

# **Funerary Ritual, Ancestral Presence, and the Rocky Point Ways of Death**

by

Darcy Lane Mathews

B.A., Simon Fraser University, 1993

M.A., University of Victoria, 2006

A Dissertation Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**DOCTOR OF PHILOSOPHY**

in the Department of Anthropology

© Darcy Lane Mathews, 2014

University of Victoria

All rights reserved. This dissertation may not be reproduced in whole or in part, by photocopy or other means, without the permission of the author.

***Supervisory Committee***

**Funerary Ritual, Ancestral Presence, and  
the Rocky Point Ways of Death**

by

Darcy Lane Mathews

B.A., Simon Fraser University, 1993

M.A., University of Victoria, 2006

**Supervisory Committee**

Dr. Quentin Mackie, Supervisor  
(Department of Anthropology)

Dr. Ann Stahl, Department Member  
(Department of Anthropology)

Dr. Peter Stephenson, Department Member  
(Department of Anthropology)

Dr. Eric Higgs, Outside Member  
(School of Environmental Studies)

## **Supervisory Committee**

Dr. Quentin Mackie, Supervisor  
(Department of Anthropology)

Dr. Ann Stahl, Department Member  
(Department of Anthropology)

Dr. Peter Stephenson, Department Member  
(Department of Anthropology)

Dr. Eric Higgs, Outside Member  
(School of Environmental Studies)

## ***Abstract***

Around 1500 years ago, the Coast Salish peoples of southwestern British Columbia began to inter their dead within funerary petroforms. These burials, consisting of patterned arrangements of stone and soil built over the dead, marked a dramatic transition from below ground burials within the village, to above ground cemeteries located around village peripheries. This upward and outward movement of the dead is exemplified at the Rocky Point Peninsula on the southernmost tip of Vancouver Island. It is one of the largest mortuary landscapes on the Northwest Coast of North America, with 515 visible funerary petroforms distributed within and between two large neighbouring cemeteries.

Catherine Bell's (1992) notion of ritualization challenges us to consider what the building of funerary petroforms accomplished that previous funerary practices did not. While funerals are times of grieving, they may also be ritual actions in which the dead are transformed from corpse to ancestor and the family from mourner to inheritor. It was in the authority of tradition that funerary ritual served as a process for both enacting and contesting relationships of power within and between the two neighbouring communities at Rocky Point.

Foregoing excavation, Coast Salish protocols of working with their dead challenged me to consider how the external and material attributes of funerary petroforms worked through space and time to produce a landscape inhabited by these durable, ancestral agents. Focusing on the mesoscale encompassing these two large cemeteries, this dissertation is an analysis of the depositional practices employed by the Rocky Point peoples in the burial of their dead. Tacking

between an ethnographic thematic analysis of Coast Salish ritualization, a body of social theory, and the archaeological record, I used a novel suite of quantitative analyses to identify patterns in how these burials were made, in addition to how they were placed relative to one another on the landscape. Results point to a fundamental bifurcation in funerary petroform morphology and placement, in part, differentiating communities of ritual practice at Rocky Point. In particular, the results highlight the social significance of the spaces between the burials, as much as the burials themselves. This is exemplified by a perceptual paradox in which these above ground features, built according to shared dispositions of practice and placed on distinctive landscapes, are simultaneously and intentionally hidden from day-to-day movement between villages. This Rocky Point sense of monumentality speaks to the liminality of their most powerful dead, anchored at the threshold of the living.

Funerary petroforms have a persistent power to entangle the living and the dead in oblique relationships of power. The resilience of this memory work, however, is not limited to the past. At Rocky Point and other cemeteries throughout the Salish Sea, these ancestral places provide living descendants with a tangible connection to family and community history. Possessing a durability that continues to enmesh people and places through time, funerary petroforms are one of the fulcrums upon which relations of power are presently balanced between Coast Salish and settler communities in British Columbia.

Key words: Practice, ritualization, power, history, tradition, memory work, materiality, communities of practice, place, point pattern analysis, cluster analysis, visibility analysis.

