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The Roffelsen Site: A Late Woodland Place of Transition between Life and Death

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Graduate Program in Anthropology

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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Abstract

In this thesis the cultural material and settlement data from the Roffelsen site are examined in conjunction with detailed osteological analysis previously conducted for the people that were buried there. The archaeological and osteological data are provided as a background for analyzing archaeological conceptions of the Late Woodland Western Basin Tradition in Ontario. The Roffelsen site provides a unique opportunity to examine our conceptions of social organization, ritual and landscape at the boundary between daily living and social expressions of death. Themes of memory and memorialization are examined as the enclosure constructed on site functions both to separate the interior and exterior spaces as well as making statement on the landscape.

Keywords: Late Woodland, Younge, Riviere au Vase, Western Basin Tradition, Memorialization, Landscape, Monument, Mortuary Processing
Acknowledgments

This paper would not have been possible without the assistance of a great many people. Dr. Neal Ferris and Dr. Michael Spence have been instrumental in guiding me through the thesis process, providing encouragement, motivation and strategic advice. Completing a Master of Arts part time while working full time as a consultant archaeologist, marriage partner and parent was no easy task and I am grateful their support never wavered. Dr. Ferris requires additional credit specifically for the help he provided during the last stages of thesis preparation.

Dr. Spence’s encouragement for me to write up the Roffelsen site data began this process, ultimately resulting in my enrollment in the MA program and the thesis presented here. Through my professional involvement with the excavation of the site, discovery of multiple individuals in the grave and by assisting Dr. Spence with their removal I have gained a great respect for and closeness to, these Roffelsen people of the Late Woodland.

Thanks to David White and Dean Jacobs of Bkejwanong First Nation for their involvement and support through the removal and repatriation process, and also to the elders that came to site to facilitate respectful communication with the individuals buried here. I am truly grateful for the opportunity to learn what they have taught us.

Thanks to Dr. Chris Ellis and Dr. Chris Watts for assistance with artifact classification, Edward Fread for analyzing the dog remains, Dr. Jennifer Morgan for faunal analysis and formatting help, and Ben Clark for mapping assistance.

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1. Chapter 1

1.1 Introduction

This thesis will explore the archaeological record recovered from the Roffelsen site, an early Late Woodland, Western Basin Tradition site located in southwestern Ontario. Materially, the assemblage from this site, its geographic location, and indicators of temporal association, would suggest the site is associated with the period encompassing the end of the Riviere au Vase and start of the Younge phases of the Western Basin Late Woodland Tradition, as defined by Murphy and Ferris (1990) for southwestern Ontario. This is a Late Woodland cultural manifestation that more broadly appears in local or regional manifestations across southwestern Ontario, southeastern Michigan and northwestern Ohio (see also Fitting 1965; Stothers and Pratt 1981).

The Western Basin Tradition is understood, in Ontario, as the cultural material tradition that developed indigenously out of the earlier Middle Woodland period and is generally thought, regionally, to be distinct from Late Woodland cultural material patterns found further east in southern Ontario (e.g., Cunningham 2001; Ellis and Ferris 1990; Watts 2008). Research has tended to be far more focussed on the Late Woodland manifestations further east, so understanding the full range and expression of the Western Basin Late Woodland archaeological record, as material remains and as expression of community and social life, is still only emerging from the documented record. The Roffelsen site is of particular importance, as it represents a rather unique settlement pattern reflective of
the boundary between daily living and social expressions of death, mourning and loss, remembrance and forgetting, all situated at a distinct locale that would have been read and understood across the wider social landscape of the early Late Woodland people of this region.

### 1.2 The Roffelsen Site

In 2004 a private archaeological company, Archaeologix Inc., excavated the Roffelsen site in advance of a single-lot, private residential development, located west of the City of Chatham (Archaeologix 2004, 2005, 2006). These excavations were conducted in advance of that development, to mitigate impacts to the site that otherwise would have occurred, and to the requirements of the Ontario Ministry of Culture’s 1993 *Archaeological Assessment Technical Guidelines*, the standard of the day for salvage excavations. The owners of the home development, Henry and Lisa Roffelsen, proved to be supportive clients and enthusiastically agreed to properly undertake excavations and subsequent analyses to fully explore the important findings from this site.

The Roffelsen site is situated west of the city of Chatham on the north side of the Thames River. It is situated on the Chatham Flats portion of the St. Clair clay plain physiographic region (Chapman and Putnam 1986). The site is located on a relatively flat expanse of ground, located 20m north of a steep bank overlooking the River Thames, at a marked bend of the river that would have proved especially notable for people travelling downriver (*Figure 1.1*). At the time of the excavations the location of the site was an agricultural field that had been in use for many years.
Excavations conducted on this site, once it had been located during pedestrian survey of the ploughed field, consisted of standard archaeological compliance practices, beginning with limited hand excavated and soil screened 1m x 1m test units. Twenty-three such units were dug, with depths ranging from 21cm to 34cm, at 5m intervals across the surface concentration of artifacts in the field. Notably, the consultant reported very little cultural material recovered during this stage of excavation, with individual units yielding two or less items, each associated with the pre-contact component (a minor post-contact 19th century component was also noted during this stage of excavation).
Conventional standards of practice and site significance evaluations from the time could have readily led to a compliance decision to walk away from the site, given the paucity of material recovered. However, during the hand excavation of units very few, minute fragments of ceramics were recovered. This discovery suggested to the consultant company that a Woodland component was present on the site which could account for some or all of the pre-contact material documented. As such, mechanical removal of the remaining topsoil over the surface artifact concentration was considered a prudent additional step, in case sub-surface deposits associated with this component were present. This proved to be a fortuitous decision.
Remaining topsoil encompassed by the artifact scatter was stripped away by an excavator with a straight edged ditching bucket. The excavator pulled the topsoil away exposing a smoothed subsoil surface. Readily evident within the subsoil were a range of subsurface pit features and post moulds concentrated within a 50 by 50m area. This uncovered settlement pattern revealed the past presence of a circular, single walled enclosure measuring approximately 25m in diameter, with pit features located both inside and outside the wall. Full scale excavations were conducted on all cultural features. The plan view of each feature and post was recorded, half of the feature was excavated to expose the profile for documentation, and all of the soil was screened and all cultural material collected by provenience.
Figure 3.3  Roffelsen Site Settlement Pattern
The vast majority of the cultural features (36 in all) contained conventional material remains, including ceramics, lithics and faunal remains. In addition, however, two features proved to be burials. In one instance, a dog burial was identified, while a second, large feature served for the interment of seven individuals. Upon the identification of human remains, requirements governing how the landowner and their consultant archaeologist is to proceed is dictated by provisions of the then *Cemeteries Act* (Ontario 1990). As such, the proper authorities were contacted, including Michael D’Mello, Ontario Ministry of Consumer Services Cemeteries Registrar. In addition, the *Cemeteries Act* requires that a representative who can speak to the interests of the deceased is also contacted, with the intent being that the landowner and the representative for the deceased can determine the best disposition for the human burials.
In the case of the Roffelsen site, Bkejwanong Walpole Island First Nation were contacted and agreed to act on behalf of the deceased. David White, then director of the Walpole Island Heritage Centre, reviewed the findings, and in consultation with the community, the landowner and his consultant archaeologist, agreed that the remains should be excavated for eventual reinterment within a cemetery on Walpole Island. The Bkejwanong First Nation also agreed that Dr. Michael Spence of the University of Western Ontario would be allowed to undertake full analyses of the human remains in order to better understand the story these ancestors needed to convey. Dr. Spence also led the in-the-field documentation and removal of the individuals from the burial feature. Mr. White and elders from the Bkejwanong community conducted a smudging ceremony with the archaeologists prior to the excavation, and communication continued through the process of analysis and research, and ultimately led to the reburial of these individuals within a cemetery by the Bkejwanong community in 2014.

Dr. Spence’s detailed exhumation and extensive analyses of the human skeletal remains confirmed that the burial feature had contained the remains of seven individuals. That work documented an elaborate and detailed post-mortem mortuary program prior to placement of the deceased in the burial feature (Spence et al. 2014). The work is also instrumental in helping to interpret the broader archaeological patterns detailed for the site itself, and my task in this thesis is to identify, describe and interpret these broader archaeological patterns with the aim of providing a comprehensive interpretation of this
particular site within the lifeways and worldview of this early Late Woodland community.

In order to improve chronological placement for the Roffelsen site and the material recovered from it, a carbonized plant remain sample (taken from Feature 22) was used to generate an AMS date by the lab Beta Analytic. Funding for this date was provided courtesy of Dr. Neal Ferris, through his SSHRC Late Woodland Borderland research project. The results from the specimen (Lab Number Beta-416904) intercepted the calibration curb twice. It yielded a conventional return of 910 ± 30 BP. Beta’s calibration provides, at a 95% probability, a calibrated age of AD 1030 to 1210 (cal BP 920 to 740), while the two intercepts provide, at a 68% probability, calibrated age ranges of AD 1045 to 1095 (cal BP 905 to 855), and 1120 to 1165 (cal BP 830 to 785). Considering general material trends through the Riviere au Vase and Younge phases, and general settlement and mortuary trends, this date confirms the Roffelsen site falls within that period of transition from the Riviere au Vase phase and early Younge phase, as discussed by Murphy and Ferris (1990).

1.2.1 The Roffelsen Site in Context

This study allows me to explore the Roffelsen site as a concept: as archaeological locale and material culture reflective of Late Woodland culture history and daily living; as liminal space between living and death as reflected in the structural elements and mortuary programming practiced at this locale; and as a place that, through the time of its use and for the centuries since, is a place to remember and forget remarkable lives and
communities. This is facilitated by the clear and uncluttered spatial patterning documented at the site, and by the detailed analyses of the deceased conducted by Spence et al. (2014).

One dimension of the early Late Woodland process of preparing the deceased for death that I wish to explore in this thesis is tied up with the notion of landscape and place making, commemoration, and memorialization of the dead. The creation of place through a culturally specific set of activities links individuals and groups to landscapes and to each other within that landscape (Bruck and Goodman 1999). The situating of place, and the nature of that place – whether fixed residence, site of resource harvesting, site of meeting, or site of internment – implies the creation of relationships to places that in turn are reflected in the way that these relationships to places are marked and remembered (Pollard 1999: 88). Understanding this engagement with space and place allows for the beginnings of an understanding of settlement as social practice and collective memory across structured or known space (Kovacik 1999; Pollard 1999). The creation of memory is used to consolidate social identities that may also have served as a statement of an inclusive or exclusive nature, connecting present with past and with the dead. For example, Neolithic communities had an active concern with past belonging and origins and the marking of these on the landscape as evidenced by the many monuments commemorating the dead (e.g., Tilley 1994). In the fourth millennium many regions in Europe had earthen and chambered tombs with remains of many individuals (Thomas 1991:112). For the early Late Woodland communities of southwestern Ontario the place that was the Roffelsen site, by virtue of what did and did not occur there, inside, along,
and outside the enclosure wall, invites us to think about the site and sight of this locale as a place between living and dead, and as place tied to particular members of a community and their legacy as part of, or apart from, that community.

Evans (2005) suggests that monuments are deliberate social expressions, visual constructions with the primary purpose of being left as a remembrance of past lives. Monuments are accepted as visual symbolic elements. Monument creation represents a highly formalized act of remembering, in other words a highly formalized act of creating or entrenching social identity. Commemoration is a type of connective practice that ties together people and things (Jones 2007). Commemorations are necessarily performative in nature, a series of actions or participation in actions and engagement with a place (Jones 2007). This includes the diverse, and fixed, process of the living becoming dead on the landscape, a process that the living mediates for the dead in the act of burial, and in the pre-burial acts of preparing the dead for their final resting on the land. This culturally relative and meaningful process thus encapsulates time, place, community and the dead in a series of gestures and social conceptions of the transition from living to dead, and what and how the dead live on or not in the memory of the living across landscapes and time (e.g., Robb 2007, 2013). The Roffelsen site, beyond ceramics, features, post moulds and burials, allows for a consideration of these broader concepts in archaeology within the context of early Late Woodland life and death along the Thames River.
1.3 Thesis Format

This thesis is organized into five chapters. Chapter 2 provides the archaeological background for analysing the Roffelsen site, including providing a brief overview of archaeological conceptions of the Late Woodland Western Basin Tradition in Ontario. Material culture and settlement and subsistence patterns are detailed and attention is given to understandings of social organization and ritual as reflected archaeologically for this material tradition.

Chapter 3 provides a detailed review of the material culture and settlement patterns that were documented and recovered from the Roffelsen site. The artifact analysis is used to support the placement of this site in time and archaeological material understanding, and to provide insight into the range of activities that took place at the site. Chapter 3 also provides a summary of the osteological analysis previously conducted by Spence et al. (2014) on the individuals buried at the site. Examples of extensive mortuary processing activities are present on these individuals who were subject to comprehensive defleshing with the apparent aim of retaining articulation. The analysis further indicates that the people interred here were closely related and all suffered from a genetic disorder that would have impacted auditory ability (Spence et al. 2014). While I acknowledge this previously published work reflects an insight and expertise that I do not have, and as such I can only present those findings here, they are critical to assisting me in understanding and interpreting the broader concept of the Roffelsen site. Neither the osteological data, or the material culture and settlement data alone provide a complete picture of the
importance of this site. My task, then, is to integrate these differing datasets to facilitate that broader understanding of the Roffelsen site.

Chapter 4 builds on the presentation of data from Chapter 3, as well as the research conducted by Spence et al. (2014), to build an interpretation of the site itself. Settlement pattern, mortuary practices, artifact distributions, pit feature locations and contents all inform us about the nature of the site and what took place during its occupation. This analysis is presented within the framework of our understanding of Western Basin Late Woodland Tradition material, settlement and mortuary practices.

Lastly, in Chapter 5 the example of the Roffelsen site is used to explore themes of memorialization, notions of collective past and the creation of social memory. The structure at the site is viewed as an expression of a distinct cultural practice – unique perhaps in time, and unique perhaps in terms of who and what the deceased represented to those tasked with memorializing them. Moreover, the construction of the Roffelsen site on the landscape - situated next to a major waterway that likely was an important transportation corridor not just for those who belonged to the Roffelsen site but also those who did not belong - created a cultural space infused with meaning.
2. Chapter 2

2.1 Introduction

This chapter will provide a summary of current understandings of the archaeology associated with the early Western Basin Late Woodland Tradition. The Western Basin is generally considered to be a distinct Late Woodland material manifestation found in southwestern Ontario, southeast Michigan, and northwest Ohio in the general area between Lakes Erie, St. Clair, Huron and Michigan. The internal and external material variations of this Late Woodland archaeological tradition are not well understood, and likely was not a fixed geographic entity with distinct borders. However, it is generally understood to be different from the contemporaneous archaeological Ontario Iroquoian Tradition to the east, and regional Late Woodland archaeological manifestations further south and west (see Brashler et al. 2000; Ferris and Spence 1995; Redmond and McCullough 2000; Watts 2008).

