2440.TR798.1	Square red pipestone bead
2440.TR856.2	Gunflint
2440.TR893.1	Triangular red pipestone bead
2440.TR894.2	Flat mirror glass

White Springs	
Locus: House 3	
Animal Remains	
<i>Context number</i>	<i>Title</i>
1952.WH617.2	Unworked shell
Artifacts	
1952.WH611.1	Handwrought iron nail
1952.WH614.1	Patinated bottle glass
1952.WH614.2	Brass/copper alloy projectile point base
1952.WH623.3	Brass/copper alloy ring
1952.WH652.6	Brass/copper alloy crucifix
1952.WH653.1	Red slate manufacturing debris
1952.WH653.2	Square red pipestone bead
1952.WH653.3	White clay ceramic pipe bowl
1952.WH653.4	Bone bead
1952.WH653.5	Red drawn glass bead
1952.WH653.6	Black drawn glass bead with white stripes
1952.WH653.7	Glass pendant manufacturing debris
1952.WH663.1	Native-made ceramic pipe bowl effigy
1952.WH664.2	Native-made ceramic pipe stem
1952.WH711.2	Black drawn glass bead
1952.WH711.3	Red drawn glass bead
1952.WH711.5	White drawn glass seed bead
1952.WH739.1	Triconcave red pipestone bead
1952.WH739.3	Native-made ceramic pipe bowl
1952.WH739.5	Red drawn glass bead with black core
1952.WH739.6	Blue wire-wound glass bead
1952.WH740.1	Tubular shell bead
1952.WH745.3	Tubular red pipestone bead
1952.WH745.5	Green drawn glass bead
1952.WH745.6	Gunflint

1952.WH745.8	Brass/copper alloy bangle cone
1952.WH763.1	Black drawn glass bead with white lines
1952.WH793.1	Native-made ceramic pipe bowl
1952.WH793.8	Triangular brass/copper alloy projectile point
1952.WH793.9	Brass/copper alloy hawk bell
1952.WH794.3	Black drawn glass bead
1952.WH802.3	Native-made ceramic pipe bowl
1952.WH803.1	Trapezoidal red slate bead
1952.WH803.5	White clay ceramic pipe stem
1952.WH803.12	Brass/copper alloy sheet brass scrap
1952.WH803.13	Brass/copper alloy kettle lug
1952.WH803.27	Blue drawn glass bead
1952.WH803.34	Red drawn glass bead
1952.WH805.2	White wampum
1952.WH805.3	Native-made ceramic pipe bowl
1952.WH805.13	Red drawn glass bead with black core
1952.WH828.1	Black drawn glass bead with red stripes
Plant Remains	
1952.WH656.1	Hickory (<i>Carya sp.</i>) charcoal
1952.WH665.1	Maple (<i>Acer sp.</i>) charcoal
1952.WH665.3	Beech (<i>Fagus grandifolia</i>) charcoal
1952.WH665.4	Ash (<i>Fraxinus sp.</i>) charcoal
1952.WH665.5	Hophornbeam (<i>Ostrya virginiana</i>) charcoal
1952.WH668.1	White ash (<i>Fraxinus americana</i>) charcoal
1952.WH668.2	Red oak (<i>Quercus rubra</i>) charcoal
1952.WH714.2	Oak (<i>Quercus sp.</i>) charcoal
1952.WH717.2	Black ash (<i>Fraxinus nigra</i>) charcoal
1952.WH846.1	Birch (<i>Betula sp.</i>) charcoal
1952.WH846.2	Hawthorn (<i>Crataegus sp.</i>) charcoal
1952.WH846.3	Nutshell
1952.WH846.4	Corn (<i>Zea mays</i>)

White Springs	
Locus: House 4	
Artifacts	
<i>Context number</i>	<i>Title</i>
1952.WH250.1	Trapezoidal red slate pendant
1952.WH250.10	Red drawn glass bead
1952.WH251.1	Discoidal shell bead