## Table of Contents

SUPERVISORY COMMITTEE .....	ii
ABSTRACT .....	iii
TABLE OF CONTENTS .....	v
LIST OF TABLES.....	xi
LIST OF FIGURES .....	xiii
ACKNOWLEDGMENTS.....	xix
DEDICATION .....	xxii
<b>PROLOGUE: REFLECTIONS ON BUILDING A FUNERARY PETROFORM.....</b>	<b>1</b>
CHAPTER 1: FUNERARY PRACTICE AND THE POWER OF RITUALS .....	5
<i>The Entangling Power of Funerary Petroforms.....</i>	<i>9</i>
<i>Background to the Research Problem.....</i>	<i>14</i>
<i>Statement of the Problem.....</i>	<i>24</i>
<i>Purpose of the Study .....</i>	<i>26</i>
<i>Primary Research Questions.....</i>	<i>27</i>
<i>Analytical Strategies.....</i>	<i>30</i>
<i>Significance of the Study.....</i>	<i>33</i>
<i>The Rocky Point Peoples.....</i>	<i>34</i>
<i>Assumptions, Limitations, and Scope .....</i>	<i>36</i>
<i>A Note on Dates and Phonemic Orthography.....</i>	<i>38</i>
<i>Overview of the Chapters .....</i>	<i>39</i>
<i>Summary Statement .....</i>	<i>40</i>
<b>SECTION I: THEORETICAL PERSPECTIVE .....</b>	<b>42</b>
CHAPTER 2: FUNERARY PRACTICE, RITUALIZATION, AND THE OBJECT WORLD .....	42
<i>Ritual as Practice .....</i>	<i>43</i>
<i>Power and Ritual: Equality and Inequality.....</i>	<i>45</i>
<i>Tradition: Continuity and Change in Ritual Practice.....</i>	<i>52</i>
<i>Funerals as Ritualized Depositional Practice.....</i>	<i>55</i>
<i>The Materiality of Ritual Practice.....</i>	<i>59</i>
<i>Funerary Ritual as Memory Work .....</i>	<i>63</i>
<i>The Space and Place of Ritual Practice .....</i>	<i>65</i>
<i>Funerary Landscapes, Cemeteries, and the Powerful Dead.....</i>	<i>67</i>

<i>Wayfaring, Procession, and Perception</i> .....	69
<i>Monumentality as a Practice of Memory Work</i> .....	72
<i>Burials as Houses, Cemeteries as Villages, and Communities of Funerary Ritual Practice</i> .....	75
<i>Knowing What Not to Know: Privacy and Boundaries in the House and the Cemetery</i> .....	76
<i>Theoretical Summation</i> .....	79
CHAPTER 3: ANCESTRAL PRESENCE AND THE RITUAL TRANSFORMATION OF THE DEAD .....	82
<b>SECTION II: A HISTORY OF COAST SALISH RITUAL PRACTICE</b> .....	<b>90</b>
CHAPTER 4: FOUR THOUSAND YEARS OF COAST SALISH FUNERARY PRACTICE .....	92
<i>Funerary Ritual Antecedents: Surface Burials and Midden Inhumation</i> .....	93
<i>Material Antecedents: Stone and Soil as a Medium for the Dead</i> .....	99
<i>The Advent of Funerary Petroforms: Burial Cairns and Mounds</i> .....	101
The Qithyil Cemetery: Funerary Practice in the Fraser Valley .....	102
The Funerary Petroforms of Southern Vancouver Island.....	107
The Rocky Point Funerary Landscape.....	112
<i>Fire: Cremation and Ritual Burning</i> .....	113
<i>Summation of Four Millennia of Coast Salish Funerary Practice</i> .....	117
CHAPTER 5: AN ETHNOGRAPHIC HISTORY OF COAST SALISH RITUAL PRACTICE .....	120
<i>The Saltwater People of Rocky Point</i> .....	120
<i>The Long Term Continuity of Ritual Practice</i> .....	124
<i>Ethnographic Knowledge of Funerary Petroforms</i> .....	127
<i>Coast Salish Social Structure: Power, Knowledge, and History</i> .....	128
<i>The House Group as a Community of Ritual Practice</i> .....	132
<i>Property, Knowledge, and the Ancestors</i> .....	134
<i>Production, Social Capital, and Ritualization</i> .....	136
<i>Summary: Authority, Legitimacy, and Power in Coast Salish Society</i> .....	137
CHAPTER 6: DEATH, THE ANCESTORS, AND POWER IN ETHNOGRAPHIC AND CONTEMPORARY COAST SALISH SOCIETY .....	140
Death as a Rite of Separation in Coast Salish Ritual Practice .....	142
Coast Salish Funerals as a Rite of Liminality .....	144
Feeding the Dead: Funerary Potlatches as a Rite of Reaggregation .....	146
<i>Ancestral Presence: The Coast Salish Relationship with their Dead</i> .....	152
<i>Personhood and the Ancestral Dead</i> .....	154
<i>Power from the Ancestors</i> .....	156
<i>The Ghosts of Place</i> .....	158