The Late Woodland Western Basin Tradition of southwestern Ontario is seen to have developed directly from earlier local Middle Woodland archaeological manifestations in the region, and subsequent phases are understood as continuous developments over time within this region (Spence et al. 1990; Murphy and Ferris 1990). The Western Basin Tradition in Ontario consists of four stages, generally based on those phases originally established by Fitting (1965), and are defined primarily through changing ceramic styles, as well as some alterations to settlement-subsistence strategies.
Table 2.1  Western Basin Tradition Cultural Phases (Murphy and Ferris 1990)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time Period</th>
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<tr>
<td>Riviere au Vase</td>
<td>AD 600 - 800 or 900</td>
</tr>
<tr>
<td>Younge</td>
<td>AD 800 or 900 – 1200</td>
</tr>
<tr>
<td>Springwells</td>
<td>AD 1200-1400</td>
</tr>
<tr>
<td>Wolf</td>
<td>AD 1400 – 1550 or 1600</td>
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The phases that divide the Western Basin Tradition in Ontario are generally based on stylistic, technological, and morphological changes in ceramic vessel manufacture. The phases are not marked by absolute definitive changes to cultural material, rather longer term gradual changes. Moreover, in the definitive cultural historical ordering of this Late Woodland Tradition, Murphy and Ferris (1990) were hesitant to define fixed dates for the transitions between the earlier phases of the tradition, partly due to limited datasets at the time, but also to what they felt was the absence of any real abrupt and wholesale change they saw at any fixed point within that time frame. This was both the case for earlier transitions between the Middle and Late Woodland, as well as transitions between phases (Murphy and Ferris 1990: 225-228).
For the purposes of this research the definition of Western Basin Late Woodland Tradition will follow the modified term used by Murphy and Ferris (1990). In addition, while this research is understood within the larger framework of the Western Basin Tradition in Michigan and Ohio, analysis is generally restricted to Ontario data in part due to a lack of accessible and comparable material but also because of the likelihood of culturally distinct regional patterns over that broader geography.
2.2 Material Culture, Settlement, and Subsistence during the Riviere au Vase and Younge Phases

To understand how people at the time of the early Western Basin Late Woodland Tradition lived it helps to understand the natural environmental setting that they occupied, since intensive agriculture, logging and modern development have transformed the landscape over the last couple of centuries. During the Late Woodland period, southwestern Ontario, which is bordered on three sides by Lakes Erie, St. Clair and Huron, is comprised of the land between the rivers that drain into these lakes. This region exhibits a diversity of environmental settings and soil types, including sand and clay plains, lake and river shorelines, prairies and wetlands (e.g., Kenyon 1988, 1997; Chapman and Putnam 1986). The variation of watershed patterns and types of landform directly influenced local plant and animal species that were present. The clay plains, which make up most of the surface area in southwestern Ontario (Chapman and Putnam 1986), remained wet for most of the year with dense forests of black ash and white elm whose crowns produced an almost continuous canopy limiting the growth of ground level vegetation (Murphy and Ferris 1990). Areas of sandy-loam soil supported berry, seed and nut producing trees and shrubs of numerous varieties and prairie regions had borders marked by oak-hickory savannahs (Kenyon 1997; Maycock and Hills 1970) and containing an overabundance of grasses and forbs (Murphy and Ferris 1990). The rivers flowing into the lakes produced marshy borders and weedy bays that supported a wide variety of fish, bird and mammal species (Kenyon 1988). Archaeological data suggests that both animal species and human occupants gravitated towards sand plains, lake and river shorelines, and prairie borders. As there are a finite number of locations in the
region where seasonally abundant resources were available that could be exploited, 
archaeological sites in these locations usually represent long periods of use (Cunningham 
1999; Lennox 1982), though evidence of regional mobility also underscores that 
Indigenous peoples organized themselves across waterways and these landscapes 
variously over time, by season, by variable choices, and by social understandings of 
space across what could be considered large scale domestic landscapes (e.g., Ferris 
2007).

2.2.1 Settlement and Subsistence Patterns

At a general level, subsistence practices evident for the Western Basin Late Woodland 
Tradition reflect a broad transition over time of increasing use of maize horticulture and, 
later on, movement towards increased sedentism (Murphy and Ferris 1990). The early 
part of the pattern suggests a diversified resource strategy that accommodated maize 
cultivation within seasonal mobility and exploitation of seasonally abundant resources, 
especially riverine and lacustrine resources (Foreman 2011; Lennox and Molto 1995; 
Murphy and Ferris 1990; Watts et al. 2011). While the settlement patterns for the Riviere 
au Vase phase are generally thought to reflect mostly a continuation of earlier Middle 
Woodland patterns of river / lake focussed warm weather camps and winter dispersal, by 
the Younge phase larger groupings are thought to gather at seasonally abundant locales 
such as spring fish spawning runs or fall nut harvesting locales, warm weather camps 
along riverways, and continued winter dispersal, though the emphasis in any one place or 
any one part of the seasonal round likely varied considerably year to year or by specific 
community (Foreman 2011; Murphy and Ferris 1990).
While the seasonal intricacies of resource exploitation and mobility strategies of Riviere au Vase groups are not fully understood, some general observations can be made. It appears that small hunting and gathering groups were seasonally mobile, taking advantage of various resources across the region. Large river or lakeshore gatherings in the spring, summer and fall were followed by disbursement by small family groups to traditional hunting territories along smaller drainages over the winter months. It is assumed (Murphy and Ferris 1990) that typical hunting, fishing, and collecting activities as ethnographically described in the Great Lakes region (e.g., Trigger 1978) were followed.

Later Younge phase patterns reflect less a deviation from earlier patterns, and more an evolution of them. While there is some variation in models proposed (e.g., see Foreman 2011), generally it is assumed that the subsistence pattern for most of the Younge phase consisted of river-based, warm weather camps being occupied, along with harvest intensive, seasonally abundant resource camps, and possible winter dispersal (e.g., Brose and Essenpreis 1973; Ferris 1989, 1990; Fitting 1970: Fox 1982b; Keenlyside 1978; Kenyon et al 1988; Lennox 1982; Murphy and Ferris 1990; Reid 1983). In other words, there is no fixed settlement pattern from place of settlement to place of resource harvesting, but rather more mobility between places by time of year and choices made across a landscape of options (Ferris 2007). Interestingly, it is suggested that this subsistence pattern of multiple sites utilized across a year leads to variability of subsistence remains and material culture being documented across the sites, reflecting the
fact that sites encompass the material patterns associated with the activities carried out at that locale, and only those activities necessary to be carried out at that locale (e.g., Ferris 1989). In other words, at sites where fish, or deer, or nut harvesting activities were carried out, there is a predominance of those specific remains, as well as technologies associated with undertaking those activities (e.g., an abundance of points and scrapers at Van Bemmel where deer and hide processing was taking place, and an absence of these lithic objects elsewhere).

In terms of settlement patterns, as Murphy and Ferris (1990) noted, there has generally been an absence of clear structural patterning on most sites from the first half of the Western Basin Late Woodland Tradition. At the time Murphy and Ferris were writing, for the Younge phase only a small, wigwam-like house had been documented at the Cherry Lane site, a partial enclosure wall associated with an encampment at the Van Bemmel site had been recorded, as well as possible evidence of either an enclosure or longer house wall at the Dymock site. Earlier Late Woodland settlement structures predating the Younge phase were not known.

A much more common settlement pattern observed during the Younge Phase consists of extensive clusters of cultural features, including large pits circular in plan and straight- to basin-shaped in profile, up to a metre in diameter and over a metre in depth (Ferris 1990; Kenyon et al. 1988; Kidd 1954; Lennox 1982; Murphy and Ferris 1990). Notably, while these deep pits may occasionally occur as a single or small number of features on earlier Riviere au Vase period sites, they are prolific on a wide range of Younge phase sites.
(Murphy and Ferris 1990). Often these large features are found to be devoid of artifacts. These pits are thought to be used for caching harvested seasonally abundant resources (Murphy and Ferris 1990:236). The clustering of these features on sites is thought either to represent exterior, communally shared or controlled storage spaces (Murphy and Ferris 1990), or the extent of house floors (Lennox 1982).

The extensive use of these storage pits indicate that caching technologies were complex, and designed to both manage highly abundant but seasonally limited foodstuffs and resources, as well as help define communal space and place across a landscape of multiple locales utilized by a community over the course of a seasonal round (Dewar et al. 2010; Ferris 2007, 2009). Indeed, cached foodstuffs and supplies brought people back to the same locations, and helped map a broader community landscape of what were places of possession for people who travelled along and across waterways and could be removed from any given location important to that community for extended parts of a year.

While carbonized maize remains have been known for Younge phase period Western Basin Late Woodland Tradition sites, the degree to which this food source played a role in diet from this time has only emerged in recent years due to isotopic studies from sites on the Detroit River (Dewar et al. 2010), and Thames River (Spence et al. 2010; Watts et al. 2011). Those studies suggest that maize was an important, year round part of the diet for people living during that time, comparable in scale to that previously documented for chronologically contemporaneous ancestral Ontario Iroquoian Tradition peoples,
generally considered to be heavily invested in agriculture at this point (e.g., Williamson 1990). Given that people associated with Younge phase archaeological material expression are thought to have been maintaining a much more diversified subsistence pattern over a landscape of multiple locales, how were they able to produce yields of maize to sustain a relatively high level of maize in their diets year round? As Murphy and Ferris noted (1990), and Dewar et al. (2010) and Watts et al. (20011) point out, maize yields likely were one foodstuff cached across sites, to be accessed at any point in a year as food needs might require. Indeed, the more prolific presence of these pits, creating larger archaeological locales than seen during the earlier Riviere au Vase Phase period, suggest that the florescence in the use of this caching strategy may well have coincided with an increase in maize production into the Younge phase, or at least its ready integration into year round diet.

The use of storage pits to manage seasonally abundant and harvested resources, including maize, allowed people from this time period to accommodate maize production, presumably occurring at warm weather base camps, within a diversified strategy that took advantage of all available resources. In essence, it appears that people during the Younge phase Western Basin Late Woodland Tradition period were able to include agriculture in their repertoire while continuing to be seasonally mobile, with warm weather settlements focussed on agriculture alongside hunting, fishing, and collecting.

It is worth noting that in recent years, archaeological investigations in the Arkona area of southwestern Ontario suggest settlement patterns may be more variable across the
geography of at least Younge Phase Western Basin Late Woodland sites. This includes a series of sites, including the Bingo and Figura sites, that exhibit multiple house structures, either wigwam-like or longhouse-like, surrounded by single- or multiple-walled palisades. How these sites relate to archaeological patterns to the west and east are not clear, and research is ongoing, however these patterns could reflect a material borderland between archaeological traditions at this time, and heightened community engagement with the material expressions of both traditions in this area (Ferris 2013; Ferris and Wilson 2009).

2.2.2 Material Culture

The material culture documented for the first half of the Western Basin Late Woodland Tradition was summarized in detail by Murphy and Ferris (1990). Riviere au Vase period vessels tend to be globular, short-necked, slightly everted and cordmarked. Decoration appears by the second half of the phase, consisting of simple tool impressions first appearing directly over unmodified cordmarked rims and necks, and later by the appearance of a row or rows of punctates. By the Younge phase ceramic vessels tend to exhibit more everted or flared rims, and necks get elongated. Decoration during the early Younge phase consists of multiple rows of tool impressions, generally applied to a smoothed over neck and rim surface, but later in the period decoration becomes more elaborate, and distinct neck motifs emerge.

While distinctive ceramic decorative styles and vessel forms exist for the Younge Phase, it is also clear that potters were interacting with stylistic trends occurring more broadly
across the region, including stylistic elements and decorative attributes found among Ontario Iroquoian Tradition ceramic assemblages to the east. This previously led cultural historical analyses to debate whether Western Basin pots were in fact “Iroquoian” or “Algonquian”, due to general temporal similarities in ceramics across these archaeological manifestations, or due to general temporal differences in some aspects of settlement-subsistence (e.g., Murphy and Ferris 1990:272-277). As archaeology generally has moved away from such essentialist framings of archaeological material patterning, and variation among Western Basin Late Woodland Tradition manifestations is documented more fully, archaeological interpretations have moved away from basic ethnic distinctions. For example, Watts (2008) compared ceramic stylistic trends among a range of sites representing Western Basin and Ontario Iroquoian archaeological Traditions. What he noted was greater decorative variation and less cohesive consistency across this artisan tradition with Western Basin assemblages, likely capturing decisions of organization and social planning of ceramic making as reflected in those assemblages that speak to the needs of a more seasonally mobile community, regardless of linguistic or identity differences with communities well to the east or, for that matter, a few kilometres away down or upstream.

Lithic procurement among Western Basin Late Woodland Tradition assemblages typically involved a heavy reliance on local chert materials, including secondary deposits, along with some representation of toolstone from more distant sources, similar to patterns seen through the Late Woodland in this region (Murphy and Ferris 1990). Triangular projectile point forms and a range of formal lithic tools common for the period appear
variably within site assemblages, likely reflecting variable activities occurring at distinct sites.

### 2.2.3 Mortuary Patterns

Our understanding of social organization and ritual among Younge phase populations is limited, coming largely from isolated burial interments in Ontario, or larger cemetery-like interment locales in Michigan and Ohio (Spence et al. 2014). During the Younge phase a wide variety of interment practices have been documented, including isolated primary interments of an individual or multiple individuals in flexed or extended positions, secondary interments of complete skeletal bundles, partial bundles, interments of small fragments of skeletal material, and bundles of single or multiple individuals placed into the burial pit. Mortuary treatments of the dead include perforations of long bones and crania, disk removal, cremation, use of red ochre, intensive defleshing and the application of clay to facial areas of skulls. (Dewar et al. 2010; Fitting 1965:3-97; Fox 1982a; Greenman 1937; Kidd 1954; Murphy and Ferris 1990; Raemsch 1993; Redmond 1982; Ritchie 1965:234-235; Speal 2006; Stothers and Bechtel 2000; Watts et al. 2011).

There is some evidence that Younge phase people may have gathered communally to perform mortuary rituals, specifically at the Younge site in Michigan which consists of special purpose burial structures (Greenman 1937) and at the Libben site in north Ohio (Murphy and Ferris 1990). The presence of secondary burials at sites such as Krieger and the absence of some skeletal elements at Dymock implies that some remains are being moved between sites (Fox 1982a), however unlike outside of Ontario it is not thought
that large numbers of people were involved in the trans-regional communal burial practices carried out at major locales like Libben or Younge (Cunningham 1999).

Cunningham (1999) suggests that the diversity of material culture and settlement and subsistence data from the Riviere au Vase and Younge phases indicates a social system where specific groups possessed a great degree of independence. As opposed to a cultural entity bound by a common mortuary program or subsistence strategy, the archaeological data points to a group of people sharing elements of a culture in a highly variable manner (Cunningham 1999). Murphy and Ferris (1990) argue that managing the dead was shaped by the mobility of places across a fixed landscape of belonging. The vagaries of where death and interment occurs include isolated burials at what are interpreted to be warm weather locales, the absence of burials at cold weather sites, and the use of bundle burials that leave some skeletal remains in another locale, all suggesting curation and planning within this movement across the land, to situate individuals where they need to be, when they are not, by virtue of timing, ready to be interred where they are at death. As well, it could also be argued that the range of practices and post mortem treatments present in the archaeological record, used variably, suggests extensive social rules or conventions that need to be followed depending on person, place or context, perhaps variably defined by particular groups or communities across the region. Likewise it probably also suggests variable requirements placed on the individuals charged with aiding or managing the deceased’s transition through death and ultimately to interment in place, as has been noted elsewhere (e.g., Robb 2007).
3. Chapter 3

3.1 Introduction

In this chapter I will present the results of the examination of the cultural material and settlement patterns of the Roffelsen site. The findings from the excavation will be reviewed and broken down with spatial arrangements of subsurface features examined to gain an understanding of how the site was used by the people who built and occupied it. The cultural material examination assists in determining the time period and culture of the site, primarily through the analysis of ceramic vessels. Following the artifact analysis the settlement pattern is studied, providing a comprehensive examination of the structural remains and cultural features, that, along with the osteological evidence gathered by Spence et al. (2014), allows us to better understand the purpose of the site.