1952.WH251.2	Native-made ceramic pipe bowl
1952.WH251.6	Iron awl
1952.WH252.9	Brass/copper alloy conical awl
1952.WH253.1	Red slate bead fragment
1952.WH255.4	White drawn glass bead
1952.WH262.1	Brass/copper alloy cross pendant
1952.WH265.15	Bone handle
1952.WH265.18	Gray drawn glass bead
1952.WH265.19	Black drawn glass bead
1952.WH265.21	Blue wire-wound glass bead
1952.WH265.23	lead bale seal
1952.WH265.24	Lead scrap
1952.WH266.1	Handwrought iron nail
1952.WH266.3	Black drawn glass bead with white stripes
1952.WH323.7	Iron bayonet
1952.WH324.1	Native-made ceramic pipe stem
1952.WH324.5	Patinated bottle glass
1952.WH330.2	Tubular shell bead
1952.WH391.5	Navy drawn glass bead
1952.WH392.3	White clay ceramic pipe stem
1952.WH392.4	Red drawn glass bead with black core
1952.WH397.3	Green drawn glass bead
1952.WH398.1	Triangular brass/copper alloy projectile point
1952.WH414.2	Crescent shell pendant
1952.WH448.1	Triconcave red pipestone bead
1952.WH451.1	Trapezoidal red pipestone bead
1952.WH508.4	Brass/copper alloy rivet
1952.WH509.3	Glass button
1952.WH509.5	Red drawn glass bead with black core
1952.WH509.7	Turquoise drawn glass bead
1952.WH509.9	Amber wire-wound glass bead
1952.WH510.1	Red slate rough bead blank manufacturing debris
1952.WH511.1	Square red slate pendant
1952.WH511.5	Black drawn glass seed bead
1952.WH511.7	Blue drawn glass seed bead
1952.WH511.9	Brass/copper alloy sheet brass scrap
1952.WH519.3	White clay ceramic pipe bowl
1952.WH520.2	Brass/copper alloy bangle cone
1952.WH521.1	Turquoise drawn glass bead with white stripes

Plant Remains	
1952.WH255.2	Hophornbeam (<i>Ostrya virginiana</i>) charcoal
1952.WH257.1	Maple (<i>Acer sp.</i>) charcoal
1952.WH257.2	Alder (<i>Alnus sp.</i>) charcoal
1952.WH257.4	Cherry tree (<i>Prunus sp.</i>) charcoal
1952.WH257.5	Red oak (<i>Quercus rubra</i>) charcoal
1952.WH258.1	Eastern hophornbeam (<i>Carpinus caroliniana</i>) charcoal
1952.WH258.2	Shagbark hickory (<i>Carya cordiformis</i>) charcoal
1952.WH258.3	Pignut hickory (<i>Carya glabra</i>) charcoal
1952.WH258.4	Black ash (<i>Fraxinus nigra</i>) charcoal
1952.WH261.1	Birch (<i>Betula sp.</i>) charcoal
1952.WH268.2	Hickory (<i>Carya sp.</i>) charcoal
1952.WH268.3	Beech (<i>Fagus grandifolia</i>) charcoal
1952.WH274.5	Tulip poplar (<i>Liriodendron tulipifera</i>) charcoal
1952.WH274.6	Plum tree (<i>Prunus sp.</i>) charcoal
1952.WH276.6	Basswood (<i>Tilia americana</i>) charcoal
1952.WH329.2	Raspberry (<i>Rubus sp.</i>) seed
1952.WH329.3	Corn (<i>Zea mays</i>) cob
1952.WH329.4	Corn (<i>Zea mays</i>) glume
1952.WH329.5	Corn (<i>Zea mays</i>) kernel
1952.WH457.3	Peach tree (<i>Prunus persica</i>) charcoal
1952.WH465.2	Sycamore (<i>Platanus occidentalis</i>) charcoal

White Springs	
Locus: Palisade area	
Artifacts	
Context number	Title
1952.WH675.1	White clay ceramic pipe stem
1952.WH675.2	Patinated bottle glass
1952.WH707.1	Native-made ceramic pipe stem
1952.WH710.2	Red slate manufacturing debris
1952.WH710.3	Red slate rough bead blank manufacturing debris
1952.WH710.4	Triangular brass/copper alloy projectile point
1952.WH722.1	Red slate bead reject manufacturing debris
1952.WH722.3	White clay ceramic pipe stem
1952.WH722.5	Brass/copper alloy kettle lug
1952.WH748.3	Gray drawn glass bead
1952.WH748.4	Green drawn glass bead
1952.WH758.1	Red drawn glass bead with black core