<i>Spatial Dispositions of the Living and the Dead</i> .....	159
<i>The Space and Place of the Coast Salish Cemetery</i> .....	162
<i>Houses and Villages for the Living and the Dead</i> .....	163
<i>The Tension Between Public and Private Space</i> .....	164
<i>Ritual Specialists in the Coast Salish Ways of Death</i> .....	165
<i>Spirit Power and the Narrative of Death and Rebirth</i> .....	169
<i>The Private and Public World of Sia'wən</i> .....	171
<i>The Metaphorical Mineral World of the Coast Salish</i> .....	172
<i>Stone as a Metaphor for Purification and Transformation</i> .....	174
<i>Stone as a Metaphor for Anchoring and Containing</i> .....	176
<i>Summation</i> .....	178
<b>SECTION III: RITUAL DEPOSITIONAL PRACTICES AT ROCKY POINT</b> .....	<b>181</b>
CHAPTER 7: LANDSCAPES, CEMETERIES, AND FUNERARY PETROFORMS AT ROCKY POINT .....	181
<i>The Rocky Point Environment</i> .....	184
<i>Building Funerary Petroforms at Rocky Point</i> .....	185
<i>The Rocky Point Study Area</i> .....	186
<i>The Yates Cemetery</i> .....	189
<i>The Edye Point Cemetery</i> .....	191
<i>The Eemdyk Passage Cemetery</i> .....	193
<i>The Bentinck Island Cemetery</i> .....	194
<i>The Race Rocks Cemetery</i> .....	195
<i>The Cape Calver Cemetery</i> .....	197
<i>The Manor Point Cemetery</i> .....	197
<i>Cremation and Ritual Burning at Rocky Point</i> .....	199
<i>Site Formation Processes at Rocky Point</i> .....	201
Cultural Transforms: Historic Activity .....	202
Natural Transforms: Conifer Encroachment .....	205
Natural Transforms: Deflation .....	206
<i>Summation</i> .....	207
CHAPTER 8: THE ANALYSIS OF FUNERARY PETROFORMS AS DEPOSITIONAL PRACTICE .....	208
<i>Cluster Analysis and Depositional Practice</i> .....	210
<i>Recognizing Genealogies of Practice in the Funerary Petroform Record</i> .....	213
<i>Coast Salish Material Taxonomies</i> .....	214
<i>Results of the Analysis of Funerary Depositional Practice</i> .....	216

<i>A Dispositional Typology: Defining Patterns in Depositional Practices</i> .....	217
Type 1 Features: Small and Medium-sized Curvilinear Funerary Petroforms .....	227
Type 2 Features: Small and Medium-sized Irregular-shaped Funerary Petroforms .....	228
Type 3 Features: Small and Medium-sized Rectilinear-shaped Funerary Petroforms .....	230
Type 4 Features: Medium and Large Burial Mounds .....	232
Type 5 Features: Rectilinear Petroforms (Possibly Deflated Monumental Burial Mounds) .....	235
Type 6 Features: Medium-Sized Stone and Soil Rounded Funerary Petroforms .....	237
Type 7 Features: Small Earthen Mounds.....	238
Type 8 Features: Hybrid Boulder Crevice-Cairn Features.....	238
<i>Summation</i> .....	241
CHAPTER 9: THE SPATIAL ANALYSIS OF FUNERARY PETROFORMS AT ROCKY POINT .....	244
<i>Theme 1: The Distribution of Funerary Petroforms by Cemetery</i> .....	247
The Nearby Cemeteries: Bentinck Island, Eemdyk Passage, and Edye Point.....	248
The Isolated Island Cemetery: Race Rocks.....	249
The Intervening Cemeteries: Cape Calver and Manor Point.....	249
The Inland Cemetery: Yates Cemetery .....	250
<i>Theme 2: The Density of Funerary Petroform Distribution</i> .....	250
The Landscape-Level Intensity of Funerary Petroform Distribution .....	252
The Mesoscale Intensity of Funerary Petroform Types within the Edye Point and Yates Cemeteries.....	253
The Mesoscale Intensity of Funerary Petroform Volume within the Edye Point and Yates Cemeteries.....	260
The Multiscalar Intensity of Funerary Petroform Dispositional Types .....	263
The Multiscalar Density of Funerary Petroform Volume .....	269
Intensity Analysis Summary .....	273
<i>Theme 3: The Interaction of Funerary Petroforms</i> .....	275
The Clustering of Dispositional Types at Edye Point.....	276
Proportions of Funerary Petroforms within The Edye Point Cemetery.....	281
Edye Point Volume Classes by NNH Ellipses and Hierarchical Cluster Analysis Localities .....	284
The Clustering of Dispositional Types at the Yates Cemetery .....	292
Yates Cemetery Volume Classes by NNH Ellipses and Hierarchical Cluster Analysis Localities .....	298
CHAPTER 10: MOVEMENT AND VISIBILITY WITHIN THE EDYE POINT AND YATES CEMETERIES.....	304
<i>Theme 4: Trails Have Biographies of Movement</i> .....	304
Pathways and Alignments of Funerary Petroforms at Edye Point.....	306
Pathways and Alignments of Funerary Petroforms at the Yates Cemetery .....	312
<i>Theme 5: Visibility and Movement Are Foundational to Producing Ritualized Bodies</i> .....	314
The Visibility Analysis Data and Methods.....	318
The Yates Cemetery: Visibility Analysis from Intervillage Trails .....	323
Edye Point Hidden Visibility Analysis from Eemdyk Passage.....	328
<i>Theme 6: Visual Differentiation of the Dead</i> .....	330
Intervisibility Between Clusters of Funerary Petroforms at the Yates Cemetery .....	330