3.2 Cultural Material

The assemblage recovered during the salvage excavations at Roffelsen consists of 1,138 pieces of cultural material (Table 3.1). The majority of the artifacts recovered are fragments of ceramic vessels, lumps of fired clay and clay pipe fragments, comprising 96.75% of the total artifact assemblage. The remaining pieces of cultural material are lithics, including chipped stone debitage, utilized flakes, a biface, core, and a smoothed round stone. Faunal and floral materials are not included in these totals, nor are the human remains and associated artifacts from Feature 59. Classification techniques were
based on the cataloguing system created at the Museum of Ontario Archaeology in London, Ontario.

### Table 3.1  Artifacts Recovered from Roffelsen Site Excavations by Individual Category

<table>
<thead>
<tr>
<th>Artifact</th>
<th>Total Quantity</th>
<th>Inside Enclosure</th>
<th>Outside Enclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
</tr>
<tr>
<td><strong>Ceramic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fragmentary sherd</td>
<td>663</td>
<td>558</td>
<td>105</td>
</tr>
<tr>
<td>Body sherd</td>
<td>289</td>
<td>257</td>
<td>32</td>
</tr>
<tr>
<td>Neck sherd</td>
<td>93</td>
<td>71</td>
<td>22</td>
</tr>
<tr>
<td>Rim sherd, fragmentary</td>
<td>22</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Rim sherd</td>
<td>21</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Lump of fired clay</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Pipe bowl</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Shoulder sherd</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Ceramic Total</strong></td>
<td>1,102</td>
<td>933</td>
<td>169</td>
</tr>
<tr>
<td><strong>Lithic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipping detritus</td>
<td>30</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Utilized flake</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Biface</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Core</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Rounded stone</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Lithic Total</strong></td>
<td>36</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td><strong>Roffelsen Site Assemblage</strong></td>
<td>1,138</td>
<td>965</td>
<td>173</td>
</tr>
</tbody>
</table>

3.2.1 Ceramics

Ceramics from the Roffelsen site were classified and analysed by vessel, unassigned rim sherds, neck sherds, shoulder sherds, body sherds, and pipes (Grant 2006). Vessels are
defined as sections of a ceramic vessel present for analysis that included vessel interior, lip, rim, neck, shoulder and start of body, either because a large enough intact vessel section was recovered, or because a vessel could be inferred from more fragmentary sherds. In total, ten vessels were identified, including two miniature vessels, which are discussed separately from regular vessels below. Rim and neck sherds that were unassignable to formally defined vessels were analysed by attributes, as were body sherds and the limited number of pipe fragments. These analyses constitute the conventional approach to early Late Woodland ceramics tied to the Western Basin Tradition in Ontario (e.g., Lennox 1982; Murphy and Ferris 1990). The vessel assemblage from Roffelsen was considered too limited and too fragmentary to allow for more detailed craft analyses, such as has been undertaken by Cunningham (2001) and Watts (2008) for Western Basin Late Woodland assemblages.

3.2.1.1 Regular Ceramic Vessels

Through the analysis of rim and neck sherds eight distinct ceramic vessels were identified in the Roffelsen collection, six of which were recovered from features inside the enclosure (Vessels 1-4, 7-8), and two outside (Vessels 9 and 10).
Figure 3.1  Vessel 1

Figure 3.2  Vessel 2
Figure 3.3  Vessel 3

Figure 3.4  Vessel 4
Figure 3.5  Vessel 7, Vessel 8 and Vessel 9 (from left to right)

Figure 3.6  Vessel 10
Table 3.2  Vessel Rim, Neck and Decorative Attributes

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Rim Shape</th>
<th>Neck Shape</th>
<th>C</th>
<th>P</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>everted</td>
<td>constricted</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>everted</td>
<td>constricted</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>flared</td>
<td>constricted</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>flared</td>
<td>constricted</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>n/a</td>
<td>n/a</td>
<td>Yes</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>9</td>
<td>n/a</td>
<td>n/a</td>
<td>No</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>10</td>
<td>everted</td>
<td>constricted</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(C = castellations; P = punctates; B = boss)

The rim profile of the eight vessels in this assemblage includes three everted, two flared and three undetermined (see Figure 3.7 and Table 3.2). All of the vessels with flared or everted rims have constricted necks, six of the vessels have flat lips (Vessels 1-4, 8 and 10), while one vessel lip is flat-to-round (Vessel 7), and one vessel has a scalloped lip (Vessel 9). If I consider the deeply scalloped lip of Vessel 9 as a form of decoration then all Roffelsen site vessels have decorated lips. This decoration on the lip is always created using the same tool as observed for rim and interior decoration, excepting the formation of the scallops.
Figure 3.7  Vessel Rim Cross Sections
### Table 3.3  Vessel Rim, Neck, Lip and Interior Surface Treatment and Decorative Attributes

<table>
<thead>
<tr>
<th></th>
<th>Rim</th>
<th>Neck</th>
<th>Lip</th>
<th>Interior Decorative Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surface Decoration</td>
<td>Surface Decoration Shape Decoration</td>
<td>Surface Decoration</td>
<td>Surface Decoration</td>
</tr>
<tr>
<td>1</td>
<td>cord marked</td>
<td>oblique linear stamps above circular punctates</td>
<td>cord marked</td>
<td>two bands of oblique linear stamps, identical to rim</td>
</tr>
<tr>
<td>2</td>
<td>cord marked</td>
<td>oblique linear stamps above circular punctates</td>
<td>cord marked</td>
<td>three or more bands of oblique linear stamps, identical to rim</td>
</tr>
<tr>
<td>3</td>
<td>cord marked</td>
<td>oblique cord wrapped stick stamps, bounded by a single line of circular exterior punctates and corresponding interior bosses</td>
<td>cord marked</td>
<td>large incised triangles, the triangle decoration alternates from plain to filled-in with horizontal incised straight-to-crescent shaped stamps evenly covering the surface of the ‘filled-in’ triangles</td>
</tr>
<tr>
<td>4</td>
<td>n/a</td>
<td>uniform oblique dentate stamps</td>
<td>smoothed</td>
<td>uniform oblique dentate stamps, identical to rim</td>
</tr>
<tr>
<td>7</td>
<td>smoothed</td>
<td>oblique cord wrapped stick stamps</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>V</td>
<td>Rim Surface</td>
<td>Rim Decoration</td>
<td>Neck Surface</td>
<td>Neck Decoration</td>
</tr>
<tr>
<td>----</td>
<td>-------------</td>
<td>----------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>8</td>
<td>smoothed</td>
<td>oblique dentate stamp</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>9</td>
<td>smoothed</td>
<td>oblique linear stamps over smoothed surface</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>10</td>
<td>smoothed</td>
<td>two bands of oblique linear stamps with circular punctates and bosses</td>
<td>smoothed</td>
<td>smoothed</td>
</tr>
</tbody>
</table>

Castellations could be observed for three of the eight vessels (Vessels 3, 8 and 10) because there were large enough sections for adequate observation. Castellations appear
as a series of small, sharp-to-rounded triangles extending straight up from the rim of the vessel. In all cases the decoration found on rim castellations is the same as found on rim lips.

Punctates are present on six vessels, while two lack punctates (see Table 3.2) and all vessels with punctates have corresponding interior bosses. Punctate shape is round or circular in all cases.

Exterior decorative elements on the eight vessels are predominately characterized by oblique bands of decoration, which appear on all of the vessels in the assemblage (see Table 3.3). Additionally, one vessel (Vessel 3) exhibits a decorative motif consisting of alternating triangles that extend from the base of the exterior rim along the length of an extended neck. Of those vessels with bands of oblique decorations, four have oblique linear stamps (Vessels 1, 2, 9, 10), while two have oblique cord-wrapped-stick stamps (Vessels 3, 7), and two have oblique dentate stamps (Vessels 4, 8). The triangular motif appearing on Vessel 3 is filled with rows of horizontal crescent shaped stamped decoration, while the long sides of the triangle are made by incised lines.

Exterior decoration on four of the eight vessels (Vessels 7, 8, 9, 10) is applied directly onto a cord marked surface, while another three vessels (Vessels 1, 2, 3) exhibit decoration applied onto a smoothed neck surface.
All eight of the regular sized vessels exhibit interior decoration. Interior decoration tends to be simple, consisting of one or two rows of application, using the same primary tool and decorative technique as seen on vessel exteriors, though the use of alternating triangles is not replicated on the interior.

3.2.1.2 Miniature Ceramic Vessels

The two miniature vessels from the Roffelsen site are both very well made. Vessel 5 is represented by a single vessel section that extends from the rim to the body (Figure 3.8). It has a well-defined and collared rim, a flat lip, and castellations. Decoration on this vessel is made by incised lines. The application of the incising on the lip is haphazardly done and not uniform, and the incised lines run horizontally along the lip surface. The neck of Vessel 5 is decorated with a single band of thin, oblique incised lines over a slightly smoothed cord marked surface that extends from the base of the collared rim to the pronounced shoulder. The shoulder of Vessel 5 is decorated with a single band of vertical linear incised markings. Below that the body appears to exhibit slightly smoothed cord markings. The interior of Vessel 5 has been smoothed and lacks interior decoration.
Figure 3.8  *Miniature Vessel 5 (left) and Vessel 6 (right)*

Vessel 6 is represented by a single vessel section that extends from the rim to just below the shoulder (*Figure 3.8*). It has a flared rim and constricted neck but does not have a collar or castellations like Vessel 5. The rim lip is rounded with irregularly stamped linear marks. Vessel 6 is undecorated; the surface treatment consists of the original cord marking very evenly applied. Vessel 6 has a very pronounced shoulder, similar to Vessel 5, and unlike any of the other non-miniature vessels in the assemblage.

Both vessels come from Feature 22 inside the enclosure. In addition, other ceramic sherds recovered from this feature may be from miniature vessels; however, no others appeared
to be from either Vessel 5 or Vessel 6, suggesting that additional miniature vessels were likely present at the site.

### 3.2.1.3 Unassigned Rim Sherds

Rim sherds consist of an interior, lip and upper exterior of a vessel, or have fragmentary representation of those elements. Fragmentary rim sherds or rim sherds that could not be associated with larger sections of formally designated vessel were analysed separately. Of the 22 fragmentary rim sherds recovered from the site, two were unassigned, while none of the 21 complete rim sherds were unassigned (Table 3.1). The two unassigned rim sherds were recovered from Feature 58 within the enclosure; there were no unassigned rim sherds recovered from the exterior.

In general and where observable, the unassigned rim sherds exhibit similar trends in form and decorative application as noted for vessels. Distinctive attributes noted on the two unassigned rims includes apparent oblique stamped decoration on the interior and exterior surfaces.

### 3.2.1.4 Unassigned Neck and Shoulder Sherds

Neck sherds were identified by exterior concave surfaces and smoothed or decorative applications. A total of 93 neck sherds were recovered from the Roffelsen site, all of which were collected from pit features (Table 3.1 and Table 3.10), 14 of which could be associated with Vessel 10. No other neck sherds could be assigned to designated Vessels.
Of the remaining 79 unassigned neck sherds, the most common decorative motif encountered consisted of cord wrapped stick stamps in oblique rows over a smoothed neck (Figure 3.9). Bands are typically oblique and tightly spaced, leaving a blank space of approximately the same width as the band of decoration between each. Oblique bands can appear as multiple, short lines of decoration repeated all or part of the way down the neck (e.g. Figure 3.1, Figure 3.2), or as a single, long oblique column of decoration extending most or all of the way along the extended neck (e.g. Figure 3.9), or, in the case of Vessel 10, have both (Figure 3.6).

![Figure 3.9 Examples of Oblique Rows of Tool Impressions](image)

Another predominant decorative motif evident on unassigned neck sherds consists of incised triangles, alternating between smoothed or blank triangles and triangles filled in with a decorative treatment. This motif is represented by twelve neck sherds not
otherwise associated with a formal vessel (*Figure 3.10*). On six fragments from Features 13 (n=2), 20 (n=1), 42 (n=1), 47 (n=1) and 58 (n=1), the motif consists of blank triangles alternating with triangles decorated with incised oblique lines. Variations to this decorative motif are also present, including one sherd from Feature 13 which has alternating blank and decorated triangles, only the filled triangles have more widely spaced oblique incised lines. One sherd from Feature 22 and one from Feature 24 both have alternating blank/decorated triangles, only instead of incised oblique lines the alternating triangles are filled in with crescent shaped stamps in horizontal lines (*Figure 3.10*). Three neck sherds of Vessel 3 from Feature 19 also display this decorative motif and are considered mends of the same vessel (*Figure 3.3*).
Only four shoulder sherds not otherwise part of assigned vessels were identified in the assemblage, generally defined by a concave exterior or end of the smoothed neck surface. Two of the unassigned shoulder sherds mend and are part of a miniature vessel with similar morphology to Vessel 5 in that they have a roughened exterior and smoothed interior, pinched shoulder with a smoothed neck with oblique incised lines. These shoulder sherds do not mend with, nor could they confidently be assigned to Vessel 5 and are therefore considered unassigned although likely from a miniature vessel.

3.2.1.5 Body Sherds

Body sherds are relatively uniform with 94% having a smoothed interior and cord marked exterior (n=269, 94%), while 4% (n=11) have interior cord marking and a smoothed exterior, and 2% (n=6) of body sherds have both interior and exterior cord marking. Both are from the interior of the enclosure, and one is from a miniature vessel similar to Vessel 5, and has a smoothed interior and exterior with irregular incised lines on the exterior. The cord marking exhibited on the majority of body sherds from the Roffelsen collection is mottled and blotchy and understood to be a result of vessel manufacture rather than an additional decorative treatment. This treatment is used on all of the body sherds examined except for the sherds of Vessels 5 and 6, the miniature vessels from the site. These miniature vessels have well-defined, thin lines of cord marking, called “cord malleated” by Wright (1966:29-30).

3.2.1.6 Pipe Fragments

Four pipe bowl fragments were recovered from the Roffelsen site, all from Feature 22, located within the enclosure. While no mends could be determined, general shape, paste
and treatment suggest they are from the same pipe. The bowl is typically early Western Basin Late Woodland in form, that is cylindrical with no flaring or constrictions present (Murphy and Ferris 1990). The sherds exhibit a smoothed interior with score marks while the exterior has been smoothed but has bumps and discolouration. The fragments are thin, ranging between 4 and 5mm thick.