1952.WH758.2	Red drawn glass bead with compound white and black stripes
1952.WH762.7	Black drawn glass bead
1952.WH770.1	Brass/copper alloy ring
1952.WH882.1	Native-made ceramic pipe stem
1952.WH884.1	Brass/copper alloy sheet brass scrap
1952.WH886.2	Red drawn glass bead
Plant Remains	
1952.WH693.2	Pine (<i>Pinus sp.</i>) charcoal
1952.WH693.3	Larch (<i>Larix laricina</i>) charcoal
1952.WH727.1	Eastern hophornbeam (<i>Carpinus caroliniana</i>) charcoal
1952.WH727.2	Beech (<i>Fagus grandifolia</i>) charcoal
1952.WH727.3	White ash (<i>Fraxinus americana</i>) charcoal
1952.WH727.4	Black ash (<i>Fraxinus nigra</i>) charcoal
1952.WH727.5	Sycamore (<i>Platanus occidentalis</i>) charcoal
1952.WH731.1	Red oak (<i>Quercus rubra</i>) charcoal

White Springs	
Locus: Pit feature	
Artifacts	
<i>Context number</i>	<i>Title</i>
1952.WH215.1	Iron knife
1952.WH215.10	Red drawn glass bead with black core
1952.WH216.1	Red slate rough bead reject manufacturing debris
1952.WH216.6	Triangular brass/copper alloy projectile point
1952.WH219.14	Red drawn glass bead
1952.WH219.15	Black drawn glass bead
1952.WH219.16	Black drawn glass bead with white stripes
1952.WH220.1	White clay ceramic pipe bowl
1952.WH220.19	Brass/copper alloy bangle cone
1952.WH220.22	White drawn glass bead
1952.WH220.24	Dark blue drawn glass bead
1952.WH220.7	Patinated bottle glass
1952.WH221.17	Purple wampum
1952.WH221.21	Navy drawn glass seed bead
1952.WH228.23	White clay ceramic pipe stem
1952.WH232.258	White wampum
1952.WH232.262	Brass/copper alloy ring band
1952.WH232.263	Triangular brass/copper alloy projectile point
1952.WH237.151	Native-made ceramic pipe stem

1952.WH237.155	Brass/copper alloy sheet brass scrap
1952.WH237.156	Black drawn glass bead with compound red and white stripes
1952.WH237.158	Red drawn glass bead with black core
1952.WH242.1	Iron reworked kettle bail
1952.WH244.1	Black drawn glass bead with red stripes
Plant Remains	
1952.WH230.1	Shagbark hickory (<i>Carya ovata</i>) charcoal
1952.WH231.1	Maple (<i>Acer sp.</i>) charcoal
1952.WH231.2	Birch (<i>Betula sp.</i>) charcoal
1952.WH231.3	Pignut hickory (<i>Carya glabra</i>) charcoal
1952.WH231.5	Beech (<i>Fagus grandifolia</i>) charcoal
1952.WH231.6	White ash (<i>Fraxinus americana</i>) charcoal
1952.WH231.7	Black ash (<i>Fraxinus nigra</i>) charcoal
1952.WH231.8	Hophornbeam (<i>Ostrya virginiana</i>) charcoal
1952.WH231.9	Red oak (<i>Quercus rubra</i>) charcoal
1952.WH231.10	Basswood (<i>Tilia americana</i>) charcoal
1952.WH232.251	Red mulberry (<i>Morus rubra</i>) charcoal
1952.WH232.255	American elm (<i>Ulmus americana</i>) charcoal
1952.WH234.6	Sycamore (<i>Platanus occidentalis</i>) charcoal
1952.WH234.7	Cherry tree (<i>Prunus sp.</i>) charcoal
1952.WH234.9	Sassafras (<i>Sassafras albidum</i>) charcoal
1952.WH234.12	Corn (<i>Zea mays</i>) cupule
1952.WH241.4	Persimmon (<i>Diospyros virginiana</i>) charcoal
1952.WH241.8	Tulip poplar (<i>Liriodendron tulipifera</i>) charcoal
1952.WH241.12	Foxgrape (<i>Vitis labrusca</i>) charcoal