Visual Differentiation of the Dead: Yates Cemetery Multiple Viewshed Analysis .....	331
Intervisibility Between Clusters of Funerary Petroforms at the Edye Point Cemetery .....	333
Visual Differentiation of the Dead: The Edye Point Cemetery Multiple Viewshed Analysis.....	334
Visual Differentiation between the Living and the Dead at Edye Point.....	334
<i>Visibility Analysis Summation</i> .....	337
SUMMARY OF THE ANALYSES: DISTINGUISHING RITUAL PRACTICES THROUGH THE ANALYSIS OF DEPOSITIONAL PRACTICE .....	339
<b>SECTION IV: TRANSFORMING AND ANCHORING THE DEAD AT ROCKY POINT .....</b>	<b>345</b>
CHAPTER 11: ROCKY POINT WAYS OF DEATH.....	345
<i>Rocky Point is a Liminal Place</i> .....	347
<i>Distinguishing Ritual Practices through the Analysis of Depositional Practice</i> .....	347
<i>The Significance of Clustering of Funerary Petroforms within Cemeteries</i> .....	348
<i>Placemaking and the Spatial Dimensions of Ritual Practice</i> .....	349
<i>History making and Memory Work at Rocky Point</i> .....	350
<i>The Public and Private Dead at Rocky Point</i> .....	352
<i>Knowing What Not To Know: Funerary Petroforms as a Public Secret</i> .....	358
<i>Funerals at Rocky Point as a Rite of Passage</i> .....	359
<i>Transforming, Anchoring and Concealing the Dead with Funerary Petroforms</i> .....	363
<i>Houses for the Dead: The Metaphorical Significance of Funerary Petroform Morphology</i> .....	366
<i>The Containment and Anchoring of Difficult Bodies and Difficult Deaths</i> .....	373
<i>Transforming the Dead and the Production of Power at Rocky Point</i> .....	375
The Power and Authority of Ritual Experts in the Burial of the Dead.....	381
<i>Funerary Ritual, Tradition, and Late Pacific Period Social Structure at Rocky Point</i> .....	383
A Coast Salish Sense of Power, Prestige, and the Defeat of Hierarchy .....	388
<i>Increasing Entanglements Between the Living and the Dead</i> .....	396
<i>Difficult Deaths and the Need to Separate the Living and the Dead</i> .....	397
<i>Transforming the Living through the Transformation of the Dead</i> .....	399
<i>Ritual Dispositions and Depositional Practice in Coast Salish Funerals</i> .....	400
<i>Centre and Periphery in the Burial of the Dead at Rocky Point</i> .....	400
<i>Seeing, Movement, and Concealing the Dead</i> .....	402
<i>The Power of the Dead at Rocky Point</i> .....	403
<i>Summation</i> .....	410
<b>EPILOGUE: OUR ENTANGLEMENTS WITH THE COAST SALISH DEAD.....</b>	<b>413</b>