3.2.1.7 Lumps of Clay

Six fragments of fired clay were recovered from four features in the interior of the enclosure (Features 19, 21-22, 25). Similar fragments have also been recovered from other Late Woodland sites in this area of the Thames River drainage (e.g., Ferris and Crundwell 1988). There is no clear indication of function. However, they are fired, so this may suggest the objects were created from the manufacture of ceramic objects or incidental clay firing during use of a hearth in this area of the site.

3.2.2 Lithics

The Roffelsen site assemblage contains only 36 lithic objects. Analysis was limited to sorting debitage into raw material, since the lithic assemblage is made up primarily of 33 debitage flakes, including three specimens that exhibit utilized or cutting edges. Notably 9 flakes are found as the only material content of Feature 23 in the interior of the enclosure. In addition, a single core was also recovered, along with a burnt biface tip fragment. These items were recovered from ten features and eight one metre square plough-zone units, and the vast majority of this material comes from the interior of the enclosure (Table 3.1). In terms of raw material, the majority of chert flakes are from
Onondaga chert sources (n=23), followed by an unidentified low quality, porous chert (n=6), and four pieces of Selkirk chert (Grant 2006).

In addition to the chert material, a very round, smooth, rock measuring 70mm in diameter was recovered. The round rock was recovered from Feature 24 inside the enclosure and has two small circular pits and one shallow linear pit, but is otherwise completely smoothed.

![Smoothed, Round Rock](image)

*Figure 3.11  Smoothed, Round Rock*

The first circular pit measures 5mm in diameter, the second is 4mm in diameter and the linear pit measures 9mm by 3mm, at the maximum points. There is no evidence that the stone was intended as a hammerstone and the evident grinding appears to be for the
purpose of creating a smoothed, perfectly round rock. The function of this stone is undetermined.

3.2.3 Faunal and Shell Remains

The majority of faunal and shell material recovered from the site was in small fragments. No formal analysis was undertaken of this assemblage, although I was able to generate a limited and basic sort into various genera (Grant 2006), further expanded on by Dr. Jennifer Morgan. Excluding the elements of a buried canine recovered from Feature 54, a total of 62 faunal pieces were classified into the following categories: clam shell, medium/large mammal (possibly deer), small/medium mammal (perhaps one possible muskrat), turtle, fish, and bird. From that sort, the largest amount of material was clam shell at 47%, followed by mammal at 43% (Table 3.4).

Table 3.4 Faunal Material Classifications and Frequencies

<table>
<thead>
<tr>
<th>Classification</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clam shell</td>
<td>29</td>
<td>47%</td>
</tr>
<tr>
<td>Medium/large Mammal</td>
<td>20</td>
<td>32%</td>
</tr>
<tr>
<td>Small/Medium Mammal</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Turtle</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Fish</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Bird</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Table 3.5  Location of Faunal Material

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total Quantity</th>
<th>Total Interior</th>
<th>Total Exterior</th>
<th>% Interior</th>
<th>% Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clam shell</td>
<td>29</td>
<td>0</td>
<td>29</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Medium/large Mammal</td>
<td>20</td>
<td>18</td>
<td>2</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Small/Medium Mammal</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>Turtle</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Fish</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Bird</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>All Faunal</td>
<td>33</td>
<td>24</td>
<td>9</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Total of Faunal &amp; Shell</td>
<td>62</td>
<td>24</td>
<td>38</td>
<td>39%</td>
<td>61%</td>
</tr>
</tbody>
</table>

While all the shell remains were recovered from primarily two features in the exterior space, 24 of 33 faunal bones came from features inside the enclosure, primarily from Feature 22 (Table 3.5 and Table 3.10). The quantity of recovered faunal remains is quite low on the site, though this is consistent with the recovery of faunal remains from primarily feature contexts on sites from this period and region (e.g., Lennox 1982; Kenyon et al. 1988). The paucity of faunal remains may reflect depositional practices that facilitated loss of this material, or were removed through excavation practices during stripping of the surface of the site (e.g., disposing of faunal remains on ground surfaces). But it also may reinforce the notion that the locale was not inhabited for extended periods of time when it was occupied. Regardless, the distribution of faunal remains also suggests that waste from meal-related activities was more, albeit limitedly, prevalent inside the structure.
3.3 Discussion of Artifacts

The Roffelsen site ceramic assemblage is consistent with the temporal placement of the site at the early Younge phase of the early Late Woodland Western Basin Tradition, exhibiting decoration characterized by multiple rows of tool impressions, castellations, and in some cases elaborate neck decoration with complex motifs (Murphy and Ferris 1990). There is some continuity with ceramic trends seen in the earlier Riviere au Vase phase, as illustrated with Vessels 1 and 2, in that the application of multiple rows of decoration appears to be applied directly on top of the cord marked neck and rim. Vessel 10, as well as 18 unassigned neck sherds, display oblique bands of tool impressions similar to the late Riviere au Vase technique of oblique rows of plaits, although these are not as widely spaced as those generally classified as Riviere au Vase (Chris Watts, pers. comm. 2005), and are also known from early Younge phase assemblages (Ferris 1989). Complex neck decorative motifs, such as alternating filled in and blank triangles, are present in the Roffelsen collection and are seen as a dominant motif of the Younge phase (Murphy and Ferris 1990:228). Vessel 3 and an additional twelve unassigned neck sherds display this complex triangular motif; however, no rim or neck sherds examined display the so-called diamond variant of this decorative motif also common during the Younge phase, albeit from slightly later sites (e.g., Fox 1982a; Lennox 1982; Watts 2008).

Redmond (1984:112) and Stothers and Pratt (1981:85) indicate that during the Younge phase interior decoration diminishes in frequency. In their analysis of Younge phase ceramics from southwestern Ontario, Murphy and Ferris (1990:202) find that interior decoration is consistently found on 85 to 95% of the vessels sampled. They also found
that multiple castellations were present on 30-50% of Younge phase ceramics sampled; that lips were generally decorated, and either flat (60-80%) or rounded (15-30%) in profile; and that a small minority of rims appear to be scalloped, formed by pressing a tool or finger repeatedly along the rim.

Murphy and Ferris (1990) suggest that the use of a band of plain neck as a decorative attribute possibly occurs as a late development of the Younge phase, and oblique rows of tool impressions, sometimes called plaits, are seen as common during the end of the Riviere au Vase phase. At the Roffelsen site Vessel 10 displays both of these attributes.

The Roffelsen site has five examples of vessels with circular punctates, all of which generate interior bosses (Vessels 1, 2, 3, 4 & 10). In their examination Murphy and Ferris (1990) found that as the Younge phase progressed punctates tended to become shallower and not normally generate bosses. There are no examples of deep slashing punctates from the Roffelsen collection, which is another characteristic of Younge phase ceramic decoration.

Murphy and Ferris (1990:228) consider body treatment as a temporal indicator, citing thin, deep “cord malleated” impressions as a common attribute of Riviere au Vase ceramics, and the move to the more mottled cord marked or “fabric impressed” body treatment as an indicator of the Younge phase. The cord marking exhibited on the majority of body sherds from the Roffelsen collection is mottled and blotchy. This
treatment is used on all of the body sherds examined except for the bodies of Vessels 5 and 6, the miniature vessels from the site, which have more of a cord malleated treatment.

Small, so-called juvenile vessels occur on Younge phase sites, taking the form of decorated or undecorated “thumb pots” (Murphy and Ferris 1990), but are not represented in the Roffelsen assemblage. There are, however, two examples (Vessels 5 and 6) of miniature vessels exhibiting good craftsmanship and detailed attention to decoration and vessel shape. This vessel type is seen as quite distinct from juvenile vessels, and these miniature vessels are found on many Western Basin sites but are particularly common during the Younge Phase (Murphy & Ferris 1990:207). Of the ten vessels recovered, two fall into this category. Vessel 5, Vessel 6 and all other ceramic fragments identified as pieces of miniature vessels were only recovered from Feature 22, within the enclosure.

Previous studies (Ferris 1989:13; Fox 1982a:6; Kenyon et al. 1988; Lennox 1982:19; Reid 1981:16, 1982:30) have shown that the lithic material on Younge phase sites is characterized by the use of locally available pebble cherts from secondary deposits. This trait is also found at the Roffelsen site, with 18% of chipping detritus being a low, unknown, poor quality porous chert, and 12% of chipping detritus on Selkirk chert; however, 70% of the lithics are manufactured from Onondaga chert, a high quality material which deviates from Younge phase trends. Onondaga chert is a formation of the Middle Devonian age with outcrops along the shore of Lake Erie and Stoney and Sandusky Creeks (Eley and von Bitter 1989). It has a fine to medium crystallinity and is
grey or brown in colour (Eley and von Bitter 1989). There is an absence of high quality Kettle Point chert in the Roffelsen assemblage, which outcrops on the south shore of Lake Huron between Kettle Point and Ipperwash, though the small overall nature of this assemblage limits the utility of the observation.

3.4 Settlement Patterns

Settlement patterns that were exposed and recorded at the Roffelsen site following mechanical topsoil stripping consist of cultural features and post moulds. The predominant structure on the site consists of a row of post moulds and the human burial feature, which combine to make up a walled enclosure. The presence of the enclosure wall invites a consideration of spatial and settlement data from the perspective of inside and outside the enclosure itself.
3.4.1 Structure

The majority of post moulds at the Roffelsen site combine to form an enclosure, made up by a row of posts creating an approximate 25m by 30m wide circle (see Figure 3.12). The
enclosure is 80m in circumference with an enclosed space of 625m². The wall of the enclosure is made up of 235 post moulds placed in a single line, with few instances of doubling up, and an average gap between posts of 38cm. The average post diameter is 7.5cm and the majority of post moulds range from 5-9cm, although larger posts measuring 10-13cm are found at various locations along the wall, at times close to gaps in the enclosure wall.

Two large posts were originally identified as Features 50 and 51 due to their size, as they ranged from 20-30cm in diameter. They are located along the northeast section of the enclosure, flanking the largest gap in the wall (Figure 3.12). The profiles are straight and with the exception of two small fragments of pottery recovered from Feature 50 they were devoid of cultural material. Based on these attributes Feature 50 and 51 are best understood as large posts situated on either side of the largest space in the enclosure wall.

Openings in the enclosure wall are present in the northeast section, flanked by Features 50 and 51, and in and around the gap created by the burial feature. The large gap and the substantial posts by this gap in the northeast, and tertiary alignment of three posts in front of the gap, are all interpreted as creating the formal entrance into the enclosure. Other gaps in the enclosure wall where the space is more than the average distance between posts, but less than a metre wide, may or may not have been intentional, or would have not been visible as gaps to users of this space (i.e., filled in in one form or another). It is also possible that some of these gaps are a product of excavation and settlement recording, caused by a few posts being missed during the mapping of the site.
Additional large posts, ranging in diameter from 16-20cm, are found not as part of the enclosure wall but located inside and outside the enclosure. In the southern half of the interior of the enclosure is an alignment of six posts that appear to be arranged roughly into a half circle, with the opened portion of the circle facing away from the portion of the enclosure wall containing the burial feature. The half circle created by the posts makes a 3.5m by 3.5m partially enclosed space. Assuming this post alignment is an intentional structure, it would post-date Feature 21, since the north-western post of this structural alignment goes right through and beneath the feature (Figure 3.12 and Figure 3.13). It is not possible to determine what kind of structure this was, or if the archaeological pattern only partially recorded a larger structure of posts (e.g., part of a wigwam like structure similar to those noted from Cherry Lane and the Figura site in Arkona). However, the small houses found on Arkona and single house at Cherry Lane were all minimally wider than 3.5 metres; see Ferris 1990; Ferris and Wilson 2009). Whether it was a residential shelter, private space, or even rack or other tertiary structure, I interpret it as an intentional feature that is part of the alignment of internal space, situated northwest from the burial feature in the southern half of the enclosed space.

3.4.1.1 Discussion of Enclosure

The Roffelsen enclosure is unique in that it consists of a single-rowed wall not used as a house wall. Wall enclosures are not common on Western Basin Late Woodland Younge phase sites in southwestern Ontario, though it is also fair to say structures of any kind are not that common (Murphy and Ferris 1990). Residential structures range from small
wigwam-like units found at Cherry Lane (Ferris 1990) and at the Figura site (Ferris and Wilson 2009), to more longhouse-like structures at Bingo Village and possibly Dymock (Ferris and Wilson 2009; Fox 1982a). Enclosure walls are reported for at least three of the sites found in the Arkona cluster, though these appear to be palisades surrounding residential structures and internal village living spaces (Ferris and Wilson 2009). At the Van Bemmel site, both spatially and temporally close to Roffelsen, a single-rowed, crescent-shaped wall of posts encloses and creates an activity space between the wall and the edge of a height of land prior to a creek flat, and is interpreted to have been a shelter or wind break (Ferris 1989). The enclosure of a large space at Roffelsen that is vacant of intensive residential structures and activities (though domestic or “living” activities are present in the assemblage in this enclosed space), and the association with a burial feature that served as crypt over a period of time, suggests a purpose distinct from other archaeological examples noted.

As Ramsden (1991) has pointed out, enclosure walls are as much conceptual as structural, and can serve as social and symbolic signals expressing group identity or representing a claim to a space. Ramsden (1991) argues that the function of enclosure walls such as palisades was in part symbolic. Humans tend to presume a symbolic content for all actions and therefore respond not only to the act itself but also to intended and unintended symbolic meanings of that act, the implication of which is that the structure and its symbolic content are mutually reinforcing and defining (Ramsden 1991). I recognize that this is a western conception that may not have been shared by these Late Woodland people, yet a wall, palisade or circular enclosure, instantly divides the world
into two parts: inside and outside, potentially defining both those who are accepted socially to belong inside, and those that do not. Enclosing walls thus act as an expression of social control, containing those within just as much as excluding those without (Ramsden 1991).

If the enclosure wall was removed from the Roffelsen site, the archaeology of this location would look like a diffuse distribution of features, spread out over the 50m by 50m area, only distinguishable from other such Western Basin sites by a multiple burial and dog burial located slightly removed from feature clusters. But the burial feature is clearly part of this enclosure, and the spatial definition of inside and outside at the Roffelsen site indicates that the majority of material-generating activities occurred inside. To me, the different spaces made by the enclosure’s construction implies difference in the activities inside and outside that wall, possibly serving to create for the Roffelsen site inhabitants a liminal space between the natural world beyond the wall, and the spiritual space of death and loss literally represented by the wall and the burial feature that was an integral part of that wall, and presumably by at least some of the activities the living conducted in that space.

There are other examples of people from this time period burying individuals within structures, most notably at the Younge site where a few of the numerous burials in Enclosure 1 appear to have been transected by the house wall (Greenman 1937), but were not part of the wall, as is the case at Roffelsen. Moreover, the function of Enclosure 1 at the Younge site is interpreted differently, as it is thought to be a charnel house containing
hundreds of burials, while the Roffelsen enclosure is better understood as a structure related to a family cemetery (see below and Spence et al. 2014).