White Springs	
Locus: General Site Finds	
Artifacts	
<i>Context number</i>	<i>Title</i>
1952.WH28.9	Bone bead
1952.WH36.2	Native-made ceramic effigy
1952.WH44.27	Pale blue wire-wound glass bead
1952.WH50.1	Crescent shell pendant
1952.WH57.5	Native-made ceramic pipe stem
1952.WH59.17	Flat mirror glass
1952.WH81.38	Iron reworked kettle bail
1952.WH81.39	Iron scissor handle
1952.WH88.60	Native-made ceramic pipe bowl

1952.WH95.2	Purple wampum
1952.WH95.64	Native-made ceramic pipe bowl effigy
1952.WH102.2	Discoidal shell bead
1952.WH128.1	Iron musket trigger guard finial
1952.WH142.9	Bone bead
1952.WH146.1	Native-made ceramic pipe bowl
1952.WH152.9	Brass/copper alloy gun finial
1952.WH158.10	Brass/copper alloy conical awl
1952.WH158.3	Iron gun barrel scraper
1952.WH184.1	Native-made ceramic pipe bowl
1952.WH196.1	Lead bale seal
1952.WH206.22	Brass/copper alloy ring face
1952.WH247.18	Brass/copper alloy kettle lug
1952.WH314.1	Triconcave red slate bead
1952.WH341.1	Circular red slate bead
1952.WH341.10	Iron mouth harp
1952.WH475.1	Tubular red pipestone bead
1952.WH475.4	White drawn glass bead with blue stripes
1952.WH480.2	Massive tubular shell bead
1952.WH480.6	White drawn glass bead with red core and red and navy stripes
1952.WH481.5	Brass/copper alloy spiral
1952.WH495.4	Diamond-shaped brass/copper alloy projectile point
1952.WH544.2	Brass/copper alloy ring
1952.WH545.3	Golden wire-wound glass bead
1952.WH562.1	Gastropod shell pendant
1952.WH566.1	Brass/copper alloy and iron thimble
1952.WH567.3	Brass/copper alloy button
1952.WH573.5	Brass/copper alloy ring face
1952.WH702.5	Navy drawn glass bead with compound red and white stripes
1952.WH753.3	Brass/copper alloy bell
1952.WH1094.1	Bone comb fragment
1952.WH1168.1	Pentagonal brass/copper alloy projectile point
1952.WH1263.1	Perforated brass/copper alloy thimble crown
1952.WH1343.1	Blue wire-wound glass bead
1952.WH1398.1	Pale blue wire-wound glass bead
1952.WH1446.1	Lead musket ball
1952.WH1498.1	Tubular brass/copper alloy bead
1952.WH1499.1	Iron trigger guard
1952.WH1543.1	Brass/copper alloy medallion

Plant Remains	
1952.WH30.5	Goosefoot (<i>Chenopodium</i>) seed
1952.WH30.8	Rose moss (<i>Portulaca</i>) seed
1952.WH34.4	Bean (<i>Phaseolus</i>)
1952.WH34.5	Sumac (<i>Rhus sp.</i>) seed
1952.WH37.18	Gourd (<i>Cucurbitaceae</i>)
1952.WH37.23	Gooseberry (<i>Physalis sp.</i>) seed
1952.WH66.6	Hemlock (<i>Tsuga canadensis</i>) charcoal
1952.WH69.43	Slippery elm (<i>Ulmus rubra</i>) charcoal
1952.WH71.2	Pawpaw (<i>Asimina triloba</i>) charcoal
1952.WH71.4	American chestnut (<i>Castanea dentata</i>) charcoal
1952.WH71.5	Eastern redbud (<i>Cercis canadensis</i>) charcoal
1952.WH80.4	Bitternut hickory (<i>Carya cordiformis</i>) charcoal
1952.WH99.2	Black walnut (<i>Juglans nigra</i>) charcoal
1952.WH301.5	Black willow (<i>Salix nigra</i>) charcoal
1952.WH435.5	Hackberry (<i>Celtis occidentalis</i>) charcoal
1952.WH438.11	American chestnut (<i>Castanea dentata</i>) charcoal