<b>REFERENCES CITED .....</b>	<b>417</b>
<b>APPENDICES.....</b>	<b>473</b>
APPENDIX 1: CALIBRATED RADIOCARBON DATES.....	474
APPENDIX 2: COAST SALISH PHONEMIC ORTHOGRAPHY .....	475
APPENDIX 3: THE ETHNOGRAPHIC HISTORY OF ROCKY POINT .....	476
APPENDIX 4: FIELD SURVEY AND RECORDING METHODS .....	481
<i>Field Survey Techniques .....</i>	<i>481</i>
<i>Spatial Data Collection .....</i>	<i>482</i>
<i>Morphological Data Collection: Detailed Feature Recording.....</i>	<i>482</i>
<i>The Morphological Attributes.....</i>	<i>483</i>
<i>Criteria Used to Identify Funerary Petroforms on Southern Vancouver Island.....</i>	<i>492</i>
APPENDIX 5: METHODS OF THE DISPOSITIONAL TYPOLOGY .....	497
<i>The Nature of the Rocky Point Data and Implications for Cluster Analysis.....</i>	<i>499</i>
<i>Rationale for Using Polythetic Agglomerative Hierarchical Cluster Analysis.....</i>	<i>504</i>
<i>The Similarity Matrix and Clustering Algorithm: Gower's Coefficient and Multistate Data.....</i>	<i>506</i>
<i>Jaccard's Coefficient and Binary Data.....</i>	<i>507</i>
<i>Unweighted Pair Group Method using Arithmetic Averages .....</i>	<i>508</i>
<i>Attribute Selection .....</i>	<i>508</i>
<i>Data Coding .....</i>	<i>511</i>
<i>Missing Data and Excluded Attributes.....</i>	<i>512</i>
<i>Weighting .....</i>	<i>512</i>
<i>Variable Standardization and Factor Scores.....</i>	<i>513</i>
APPENDIX 6: POINT PATTERN ANALYSIS METHODOLOGY.....	516
<i>Estimating Intensity: Kernel Density Estimation .....</i>	<i>516</i>
<i>Multi-Distance Spatial Cluster Analysis (Ripley's K-function).....</i>	<i>517</i>
<i>Nearest Neighbour Hierarchical Cluster Analysis Methodology.....</i>	<i>520</i>

## List of Tables

<i>Table 1: The inferences, subset of questions, sources of data and methods of analysis used to answer Dissertation Question 1. ....</i>	28
<i>Table 2: Regional Chronology of the Salish Sea. ....</i>	93
<i>Table 3: Typology of Burial Features in the vicinity of Qithyil (Oakes, et al. 2008). ....</i>	103
<i>Table 4: Summary of Funerary Petroforms in the Rocky Point Study Area, from north to south. ....</i>	188
<i>Table 5: Attributes used in the cluster solution for funerary petroforms at Rocky Point. ....</i>	219
<i>Table 6: Summary of the cluster analysis results, comparing the proportions of materials and metric attributes across the eight dispositional types. ....</i>	224
<i>Table 7: Summary of the secondary attributes excluded from the cluster analysis, comparing proportions of the attributes across the eight types. ....</i>	225
<i>Table 8: The Spatial Analysis questions, sources of data, and methods of analysis. ....</i>	246
<i>Table 9: Edye Point and the Yates Cemetery funerary petroform NNA by Dispositional Type. ....</i>	255
<i>Table 10: Edye Point and the Yates Cemetery funerary petroform NNA by Volume Class. ....</i>	262
<i>Table 11: Comparison of the Point Pattern Process results for Dispositional Type Feature Intensity at Edye Point and the Yates Cemetery. ....</i>	266
<i>Table 12: Volume Intensity at Edye Point and the Yates Cemeteries: Comparison of the Point Pattern Process results. ....</i>	269
<i>Table 13: Distribution of Dispositional Types Within Localities at Edye Point. ....</i>	282
<i>Table 14: Distribution of Volume Classes Within Localities at Edye Point. ....</i>	288
<i>Table 15: Distribution of Volume Classes Inside and Outside of NNH clusters at Edye Point. ....</i>	291
<i>Table 16: Contingency table for the Distribution of Volume Classes Inside and Outside of NNH clusters at Edye Point. ....</i>	291
<i>Table 17: Distribution of Dispositional Types Within Localities at the Yates Cemetery. ....</i>	296
<i>Table 18: Distribution of Volume Classes Within Localities at the Yates Cemetery. ....</i>	300
<i>Table 19: Percentage of features at the Yates Cemetery within the three visibility zones by trails and control type. ....</i>	324
<i>Table 20: East trail/control trail expected and observed values for the three visibility zones. ....</i>	324
<i>Table 21: East Trail/random sample expected and observed values for the three visibility zones. ....</i>	325
<i>Table 22: West Trail/Control Trail sample expected and observed values for the three visibility zones. ....</i>	325
<i>Table 23: West Trail/random sample viewshed expected and observed values for the three visibility zones. ....</i>	326
<i>Table 24: Observed and expected values for visible and not visible funerary petroforms at Edye Point when viewed from canoe in Eemdyk Passage. ....</i>	330
<i>Table 25: Comparison of funerary ritual and mortuary practices from the Middle Pacific to Ethnographic periods. ....</i>	385