Also, at the Danbury Late Woodland site on the shore of Lake Erie in Ohio, a structure that does not have clear habitation features such as hearths and storage facilities was documented that included several of the burials recovered during excavations there (Redmond 2012). Structure 1 is rectangular, measuring approximately 9m long by 5m wide. Five burial features were documented within the confines of the structure, including two prone burials that lie across the projected northwestern wall and are understood to pre- or post-date the structure (Redmond 2012:121). One burial feature also contains a partial dog head and other body parts, and a dog femur and tibia was recovered from a feature directly adjacent to the burial (Redmond 2012). Redmond interprets Structure 1 as a specialized mortuary structure based on the concentration of disinterment and reburial activities inside the structure, and a lack of evidence of domestic functions within. The construction of the structure allowed for continuous access to the mortuary space over a space of at least months and probably years, and may have served to shelter those who performed the funerary activities and conceal such activities from the uninitiated, as well as protect the graves from the elements, and allow for above-ground storage of human remains prior to burial, or the caching of offerings for the dead (Redmond 2012).
3.5 Cultural Features

There are 34 sub-surface cultural features associated with the Roffelsen site, 21 located outside the enclosure, 12 inside, and one in the wall of the enclosure. A variety of feature attributes were considered in attempting to determine possible feature function and spatial associations across the site, including the shape of feature plan and profile; type of pit fill; the depth and definition of the feature; and the material included. This analysis is intended to tease out possible patterning across features and across features inside and outside of the enclosure. The two burial features are discussed separately after a consideration of non-burial features.

3.5.1 Pit Features

The 34 features documented across the Roffelsen site include pits, hearths, and burials. In total, 28 features are considered pits, 12 in the interior, and 16 in the exterior (Table 3.8). Due to the nature of excavations at Roffelsen, the vast majority of material culture recovered is from pit feature contexts. It was evident in the field, however, that all pit features were not alike. For example, beyond hearths and burials, pit feature artifact quantities ranged from 0 to over 700 artifacts, and content-rich features (arbitrarily defined as having 20 or more artifacts and/or faunal remains) are found both inside (n = 6 or 50%) and outside (n= 4 or 25%) of the enclosure.
### Table 3.6 Feature Types

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Interior</th>
<th>Exterior</th>
<th>Enclosure</th>
<th>Total</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuse Pit</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>15</td>
<td>44%</td>
</tr>
<tr>
<td>Storage Pit</td>
<td>2</td>
<td>11</td>
<td>0</td>
<td>13</td>
<td>38%</td>
</tr>
<tr>
<td>Hearth</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>12%</td>
</tr>
<tr>
<td>Burial</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>21</strong></td>
<td><strong>1</strong></td>
<td><strong>34</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

In addition, plan shape of the 28 pit features varied, from round to irregularly round (n = 21), to oval (n = 5), to rectangular (n = 1) to irregular (n = 1), while profiles for the 27 of 28 features where this attribute is recorded were basin shaped (n = 25), to bathtub shaped (n = 2). Nine (32%) pit features were stratified, though only two exterior features (Features 41 and 42) had more than two strata (i.e., multiple episodes of deposition). Presumably the other stratified features reflect post use infilling, either intentionally during periods of site occupation, or subsequently after site abandonment, as is typically interpreted for this pit characteristic (Murphy and Ferris 1990). The remainder of pit features then (nine interior and 12 exterior) tend to exhibit no strata, and presumably were used and infilled as part of ongoing feature maintenance.

Measurements varied greatly among pit features. For example, feature depths ranged from 7 cm (Feature 62) to 47 cm (Feature 47), while diameters/widths ranged from 50/36 cm (Features 65 and 40) to 120 cm (Features 47 and 64). In all, few of the features excavated are reminiscent of the round, deep pit marked by a basin shaped profile that are typically identified on Western Basin sites from this period (Murphy and Ferris 1990; see also Kenyon et al. 1988; Lennox 1982). These features are understood as storage or cache pits and despite their size artifacts are sparse, for example at Robson Road 60.5% of the
features yielded 25 artifacts or less (Murphy and Ferris 1990). The absence of this kind of feature on Roffelsen may be due to topsoil stripping impacting depth measurements, though it may be possible that Features 13, 47 and 64 in the exterior, and feature 25 in the interior, were intended at some point to serve this function, albeit at a smaller scale than seen at sites like Robson Road. It may also be that this kind of feature was not a functional requirement at Roffelsen, which has also been noted for the Van Bemmel site, where absence of deep storage or cache pits was attributed to the short term use and long period before any kind of reuse at that locale (Ferris 1989).

Figure 3.13 Example of Pit Feature Plan & Profile

Consistent with general trends from this period, content quantity within pit features did not correspond with size. For example, Feature 22, with over 700 artifacts and faunal
remains, measured 37cm deep by 100cm wide, while Feature 20, with over 80 artifacts and faunal remains, measured 9cm deep by 70cm wide. It is worth noting that the frequency of larger (i.e., defined arbitrarily as 50cm or more wide in plan and 25cm or more in depth) features varied between the interior and exterior of the site, with three of 12 interior features (25%) considered large by this measurement, while nine of 16 exterior features (56%) would be considered large.

While not a primary focus of this study, archaeologists have attempted to classify pit features into possible functions as reflected in specific site contexts (e.g., Lennox 1982; Timmins 1997). For example, Timmins (1997:165-166) noted that features with little to no artifacts in their lowest stratigraphic layers probably served as storage pits, as it was likely that organic liners in these pits would have rotted and contributed to the formation of the bottom layer, along with debris accidentally deposited in the pit. Features with lots of artifacts in their bottom layers may have never been used for storage, and so were just used for refuse. In effect, then, content and strata may indicate intentional use of pits for refuse.

Only the two features mentioned earlier (41 and 42), both located outside the enclosure, were stratified and contained material. And likewise, as pointed out by Murphy and Ferris (1990) and Lennox (1982), it may be possible that some features were re-used over their life histories, beginning as storage pits and then become refuse pits as needed, or created more expediently for a particular purpose and then utilized to deposit material. As such, functional classifications of pit features will always risk arbitrary designation.
Nonetheless, for the sake of ease of reference in this present study, and to readily explore possible differences across the Roffelsen site, and across the interior and exterior spaces on this site, I have chosen to designate multiple-stratified features (i.e., more than two strata indicating multiple episodes of use), as well as features with more than five content items recovered during excavation (as an arbitrarily defined likely intent of deposition), as “refuse” pits, while pit features not meeting this criteria are considered "storage" pits. I recognize the arbitrariness of the designations, and further qualification of content data will inform spatial analyses below. However, for sake of ease of reference and presentation of data, I will use this terminology for present purposes.

There are 15 features that can be identified as refuse pits at the Roffelsen site, ten found inside the enclosure and five outside (Table 3.6). Beyond the two multi-stratified features (13%), another five (33%) refuse pits at the Roffelsen site have more than one layer of fill. Four of five refuse pits exterior to the enclosure exhibited multiple strata, while three of nine refuse pits in the interior where profiles were recorded exhibited multiple layers.

Table 3.7  Refuse Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Location</th>
<th>Fill</th>
<th>Plan</th>
<th>Profile</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Exterior</td>
<td>Two Layers</td>
<td>Irregular Oval</td>
<td>Basin</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>Exterior</td>
<td>Homogeneous</td>
<td>Round</td>
<td>Basin</td>
<td>64</td>
</tr>
<tr>
<td>41</td>
<td>Exterior</td>
<td>Multiple Strata</td>
<td>Oval</td>
<td>Basin</td>
<td>35</td>
</tr>
<tr>
<td>42</td>
<td>Exterior</td>
<td>Multiple Strata</td>
<td>Round</td>
<td>Straight</td>
<td>117</td>
</tr>
<tr>
<td>46</td>
<td>Exterior</td>
<td>Two Layers</td>
<td>Round</td>
<td>Basin</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>Interior</td>
<td>Not Recorded</td>
<td>Round</td>
<td>Not Recorded</td>
<td>21</td>
</tr>
</tbody>
</table>
Refuse pits with homogeneous soil are interpreted as single use pits. Their concentration in the interior of the enclosure (6 of 7) could indicate that it wasn’t as acceptable to leave open pits in this ritual or liminal space, or in other instances that the amount of refuse was so great they were quickly filled and not large enough to permit multiple depositions. This would certainly be supported for Feature 22 which had 758 pieces of material and represents by far the single greatest non-burial depositional event at the site.

Of the 13 storage pits only two of these pit features (Features 26, 61) are found inside the enclosure (Table 3.7).

### Table 3.8 Storage Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Location</th>
<th>Fill</th>
<th>Plan</th>
<th>Profile</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Exterior</td>
<td>Homogeneous</td>
<td>Round</td>
<td>Basin</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Exterior</td>
<td>Pocket of different soil</td>
<td>Round</td>
<td>Basin</td>
<td>0</td>
</tr>
</tbody>
</table>
Four hearths were also documented at the Roffelsen site. Hearths are shallow, circular to oval features with fire reddened soil and no artifacts. All four hearths are found outside the enclosure wall and relatively isolated from the other pit features.

Twenty one features are outside the enclosure (11 storage, five refuse, four hearths and one canine burial pit) and twelve (10 refuse and two storage) are found inside the enclosure. Feature 54, the canine burial, is located southeast of the enclosure, close to the human burial feature and away from other features. The human interment is situated within the line of the enclosure wall in neither the interior or exterior space. As the line of posts that make up the enclosure wall did not intersect Feature 59, this suggests the space of the grave was incorporated intentionally into the enclosure wall, and that either the grave was created before the enclosure wall, or they were created at the same time.
Table 3.9 summarizes the general location of non-burial feature types. It suggests that, either as a product of archaeological classification or actual use life histories, the
categorization of “refuse” and “storage,” especially as related to the presence or absence of archaeological material in each of those types, is significant when considering differences between features from the interior and exterior of the enclosure. Spatial patterning related to feature content will be explored more fully next.

**Table 3.9  Feature Types by Location**

| Feature Type | Interior | | | Exterior | | |
|--------------|----------|---|---|---------|---|
|              | %        | # | | %        | # |
| Refuse Pit   | 67%      | 10| | 33%      | 5 |
| Storage Pit  | 15%      | 2 | | 85%      | 11|
| Hearth       | 0%       | 0 | | 100%     | 4 |

**3.5.2  Feature Contents**

While over half of the 28 pit features excavated (n=18, 64%) included artifacts, the overall artifact yield from most of these features was low, and only eleven features were found to have more than 20 artifacts. As noted above, pit features with artifacts in them are concentrated within the enclosure. Of the 18 pit features with any kind of artifacts, 61% (n=11) are inside the enclosure. Alternatively, nine of the ten features lacking any artifacts are located outside the enclosure. Table 3.10 provides the context and contents of each of the Roffelsen subsurface features and the features are illustrated according to material yield in Figure 3.15.

**Table 3.10  Feature Context, Type and Contents**

<table>
<thead>
<tr>
<th>Location</th>
<th>Context</th>
<th>Pit Type</th>
<th>Vessel(s)</th>
<th>Artifact</th>
<th>Faunal</th>
<th>Freq.</th>
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<td>Context</td>
<td>Pit Type</td>
<td>Vessel(s)</td>
<td>Artifact</td>
<td>Faunal</td>
<td>Freq.</td>
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<td></td>
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<td>Feature 61</td>
<td>Storage</td>
<td>-</td>
<td>body sherd</td>
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</table>
Figure 3.15  Pit Features by Artifact Yield
A total of 953 artifacts were recovered from eleven of twelve features within the interior of the structure, comprising 85% of the total pit feature assemblage, while 166 artifacts were recovered from seven of sixteen features exterior to the enclosure (Figure 3.15). The average yield for features with artifacts in the interior of the structure is 86, with a range of recovery from 1 to 734, and the average yield from features with artifacts outside the enclosure is 24, with a range of recovery from 1 to 61.

The averages from inside the enclosure are skewed by Feature 22 from which 734 artifacts were recovered - 66% of the artifact total from the Roffelsen site pit features (see Table 3.10). Six of the ten vessels were recovered from Feature 22, as well as the miniature vessels. Only one instance of a cross mend was identified. Vessel 3 is represented in Feature 22 by three rim sherds and two necks sherds, and from Feature 19 by three neck sherds. The features are approximately 4m apart from each other in the western side of the enclosure along the cluster of features and posts radiating northwest from the burial feature. Based on the volume of material recovered from Feature 22 and its association with Feature 19, it is likely that at least these features, if not others in the linear alignment and post structure, are linked to the period of time when the burial was initially constructed and burial feature established. This was also perhaps the first visit to the site, but regardless, it is likely the period of use of Feature 22 would have been when the enclosure and grave were constructed, encompassing the time and labour to conduct the treatment of the deceased and rituals associated with the burial of Individual A (see burial discussion below). I suspect the initial visit to create the site would have required the longest stay as it would have taken a few weeks to prepare the site, build the wall and
possibly the interior structure, and conduct all the necessary rituals for the display and interment of Individual A.

### 3.5.3 Canine Burial

Feature 54 contained the remains of a single canine and five pottery fragments (three body sherds and two fragmentary sherds). The burial pit is situated southeast of the enclosure, approximately 2m from the wall, measuring 220cm in length with a maximum width of 120cm. It is roughly oval in size with the maximum length on a southwest to northeast orientation. The feature has stratified soil: at the base a thin layer of light brown clay, the majority of the pit filled with black clay, with red clay covering the majority of the surface. This red clay may indicate a burning event, a fire on the burial pit after the dog was buried. The field data is inconclusive on whether the clay was fired.

A total of 161 pieces of faunal material were recovered. Unfortunately information on the orientation of the canine and level of articulation was not recorded during the excavation, though it is assumed the dog was buried whole, and the fractured bones and absence of some elements could be the result of impacts from topsoil stripping/cleaning the subsurface of the site during excavation. Faunal analysis of the remains was conducted by Edward Fread of Archaeologix Inc. in 2005 (see Grant 2006). While the specimen was found to be relatively complete the cranium, ribs and pelvis are highly fractured and some elements are missing. All of the epiphyses are fused and all teeth are erupted and worn, and one lumbar vertebra exhibits arthritic deformities, all of which indicate advanced age. The sex of the canine could not be determined due to severe damage to the
pelvis and no obvious cause of death was evident. Due to the excavation process there is no data on burial positioning, completeness or level of articulation. No cut marks were identified, suggesting defleshing of the bones was not conducted; however the examination did not involve magnification. Isotopic analysis conducted by Zoe Morris (2015) indicates that the Roffelsen dog was consuming maize in sufficient enough quantities to suggest maize was a year-long food source for the dog, as well as, presumably, the dog’s owners.

### 3.5.4 Human Grave

Feature 59 is the only feature that is located as a gap in the wall of the enclosure. It is an oval pit 190cm by 102cm with the maximum length in a northwest to southeast orientation. There are three posts directly associated with the feature, two small posts 3-4cm in diameter near each other in the pit and visible only in its base, and a larger post 10cm in diameter, placed just beyond the northwest edge of the feature (Figure 3.16). The large post may have functioned to anchor a cover or a superstructure which served to protect the remains and the two smaller posts may have been part of a termination ritual marking the end of the feature’s use or may have helped secure the cover after it had experienced some decomposition. Unless otherwise noted, the observations and interpretations of this internment feature and the individuals interred arise primarily from Spence et al. (2014) with some personal observations from being on site during their removal.
Seven individuals were contained within the grave, and for purposes of analysis were designated A through G. The letter designations were assigned as individuals were identified and do not indicate the deposition sequence. These individuals were placed sequentially in the pit as articulated skeletons rather than fully fleshed bodies. The orientation within the grave was not determined by age; it could not be determined from the available evidence if sex was a factor or not in determination of inclusion or position.

Table 3.11  Sex, Age Position, and Orientation of Individuals from the Roffelsen Site (Spence et al. 2014)

<table>
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<th>Sex</th>
<th>Age</th>
<th>Position</th>
<th>Orientation</th>
</tr>
</thead>
<tbody>
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<td>Male</td>
<td>50-79 years</td>
<td>Extended supine</td>
<td>Head to northwest</td>
</tr>
<tr>
<td>B</td>
<td>-</td>
<td>6-8 years</td>
<td>Extended supine</td>
<td>Head to northwest</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>3-4 years</td>
<td>Extended supine</td>
<td>Head to southeast</td>
</tr>
<tr>
<td>D</td>
<td>-</td>
<td>1.5-1.8 years</td>
<td>Extended prone</td>
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<tr>
<td>E</td>
<td>-</td>
<td>1.5-1.8 years</td>
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<td>F</td>
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<td>G</td>
<td>-</td>
<td>0-2 months</td>
<td>Extended prone</td>
<td>Head to southeast</td>
</tr>
</tbody>
</table>

Although the entire sequence of deposition is unclear, Spence et al. (2014) have been able to determine that the first individual to be placed in the pit was A, the adult male; B followed by C were placed on A’s right side; F followed by E were placed on his left side; and D and G, order unknown, were placed on top of A. Bone-to-bone contacts were evident between B and A, C and B, F and A, E and F, and D and A. The fact that they were in direct contact indicates that the pit had not been filled between interments, and varying levels of decomposition and articulation observed suggest different lengths of time between the addition of new individuals to the grave.
Spence et al. (2014) report that there was no obvious cause of death for any of the individuals, though F probably suffered from vertebral tuberculosis which may have played a role in his death, and G suffered infantile cortical hypertosis, also known as Caffey’s disease, and while not often fatal it may have been implicated in G’s death.

The presence of numerous cut marks on the exterior of the skeletons suggests that most of the soft tissue had been removed, including internal organs, fleshy part of the nose,
tongue, ears, and in the case of F removal of the brain, leaving only enough tissue to maintain their articulation (Spence et al. 2014). The production of an articulated skeleton was clearly the goal of the specialist doing the mortuary processing, and in some cases was only achieved with repairs. Lacing holes are present on the humerus and ulna of Individual A, and both A and F have holes in their second and third lumbar vertebrae. The consistency of the mortuary practices at Roffelsen, particularly the lacing holes in the lumbar vertebrae and removal of several bony segments, suggests to Spence et al. (2014) that the preparation of the deceased was conducted by the same individual.

Five of the six observable individuals exhibited developmental flaws of the tympanic plate of the external auditory canal and four of the five individuals with observable middle ears have discontinuities in the ossicular chains, suggesting to Spence et al. (2014) that the combination of outer ear and middle ear defects and suggestion of cochlear defects indicates some form of congenital aural atresia resulting in moderate to severe hearing loss. Nonmetric data indicates that the people interred in Feature 59 had close biological relationships which presumably reflect close social ties (Spence et al. 2014). As the first to be placed in the grave and the oldest person, Individual A may have had an ancestral relationship to some or all the others while the subadults may have been siblings or cousins to one another (Spence et al. 2014). Based on the analysis of crude death rates to assess the demographic size of the community contributing to the Feature 59 grave, Spence et al. (2014) infer that the use span of Feature 59 is best placed at 5-10 years by a small social unit like an extended family or lineage.
In addition to the individuals there were four items in the grave: half of a fresh water bivalve; a lump of yellow ochre, 45mm in diameter; a flake of Onondaga chert; and an unidentified tool manufactured from the humerus of a swan or goose.

### 3.5.5 Discussion of Grave

There is a broad variety of burial practices common during the Younge phase of the Western Basin Tradition. Interment styles take the form of primary burials, secondary burials, ossuaries of mingled remains, bundles of crania and long bones, rearticulation of individuals, and isolated torsos (Dewar et al 2010; Speal 2006; Wyckoff 1978; Redmond 1982; Murphy and Ferris 1990; Stothers et al. 1994; Halsey 1999). In addition to the various burial forms, there is a vast array of post-mortem treatments that have been recorded including the purposeful removal of soft tissue, perforations of long bones and crania, the application of clay to facial areas, disk removal, lacing holes, and other skeletal repairs to aid in achieving articulation (Spence et al. 2014; Fitting 1965; Greenman 1937; Raemesh 1993; Speal 2006).

Given the above it is clear that the mortuary treatment given to the Roffelsen individuals is not unique during this time period. Roffelsen is similar to other sites in that the mortuary processing is not applied with a bias towards age, sex or interment type (Romain 1978; Raemesh 1991; Wilkinson and Bender 1991). The practice of placing graves within the wall of a structure is seen at the Younge site where multiple burials are associated with the house, situated in the interior, exterior and in the walls (Greenman 1937).
Roffelsen consists of successive interment events and while the presence of cranial perforations indicates the Roffelsen individuals may have been displayed, it would not have been for an extended period given the near total absence of soft tissue and apparent goal of articulated interment (Spence et al. 2014).

There are aspects of Roffelsen that are distinctive, even in a period of great variability. Speal’s (2006) examination of the Riviere au Vase and Younge site individuals suggested that it was unusual to find more than one cranially modified individual in the same grave or for post-mortem processing to be conducted on all individuals, while all of the observable individuals at Roffelsen had cranial disks and all soft tissue removed. The practice of placing graves within structure walls is seen at the Younge site; however the scenario is different from Roffelsen in the sheer number of burials at the site and existence of numbers of individuals not buried near the walls. The Younge structure is understood as a charnel house for the burial of hundreds of individuals subject to a variety of burial and mortuary practices, while the structure at Roffelsen is seen as directly related to the grave and mortuary processing of the small group of socially isolated and related individuals interred there. Moreover, the spaces created by the Roffelsen enclosure wall serve to delineate functional and ritual spaces of the interior and exterior.

The implications of the data documented from the artifact assemblage, settlement patterns and grave interments, and the broader implications these findings have for interpreting the Roffelsen site, will be explored further in Chapter 4.
4. Chapter 4

4.1 Introduction

The Roffelsen site presents a distinctive form of early Late Woodland archaeology from this part of southern Ontario. The uniqueness of this site arises primarily from the walled enclosure, and the burial features documented at the site. In this Chapter I will integrate the archaeological and mortuary data to generate an interpretation of the human activities that led to this archaeological manifestation. While material culture recovered at Roffelsen has been instructive in helping to define the material/temporal placement of the site, discussion here will primarily focus on settlement data, orientation and association of space across the site, as well as the evidence Spence et al. (2014) have detailed for the human interment. Where appropriate, particular data on material culture is cited to help build this interpretive picture of life and death at the Roffelsen site.

An important first consideration of the settlement patterning at the Roffelsen site is the fact that the various components of the pattern can be considered all parts of a whole. No feature overlaps were observed, and with the exception of the one instance of a post intersecting Feature 21 in the interior of the enclosure, structures tend to not bisect earlier feature deposits. As discussed below, spatial alignment of features and space reflect an awareness of the internal and external space created at Roffelsen, and location of the entrance and the interment. This awareness governed the inhabitants’ choices across the site and is reflected back in the archaeology. This suggests to me that, while impossible
to confirm absolutely, it is a reasonable assumption to interpret the data as collectively representing a brief moment in time: in effect the selection, construction and use of this locale primarily for the purpose of interring the individuals found in the interment crypt incorporated into the wall of the enclosure.

4.2 Settlement Patterns and Spatial Layout at Roffelsen

The enclosure at the Roffelsen site is a single row of posts arranged in a circle, encompassing a 25-30 metre diameter space. It is generally impossible to determine archaeologically from below ground pole patterning whether such alignments allowed gaps between poles, or if material such as tree branches, bark, grass or other material was woven horizontally between the vertical posts or otherwise used to fill in the gaps, though that is typically assumed for pole structures documented archaeologically in southern Ontario (e.g., Ferris 2013; Williamson 1990). It is certainly likely that the filling in of gaps between the poles was the case, which importantly would make it difficult to see through the enclosure wall into the interior, and as a result define the interior as private space. Likewise, it is reasonable to assume that, given the size of the space encompassed by the enclosure wall, there was no roof to this structure.

It is improbable that this single line of posts was designed to function as a defensive structure, as is typically perceived to be the case for palisades encompassing residential space at village communities from this period, given the absence of that kind of residential space inside the enclosure. The wall could have served to provide protection
from the wind, though not other elements given the likely absence of a roof. But the enclosure wall would have been an elaborate effort, since it would presumably have been designed to protect against wind from any direction, rather than just against prevailing winds. Rather, I interpret the enclosure as primarily being about creating an interior, private space, materially and conceptually creating distinct spaces inside and outside the wall.

The placement of Feature 59 – the multiple burial pit – within the enclosure wall signifies an interrelationship between the structure, the spaces created inside and outside the enclosure, and the people buried there. The posts did not continue through Feature 59, thus the grave occupied a gap in the palisade rather than being a later intrusion or prior feature. As such, the construction of the Roffelsen palisade and the burial pit are interpreted as being contemporaneous activities initiated by the death of Individual A, the first person placed in that feature.

The size of the burial pit and nature of the internments gives clues to the intent of the people who constructed and used this locale. The length of Feature 59 was just barely long enough to fit all of Individual A, though the width of the pit was significantly larger than needed for the interment of a single individual. Two of A’s maxillary teeth had fallen down among the cervical vertebrae indicating decomposition before the pit became filled with soil and some of D’s right ribs had fallen into the gap between A’s sacrum and right innominate, which could not have occurred if A had been covered by soil after placement in the pit (Spence et al. 2014). Moreover, the bone-to-bone contact between
individuals who overlapped each other reveals that the pit was not filled between any of the successive interments. It seems clear that it was intended from the start that multiple individuals would be laid to rest in the Feature 59 grave and that it may be best understood as a sort of tomb or crypt.

While it isn’t possible to determine direct, associated timing, it is reasonable to assume the dog burial represents an added, complementary function for the site. The dog burial – Feature 54 – is situated close to the enclosure wall, closer than any of the other exterior features and separate from the location of any other features. The long axis of the human grave is northwest-southeast while the dog burial long axis is northeast-southwest, making the two features mirror images of each other in orientation as well as in general size, with only a 5m distance between them. Beyond placement similarities, the dog burial is also generally associated with the period of the main use of the Roffelsen site since ceramic vessel fragments were found in the feature fill. Also, isotopic analysis demonstrates that the dog was eating maize on a year round basis (Morris 2015), consistent with human isotopic patterns seen from this period (e.g., Dewar et al. 2010; Watts et al. 2011). The surface of this feature had fire reddened clay indicating that a fire burned over the pit after the dog was interred. Impacts during excavation mean it is unknown if the dog was articulated when it was interred, but there was no evidence of feasting or cut marks on the remains, suggesting there was no mortuary processing or consumption of the animal before burial. I assume that the dog died and then was buried at this location, in nearby association with the humans also interred, intentionally, reinforcing and reinforced by this locale being a place of burial.
There are other examples of dogs being buried at early Late Woodland sites from this region. At the Danbury site the skeletal remains of a dog were included in the reopened grave of a 55 year old female (Redmond 2012). A small section of the skull and seven articulated cervical vertebrae were found in one area and one scapula and several rib fragments were next to the head and neck (Redmond 2012:114). As there are at least six examples of graves being reopened after the initial interment at the Danbury site it is not clear if the partial dog head was deposited before or after the grave was reopened and the female’s left lower leg was removed (Redmond 2012). The instances of dog burials at Danbury and Roffelsen, both related to human graves, raises a question of what the use of this animal was in Late Woodland mortuary programs. It is possible that the Roffelsen dog burial was a food or sacrifice, although there was no evidence of trauma, or other form of ritual act. It is also possible the dog was buried to be near one or more of the people interred in the crypt, due to close associations the dog was understood to have had with that person or people during life.

4.2.1  Interior and Exterior Spaces

Evidence of different conceptual uses of the interior and exterior spaces by the individuals who utilized the Roffelsen site is reflected in the variable patterns of archaeological data from both areas. As reviewed in Chapter 3, while more cultural features are found outside of the enclosure, including all the hearths documented at the site, the vast majority of all material culture was recovered from interior features. Artifact assemblages are relatively small overall, but this includes ceramics, lithics and animal
bone. The ability to type the function of features from the Roffelsen site was limited and arbitrary, nonetheless, by content and by possible indication of intentional infilling after use, interior features reflect a relatively intensive period of use, while the exterior features exhibit less intensive and, in some cases, repeated uses. As well, while the majority of interior pits align along the southwest half of the enclosure, outside features cluster in two areas, notably well removed from the side of the enclosure near the human and dog burials, and removed from the entrance at the northeast top of the enclosure. These patterns all reinforce the notion of different uses, and by extension perception, of the interior and exterior spaces created by this enclosure.

The exterior pit clusters may reflect a pattern similar to that seen at Bruner-Colasanti, a Younge Phase site in Essex County, which was characterized by concentrations of pit features surrounding an open central area assumed to be central plaza (Lennox 1982), a pattern also noted inside the palisaded space of houses and open area at the Figura site and Bingo Village (Ferris and Wilson 2009). More pertinent to the feature clusters at Roffelsen, investigations of sites in the Arkona and Leamington areas also documented small sites consisting of just a small cluster of features, with little material culture in them, and these have been interpreted as short term encampments of one kind or another (Ferris and Wilson 2009; Kenyon et al. 1987). It is also worth noting that the two exterior feature clusters (to the northwest of the enclosure – features 28-30, 40-42, 44, 46-48; and to the southwest of the enclosure – features 10-13, 15, 62, 64-65) each include two closely aligned features containing most of the material remains recovered from each cluster (see Table 4.1). This repetition in pattern between the two clusters may
underscore that there were multiple social units at the site at one time, or that multiple visits to the locale occurred by a group undertaking similar activities outside the enclosure each time, or both. It might be possible that the pit clusters outside the enclosure represent relatively brief visits to the locale – archaeological traces of the day to day activities carried out outside, rather than inside the enclosure. The discrepancy in artifact counts across each feature cluster also suggest that each period of encampment or group encamping at the exterior of the enclosure required only one to two features that could be considered “refuse pits.”

Table 4.1 Pit Feature Cluster Contents

<table>
<thead>
<tr>
<th></th>
<th>Northwest Exterior Pit Cluster</th>
<th>Southwest Exterior Pit Cluster</th>
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<tbody>
<tr>
<td>Feature 41</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>Feature 42</td>
<td>61</td>
<td>51</td>
</tr>
<tr>
<td>From Rest of Pit Cluster</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Artifacts</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>Faunal/Shell</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>

Interestingly, the activities conducted outside the enclosure were situated between the wall and the river, while the largest entranceway into the structure is set away from the river and any approaches to the site from the river. This location of the entrance could have been to create an additional layer of separation between interior and exterior spaces, especially if the interior was more about the dead than the living. It could also underscore
that the interior was a space of more restricted access and use by only a limited number of individuals who came to the site. The large posts that flank the northeast entrance are interpreted as anchor posts for some kind of structure at the entrance, which may have included a gate or other device to further restrict access to the interior.

While the riverbank up to the level ground of the Roffelsen site is steep, it is likely that the Roffelsen enclosure was constructed to be a visible marker on the landscape, the steep river bank giving the enclosure the appearance of being removed yet purposefully visible. The enclosure is 20m north of the river bank, and between the bank and structure are the external feature clusters, which suggests some or all of that area was cleared or relatively open between the bank’s edge and enclosure wall, presumably as a result of timber harvesting for initial construction as well as for firewood when the site was occupied.

Turning to the interior of the enclosure, the primary use of that space, as evidenced by archaeological data, was in the southwest part of the enclosed space, and radiating northwesterly from the burial feature itself. It is here that a series of features are located and a small post structure was recorded. As noted in Chapter 3, half of features within the enclosure include more than 20 artifacts, while only one feature lacks any artifacts. While the vast majority of artifact material comes from Feature 22 (77% from all features in the interior), Feature 20 (n = 83) and Feature 25 (n = 44) also had more than double the arbitrary 20 artifact count as a measure of high artifact density on the site. As well, eight of the ten identified vessels come from the interior (six from Feature 22), as well as the majority of faunal and lithic material, although these each are relatively small
assemblages compared to other sites from this general region and time (e.g., Ferris 1989; Jarvis 1996; Kidd 1954).

As mentioned in Chapter 3, the volume of material in Feature 22 is interpreted to have been associated with the initial period of use of the site, during the construction of the enclosure and interment of Individual A in the burial feature. It also contained the only smoking pipe fragments from the site, as well as both miniature vessels, and 14 of the 32 faunal remains recovered from feature contexts on the site. As well, the only identified cross mend for ceramic vessels at Roffelsen is Vessel 3, which cross mends between Feature 22 and Feature 19, located just four metres of so from Feature 22. The presence of a cross mend indicates that both features were contemporaneous and open around the same time.

Several of the interior features pair off, including features 60 and 61, 23 and 24, and 20 and 21. In addition, features 19 and 22, and features 56 and 58, are located in close proximity to each other, which may suggest a focus of activities sequentially at each of those paired features (i.e., two features opened at once), or a feature needed at each general area each time a visit occurred (i.e., only one of each paired feature opened at one time). The fact that one post of the interior pole structure intersects Feature 21 confirms sequential use of that space, hinting at staggered events over the life of the enclosure. Given the close spatial relationship of Feature 20 to Feature 21, it is possible that these features were both infilled prior to the post construction, or that feature 20 replaced the function feature 21 was serving when the post structure was built.
If, as Spence et al. (2014) suggest, the site was occupied for brief periods to a maximum of seven separate visits to conduct interments and all the rituals that went with those interments, this would explain the relatively sparse artifact assemblage overall for the site. Not a lot of refuse would be produced from seven short visits. As well, it is worth noting that there is a difference between the location of features with either multiple or two (i.e., use and post use infilling) stratified pits and those with homogeneous soil profiles. More features outside the enclosure exhibit that pattern (n=6) versus inside (n=3). If we assume that the interior space created by the palisade was a ritual, liminal space and entry was likely not permitted for casual visits, it may be that it was not permitted to leave pits open, or that the contents included debris from mortuary activities, and as such had to be filled in after a single use. It may also suggest that the exterior pit clusters reflect additional brief periods of occupation at the site that occurred other than during times of interment. This could represent regular or irregular (seasonal, annual) visits of the family or social group as they travelled up or down the Thames River. Brief moments in time to stop and remember the deceased over the course of a broader mobility across the landscape. It is worth noting this personal, familial behaviour was recorded for Eighteenth century Ojibwa families in southwestern Ontario, in particular a family that, while travelling up and down the St. Clair River/Lake St. Clair, stopped to visit a son’s grave at the tip of Harsen’s Island along the way (Ferris 2009).
4.3 Mortuary Patterns

As discussed in Chapter 3 none of the observable individuals interred in the burial feature exhibited normal development of the temporal bone, and this maldevelopment is apparent in both the outer and middle ears and in the petrous parts (Spence et al. 2014). In other words these people would have had significant hearing deficits. Given the number of individuals affected and the young age of most of them this was clearly a congenital disorder, probably with a genetic base. It is also likely that the health problems associated with this maldevelopment syndrome could have been serious and may have led the group to anticipate more deaths following the death of Individual A. More specifically germane to this thesis, the close biological relationship among the people interred at the Roffelsen site, and their shared hearing loss is considered significant to understanding the creation of the locale and activities conducted at this site.

What Spence et al. (2014) determined is that many genetically based hearing disorders result in poor oral language development and also have correlated skeletal and soft tissue anomalies. Some frequently present stigmata from syndromes such as these include malformations of the fleshy external ear which could be disfigured or absent, pigmentation anomalies and a suite of eye variations all of which would have been visible to other members of the community and to outsiders. While it isn’t possible to say with any certainty whether these abnormalities were present in the Roffelsen population, their possible presence should be kept in mind when thinking about the social impact of the syndrome in addition to hearing loss and potential language difficulties.
As Spence et al. (2014) detail, all seven of the individuals interred at Roffelsen underwent extensive and remarkably consistent mortuary processing prior to interment taking place. The limbs were stripped of all soft tissue, even to the point of scouring between the tibia and fibula and the ulna and radius. Flesh removal was either done very carefully on the wrists, fingers, ankles and toes, or they were left intact to ensure their continued articulation. The soft tissue was removed from the torso, internal organs were cleaned out and soft tissue from the back of the torso was scraped off. On the head the scalp was scraped away and the ears and soft tissues of the face (including the eyes, tongue and fleshy part of the nose) were all removed. The brain of at least Individual F was also extracted. Brain extraction may have occurred to the other deceased, but the process would have been done carefully enough to leave no cutmarks on the interior surfaces of the cranium. Cranial discs were excised to allow for access to and removal of the brain (or to free some force or essence from inside the head). It appears that the immediate goals of this extensive processing were to remove virtually all the soft tissue from the corpse and to retain an articulated skeleton. Indeed, all of the skeletons placed into Feature 59 were fully and properly articulated, extending even to the distal phalanges. As well, these interments, and the processing for interment, occurred soon enough after death that there was no separation of elements through decomposition.

Presumably the majority of these activities would have been conducted with lithic tools of one kind or another. Little in the way of lithic debris was recovered from the assemblage, though it is worth noting that, in an otherwise empty feature, nine lithic
flakes were recovered from Feature 23 in the interior, and a biface tip was recovered nearby from Feature 22.

It should be stated that it is not possible to be absolutely certain that the mortuary processing happened at the site; the patellae and the discs cut from the cranium are missing and evidence from other sites (Spence pers. comm. 2013) suggests that they should have been discarded at the place the processing was done. Therefore either the processing was done elsewhere or the soft tissue, patellae, discs and other remnants from processing were discarded off site, left on the surface, or in the case of the bone, retained for some purpose. However, it is also the case that the post-processed and articulated skeletons were held together by so little that they could not have remained intact if transported far. As such it is most reasonable to understand the mortuary processing as having occurred at the site, not far from the burial pit.

The semi-circle of posts in the interior of the Roffelsen structure creates a 3.5m wide by 3.5m deep partially enclosed space that could have had a roof to protect the interior and may have functioned as work space for the mortuary specialist or to obstruct the ritual or body processing activities from view. Or it could have acted as a shelter for the specialist and others during the time spent at the site preparing the bodies and conducting the associated rituals. If that was the case, however, and given the structure post-dates at least Feature 21, some activities either took place in the enclosure before deceased individuals needed to be processed and interred, or that at least Individual A was processed without aid of that structure.
Evidence suggests that the articulated skeletons were displayed before their burial. Lacing holes in the lumbar vertebrae of A and F were to assist in articulation of these larger individuals, and holes were drilled in the crania of A, F, D and C near the area of the bregma (Spence et al. 2014), which could have been used to hang the individuals for display or to attach some sort of decoration or headdress. This need to hang the bodies for a period of time potentially may have been an alternative or additional function of the post structure. Hanging the deceased in this way may have served a mourning or ritual purpose for those left behind, or may have more simply been a necessary positioning to facilitate latter phases of the processing of the bodies.

Spence et al. (2014) remarked on the high degree of consistency in the mortuary processing evident across the seven individuals, even though these activities would have taken place at different times, and would have been a time and labour intensive undertaking, regardless of possible emotional spiritual tolls. This observation suggests the possibility that most, perhaps all, of the Roffelsen people were defleshed by the same person, one with a good understanding of human anatomy. This person may or may not have been a member of the larger family or social group, and may or may not have held a special status as a shaman of some sort. The fact that there was no separation of elements indicates that the mortuary processing and interment occurred shortly after death and the consistency suggests it was by the same ritual specialist or at most a ritual specialist and a person trained by that ritual specialist as an apprentice. All indications suggest that the specialist had a great deal of experience so he or she may have served a wider variety of
groups and may have come from elsewhere in the region. The absence of other examples of this kind of detailed defleshing in the archaeological record from this region could suggest the practice was unique to this social group. However, as Spence has noted (pers. comm. 2013), the need to conduct very detailed and close analyses of the remains in order to identify these patterns of processing may mean other examples exist in the archaeological record but were not identified due to more limited analyses or need for immediate reinternment.

4.4 The Roffelsen Site, History of Use

The archaeological patterns at the Roffelsen site are best understood to have occurred in relation to the primary role of the site as a place to grieve, prepare, and bury individuals who were closely related to one another, and, likely, to the living who built and maintained the enclosure and place through its use for this purpose.

My interpretation of the data is that the archaeological patterns inside the enclosure are primarily or exclusively related to the preparing, processing, interment and associated rituals surrounding the burial of these seven closely related individuals, and that the wall was constructed specifically to create a private, and perhaps formal space for these activities. Everyday activities may have also occurred in the interior, given the number of vessels and faunal remains recovered from the interior features. This may have been related to sustaining the individual(s) who conducted the labour intensive activities preparing the bodies for burial, or related to sustenance for the people who originally built the enclosure, in the case of Feature 22. Alternatively, it is also possible that the
people who entered the enclosure to work with the deceased were sustained by people staying on the outside of the enclosure, presumably around the exterior feature clusters. If this was the case for some or all of the interment instances, then the majority of material remains and settlement patterns found within the interior might be better thought of as directly related to the rituals and various tasks required to prepare the bodies for interment.

Overall, a general lack of material remains tied to food acquisition, preparation and consumption could indicate that when people needed to visit the Roffelsen site, they brought prepared food in order to allow greater focus on these ritual activities, or otherwise did not stay long enough to really focus on these more routine activities. The mortuary data suggests that the site served as a mortuary center for a small social unit like a family, extended family, or at most a small lineage. As well, given the relatively quick succession of interments, Spence et al. (2014) estimate that the use of the burial feature probably spanned 5-10 years. Given the lack of overlapping features and structures and general symmetry of space here, that estimate likely can be extended to the duration the locale was actively used as a site, though it may be that after the last interment in the burial feature other social group members continued to return for mourning and remembrance reasons.

The small group of inter-related people in the burial feature likely had significant hearing defects and possible visible disfigurements. Given the preponderance of the skeletal maldevelopment evident on the individuals interred, it is reasonable to assume only
people who suffered from this disorder were those who were buried at Roffelsen. This suggests all subsequent interments had a clear relationship with Individual A. It is also reasonable to suggest that the subsequent interments may have been connected to Individual A as a father or other direct biological relation to perhaps some of those younger individuals; in other words these people may have lived together with Individual A before he died. It also suggests that the enclosure and grave were created as a crypt for these particular members of a family or social unit, and that the uniqueness of this mortuary programme is precisely because of the uniqueness of the individuals buried there, however that uniqueness was understood during their lives and by those around them.

Why go to so much trouble in preparing these people after death? The individuals buried at the Roffelsen site do not necessarily need to be considered an isolated group because of their differences, shunned by those with full abilities. However, because of the language difficulties they probably had as a result of their maldevelopment these individuals would have literally experienced sound and communication isolation, and perhaps some form of social isolation no matter how accepting the greater Late Woodland period population of the region would have been at the time. The effort invested in the construction of the enclosure, and the anticipation of the subsequent interments does suggest that the people buried here held some form of special status in the society they were a part of. But was that status because they were revered, important because of their visible and physical differences, or were they different in a negative way, feared or otherwise seen as potentially contaminating others? Defleshing practices
conducted at the Roffelsen site were extremely thorough and consistent. Was this done to remove the evidence of their physical affliction, perhaps returning them to an “unblemished” state? The genetic disability certainly could have included flesh pigmentation anomalies and deformed outer ears, visible “stigmata” that, once removed, ironically rendered the deceased whole again, as in being similar to other deceased. Perhaps the rituals and enclosure were meant to separate them from other community dead, and to protect the rest of the community from “contamination”.

Alternatively, this special treatment could have been done as a show of honour and reverence, to commemorate this special and different group of people, or out of love and loss on the part of those family members, either similarly afflicted or not, who had lost their loved ones. The enclosure could have acted as a liminal space within which the deceased were prepared for burial and the rituals for interment occurred. At the same time the presence of that enclosure could have also functioned as a monument to honour the people interred in that feature. Those deceased members of a community and family could have been a celebrated group, warranting to those left behind the need for a visible monument, one that would have been visible to, and thus known by, all who travelled down the Thames River. And this would have been the workplace of a specialist servicing the needs of the community and deceased - a specialist nearby or present at the death of each individual to then be interred by the family or community at the Roffelsen site in the same manner.
What does the grave placement as part of the structure wall mean? Such walls, by
definition, distinguish inside from outside, and at Roffelsen, perhaps also distinguished
the natural world from the cultural world, and prosaic daily living from the needs of the
dead. If so, the interment crypt is quite literally a liminal space, in the palisade wall rather
than inside the enclosure. No longer of the living, but also no longer dead after being
processed and displayed in the interior of the enclosure prior to interment within the wall
of the enclosure. And possibly this burial location was thus thought of as a physical
resting place that neither was wholly of one world or the other – regular world or
ritual/spiritual world – which may have also reflected the social realities these people
experienced while living.
The themes of memory and the notion of collective past are emphasized in current archaeological circles and often discussed in relation to Neolithic monuments and practices of prehistoric European people (Jones 2007; Meskell 2003; Pauketat and Alt 2003; Bradley 2003). The Roffelsen site provides an opportunity to develop these ideas in the context of a small, briefly occupied but no less monumental archaeological manifestation in Ontario and explore the creation of the social memory of a small subset of Western Basin Tradition people.

5.1 The Roffelsen World

Roffelsen provides a rare opportunity for study in that, unlike many monuments, individuals engaged with the site are present in the archaeological record. The individuals interred here range in age from a neonate to an elderly male ‘Individual A’, who was the first to be interred in the burial pit and whose death is considered to be the motivation for the site’s construction (Grant 2006; Spence et al. 2014). All of the individuals buried here were subject to extensive and consistent mortuary processing by a single specialist which included complete defleshing while retaining an articulated skeleton (Spence et al. 2014). The burial pit was dug just large enough to contain the length of Individual A but was much wider than necessary suggesting that it was intended from the start that more than one person would be buried here (Spence et al. 2014). In addition, post marks to possibly
anchor a protective covering over the remains were identified and the evidence suggests the pit was not filled in between interments (Spence et al. 2014).

Skeletal analysis determined that there were close biological relationships among the people buried at the Roffelsen site; they had significant hearing defects from a congenital disorder probably with a genetic base (Spence et al. 2014). What Spence, Williams and Wheeler (2014) found is that many genetically based hearing disorders also have correlated skeletal and soft tissue anomalies and while we can’t say whether these were present in the Roffelsen population their possible presence should be kept in mind when we think about the social impact of the syndrome these people had. Some frequently present stigmata from syndromes such as these include malformations of the fleshy external ear, a variety of eye variations, and skin pigmentation differences, all of which would have been visible to other members of the community and to outsiders (Spence et al. 2014). Moreover, these people may have suffered speech problems and had poor language development. The combination of deafness, language difficulties and visible stigmata suggests the people engaged with the Roffelsen site may have been a socially isolated group. Roffelsen is a dedicated cemetery for a group of closely related, hearing impaired people. The interments are not incidental with everyday living. These burials and the structure that houses them were purposefully created as separate from daily life.

5.2 Commemoration and Memorial Practices

Following Evans (2005) monuments are understood here as deliberate social expressions, constructions with the primary purpose of being left as a remembrance of past lives. Monuments are often accepted as visual symbolic elements of colonization. When
moving into a new territory a significantly visual construction sends the intended message and stakes a visual claim to the land. The Roffelsen structure was not a monument used by colonizers to lay claim to a place, but rather the expression of a small group of potentially socially isolated people. The intention was not to claim the land but to commemorate and memorialise the individuals buried within the structure, and commemorative practices highlight the way that individual and collective memory and material culture are interwoven (Jones 2007). The Roffelsen enclosure represents a highly formalized act of remembering, in other words a highly formalized act of social identity creation.

Commemoration is a type of connective practice that ties together people and things (Jones 2007). Commemorative practices are characterised by features of memorialisation and recurrence, memorialisation being the act of remembering in an appropriate way and through an appropriate medium (Casey 1987). Commemorations are necessarily performative in nature, a series of actions or participation in actions and engagement with a place (Jones 2007). Participation in the initial construction project and the on-going ritual activities of the site would have contributed to a sense of social cohesion within the small family group that utilized the Roffelsen site.

If this is the case we may question how the cosmological beliefs and ritual knowledge were expressed through the architecture and landscape created by the Roffelsen people, and explore the Roffelsen enclosure as the site and means by which social identity was formed, the creation or celebration of difference by an isolated people. It is important to
note, that while the contributing population of the burial pit consists of a small genetically related group this does not necessarily mean that the engagement of the site was restricted to only these people. The specialist who conducted the mortuary processing was a highly skilled individual, not necessarily part of the contributing Roffelsen population, who returned to the site for each interment event. In addition, the visibility of the enclosure from the well-travelled Thames River suggests that its presence had an impact on the greater populace. That being said, the small number of pits created during a maximum of seven visits to the site, and perhaps fewer, is a good indicator that only a small group was involved in its construction and use. Spence et al. (2014) state that the use span of the grave is best placed at 5-10 years at most, probably by a small family or lineage. This short period of occupation at the site and its construction and use as a commemorative family cemetery suggests to this author that only a small segment of the Western Basin Tradition population was meaningfully engaged at the site.

Commemoration through the construction of this monument may indicate the acceptance and celebration of these people as different, a memorializing monument for a group of people from a small isolated community. Without Individual A could this group of people have survived as a separate community, if that was the case, and could this enclosure serve as a commemoration of his and his kin’s lives as separate before they were assimilated into other groups as Spence et al. (2014) suggest may have occurred? There are at least two influential people known at this site, Individual A whose death motivated the construction of the enclosure and community burial pit, and the ritual specialist who conducted the uniform mortuary processing of the people who were buried here.
Together these two individuals greatly influenced the social memory of the Roffelsen constructors and contributing population as well as influencing the memory of those who happened upon it on the landscape, as it was constructed in a highly visible spot. This structure may have been constructed as a link to social power, a stage for ritual events legitimizing or accentuating the power or status of the specialist who interred people here. Without comparable sites we cannot know for certain if Roffelsen is a standardized structural type or a unique expression. Through the course of this analysis I interpret the site as a unique expression related entirely to the contributing population.

5.3 Memory and the Creation of Tradition

We are all exploring our own pasts while at the same time constructing our futures from our understanding of the past. Cultural material, be it artifacts or structures, acts to promote human memory or, as Jones (2007) suggests, is the grounds through which people experience memory. Remembering is a process made apparent to the individual by continual and dynamic encounters between the body and the material world he or she inhabits, rather than an abstract and dispassionate reaction between the external world and the mind (Jones 2007). This perspective suggests memory is produced through the encounters between people and the material world and that objects function as indexes or reminders of the past through which both individual and collective memories are formed and repeatedly invoked (Jones 2007). It is the ongoing incorporation of the object into routinized practise that generates meaning (Blake 1998).
People would share the memory of the events at the Roffelsen enclosure as well as the memory of the object, the structure itself. These memories were not simply shared but actively constructed through the collective remembering of the events held at the site, with memory emerging from the use of this monument in social and cultural practices. After each individual’s death the community and the ritual specialist returned to the site and proceeded to conduct the same ritual practice for each individual regardless of age. Jones (2007) sees culture as a network of practical actions. In the Roffelsen example soon after the individual died a group minimally comprised of the ritual specialist and others needed for the transportation of the body, traveled to the enclosure where the skilled mortuary processing and accompanying ceremonies were conducted. Through this process of practical actions, the necessary interment of a recently deceased individual, social memory was created and re-created.

Following Latour (1991) technology is society made durable, things are indexes of past events, prompts from past activities. The Roffelsen structure acts both to encapsulate and coordinate the activity conducted in its locale. Habitation practices were conducted outside the wall, interment of the individuals and possibly their display happened within the wall, while the interior space was utilized for mortuary processing, ritual activity, and as a space for the ritual specialist and perhaps some family members. The spaces created through the construction of the Roffelsen enclosure are directly related to the activity of interment and remembrance of these individuals. If Roffelsen functioned as an index it would be as a reminder of the ritual interment of Individual A. The consequent
interments of related individuals are then equivalent acts that function as both ritual and remembrance.

If the Roffelsen structure is viewed as an expression of a distinct cultural practice and distinct kind of identity it remains to be demonstrated whether this is restricted to the small social community that contributed to the burial feature or is a reflection of larger Western Basin Tradition practices. It is not outside the realm of possibility that the Roffelsen people created their own distinct social practices and traditions. Excavations at the Bingo and Figura sites of the same time period have revealed that the Younge phase, Western Basin Tradition as manifested in Ontario involved the adoption of practices not considered to be cultural norms, such as the building of longhouses along with the more traditional circular domestic structures and the construction of palisaded villages (Ferris and Wilson 2009). When one considers the possible social isolation of the contributing population of the site it strengthens the idea that these people may have been engaging in the formation of a collective memory that was unique to their small group.

Cultural practice is a continuous process of creative production through which negotiations of identity, power, and meaning are construed. Tradition is invented out of components of the past while at the same time the components that make up a tradition are subject to a continuous process of revision and alteration (Jones 2007). The Roffelsen structure served to fix the memory of tradition in the minds of the social actors performing within it. The use of a single ritual specialist led to consistent mortuary processing and the individuals buried here were placed within the same structure and
burial pit. The difference in placement, body position, could be relative to status, due to changes or mutations in social practice, or may have been of a purely functional nature resulting from the need to fit each person into a previously excavated and protected pit. There was no distinction made during the processing of each individual, regardless of age, burial placement or interment sequence. It appears that all individuals were subject to the same mortuary processing prior to interment.

Roffelsen and the lack of analogous sites may be a result of the invisibility of such sites archaeologically, a reflection of the dynamic nature of traditions – made and remade over time (Pauketat and Alt 2003), or an example of invented tradition (Hobsbawm 1983). Pauketat and Alt (2003) see earthen mounds as a kind of inscription of social memory in space, each inscription an act of ‘memorialization’. The Roffelsen enclosure may also be understood in this fashion, its short use-span providing a snap shot of tradition. This is an unfamiliar type of monument site in that it was occupied for a short period of time, consisting of a single construction episode conducted by a small group of people and a few brief subsequent visits, but perhaps remained visible for a decade or two after that.

Following Bradley (2003) and considering the creation and re-creation of memory as an active and on-going process, the act of returning to Roffelsen to inter individuals as they died is considered more than a functional exercise. These acts were creating and re-affirming the collective memory of the people engaged with the site. Moreover, the elaborate funerary rites are also understood as expressions of social memory and the construction of a collective notion of the past.
Bradley (2003) considers monument building as a codification of oral traditions so through the examination of monumental structures we can come to understand the traditions of past people. The Roffelsen enclosure left a distinct mark on the landscape, in a very visible area close to a major waterway. This monument in particular was not labour intensive, would not have required a large number of people to construct, and there is no indication that its use changed over time. The diagnostic material is indicative of a Riviere au Vase and Younge phase transitional period (Grant 2006) and the burial episodes happened within a 5-10 year period (Spence et al. 2014). It seems that the intended function of the structure when built is the only use it was put to. Did the abandonment of the site happen because the contributing population was assimilated into a larger group, did the need for the creation of social memory from this site fade after its use after a few years, or did the people stop using it once the prescribed number or type of people were interred? I suggest that it ended because all of the afflicted people had died and there was no further need for the special interment practices represented by this enclosure.

There is no indication that the use of this enclosure extended over a long period of time which raises the question of whether it was avoided or just abandoned after the last individual was buried. It may have been that the structure was shunned. If linked with the supernatural the enclosure may have served a purpose to warn others to stay away. The elaborate mortuary processing could have been an attempt to return these people to a state similar to their peers, those without the genetic illness suffered by the Roffelsen
individuals. The removal of soft tissue would have removed the visible stigmata of the syndrome; the defleshing process as a means to remove personal identity, to remove the affliction from the individual or from the individual’s spirit.

5.4 Landscape, Place and Space

The Roffelsen enclosure cannot be understood in a vacuum, removed from the locality in which it is situated. Roffelsen was not only a structure, its construction created a cultural place with meaning greater than that of the natural environment alone. The creation of place through a culturally specific set of activities relates individuals and groups to landscapes and each other within the landscape (Bruck and Goodman 1999). The act of settlement implies the creation of relationships to places that in turn are reflected in the way that these relationships are marked and remembered (Pollard 1999: 88).

Understanding this engagement with the environment allows us to move towards an understanding of settlement as social practice (Pollard 1999). Settlement is defined as a dynamic construction of space and time that encapsulates the collective memory of a group (Kovacik 1999). Structure is a powerful medium that shaped the lived experiences of people and through this the construction of social memories. The creation of memory is used to consolidate social identities, actively construct collective memory, and may also have been a statement of an inclusive or exclusive nature. The Roffelsen enclosure is directly related to the individuals interred in its wall, yet is exclusive in its restriction of the activities conducted in the interior space.
Neolithic communities had an active concern with past belonging and origins and the marking of these on the landscape, as evidenced by the many monuments commemorating the dead (Tilley 1994). In the fourth millennium many regions in Europe had earthen and chambered tombs with remains of many individuals; the disarticulated state has some suggesting that the mortuary rites transformed these bodies from individuals to generalized ancestors (Thomas 1991:112) or, in Ontario, merged individual identities into a collective identity. Relationship of past kin and the place manifest in special activities, formal deposition and construction of monuments as permanent embodiments of place-values. “It is through the rhythms of dwelling and movement that the landscape came to be acculturated and places invested in meaning” (Pollard 1999: 90).

The construction of this circular enclosure created clearly delineated spaces and may best be understood by exploring the exclusionary aspects of the site – only certain people from a small subset of society were buried here and the majority of domestic or non-ritual practices were excluded from the interior space. This structure was not used to consolidate the experiences of people from different areas to create a collective social identity but rather used by a small group that may have been excluded from general society. The disability of the individuals buried at Roffelsen, difficulties with language development and deafness, would have created some degree of social isolation from the larger society, regardless of whether the larger society wanted to isolate them or not. The social isolation was not absolute, as the ritual specialist was available to conduct the ritual processing for each of the seven individuals as they died.
In this paper the Roffelsen site is used to explore ideas surrounding memory and its relationship to material culture, settlement archaeology and landscape. This small Ontario site provides an opportunity to test current theoretical ideas that have stemmed mainly from the study of Neolithic monuments and collective social memory against a smaller and different type of site. The Roffelsen people captured their version of reality in physical form and while the answers to many of the questions the analysis of the Roffelsen site raises are not likely to appear, thinking about them allows us to explore broader questions of memory creation, social practice and the relationships of past people to the landscape. The construction of the site and interment of the individuals at Roffelsen goes far beyond the functional deposition of remains. The structure is a physical manifestation of understanding or sense of place and a demonstration of the social engagement practices of these people with the landscape. The Roffelsen site structure served as a tangible reminder of the recent past and a focal point for the creation of collective social memory with the architecture and landscape creating both tangible and symbolic connections with ancestral space, events and beliefs.
6. References

Archaeologix Inc.
2004 Roger Laprise Consent Application B121/95, Dover Township, Kent County, Ontario. On file with the Ontario Ministry of Tourism, Culture and Sport, Toronto.

2005 Stage 3, Roger Laprise Consent Application B121/95, Dover Township, Kent County, Ontario. On file with the Ontario Ministry of Tourism, Culture and Sport, Toronto.

2006 The Roffelsen Site (AcHn-33), AcHn-32 and AcHn-34, South Half of Lot 16, Concession 1, Township of Dover, County of Kent, Ontario. On file with the Ontario Ministry of Tourism, Culture and Sport, Toronto.

Blake, E

Bradley, Richard

Brashler, J., E. Garland, M. Holman, W. Lovis and S. Martin

Brose, D. and P. Essenpreis

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Callender, C., R. Pope and S. Pope
Casey, E.

Chapman, L. J. and D. F. Putnam

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Kenyon, Ian, Neal Ferris and W. Hagarty

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Kidd, Kenneth E.

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Maycock P. and G. Hills
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Murphy, Carl and Neal Ferris  

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Pauketat, Timothy R. and Susan M. Alt  

Pollard, Joshua  

Raemsch, Carol  

Ramsden, Peter  

Redmond, Brian G.  


Redmond, B. and R. McCullough

Reid, P.
1981  *Investigations at the Cherry Lane Site (Essex County Ontario) in 1981*. On file with the Ministry of Culture, Toronto.

1982  *Investigations at the Robson Road Site (Essex County, Ontario) in 1981*. On file with the Ministry of Culture, Toronto.


Ritchie, W.A.
1965  *The Archaeology of New York State*, Natural History Press, Garden City.

Robb, John


Romain, W.

Speal, C. Scott
Spence, Michael W., Robert H. Pihl and Carl R. Murphy  

Spence, Michael W., Christine White, Neal Ferris and Fred Longstaffe  

Spence, Michael W., Lana Williamson and Sandra Wheeler  

Stothers, David M., and Susan K. Bechtel  

Stothers, David M., James R. Graves, Susan K. Bechtel and Timothy J. Abel  

Stothers, D. and Michael Pratt  
1981 New Perspectives on Late Woodland Cultures of the Western Lake Erie Region. Mid-Continental Journal of Archaeology 6(1): 91-121.

Thomas, Julian  

Tilley, Christopher  

Timmins, Peter  

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**References**  
References are available on request.