*Table 26: The Gower coefficient attributes, data type, coding, and similarity contribution used in the cluster analysis of funerary petroforms at Rocky Point..... 514*

*Table 27: The Jaccard Coefficient attributes, data type, coding, and similarity contribution used in the cluster analysis of funerary petroforms at Rocky Point..... 515*

## List of Figures

<i>Figure 1: Funerary petroforms continue to be disturbed and Coast Salish cemeteries developed for residential housing, such as is occurring at Grace Islet at the time of this writing.</i> .....	2
<i>Figure 2: Examples of funerary petroform, with curvilinear outlines (Features C24, C89, and C158) and a rectilinear outline (Feature C144).</i> .....	6
<i>Figure 3: Overview maps illustrating the location of the Rocky Point Peninsula, showing contemporary land tenure, distribution of funerary petroforms, winter village locations, and the seven cemeteries included in this study (outlined in red).</i> .....	7
<i>Figure 4: The Rocky Point and Qithyil funerary landscapes, southwestern British Columbia.</i> .....	17
<i>Figure 5: The theoretical, thematic and archaeological data used to identify and contextualize Rocky Point funerary ritual practice.</i> .....	26
<i>Figure 6: The funerary ritual process, in the context of Van Gennep’s (1960) model of rites of passage and Turner’s (1986) model of social dramas. Modified from Garwood 2011, Fig. 18.2.</i> .....	84
<i>Figure 7: Metcalf and Huntington’s (1991) interpretation of Hertz’s theory of death as a transformation involving the relationship between mourners, the corpse, and the soul.</i> .....	85
<i>Figure 8: Posited temporal trends in the burial of the dead in the Salish Sea Region.</i> .....	94
<i>Figure 9: Mortuary sites discussed in the text, in relation to the distribution of known funerary petroform sites.</i>	97
<i>Figure 10: Plan view of excavated portion of Qithyil Mound 1 (modified from Thom 1995) showing peripheral petroform, corner cairn, and internal cairn covering the burial pit.</i> .....	105
<i>Figure 11: Excavated funerary petroform from the Cadboro Bay site (modified from Smith and Fowke 1901:72, Feature “No. 10”) illustrating the two concentric rectilinear petroforms.</i> .....	112
<i>Figure 12: Coast Salish funerary and mortuary practices over the past 4,000 years.</i> .....	118
<i>Figure 13: Ethnolinguistic groups around the Salish Sea. The dashed line denotes the known extent of funerary petroforms.</i> .....	121
<i>Figure 14: Location of ethnographic Straits Salish local groups and Klallam place-names. Major village sites are highlighted with red circles.</i> .....	124
<i>Figure 15: Coast Salish social stratification, after Suttles (1987:12).</i> .....	129
<i>Figure 16: Coast Salish funerals as a rite of passage, illustrating the rites of separation, liminality, and aggregation. This demonstrates funerary ritual as a process of transforming corpse to ancestor and mourner to inheritor.</i> .....	142
<i>Figure 17: Burning food for the dead continues to this day. The material remains of recent “burnings” (left), and the depositional practice of “sweeping up” after each burning and depositing the broken and burned materials adjacent to a historic cemetery (right). Tsawout Reserve, April 2014.</i> .....	148
<i>Figure 18: Overview map of the Rocky Point study area showing areas surveyed, distribution of funerary petroforms, village midden, and cemeteries selected for detailed feature recording.</i> .....	181

<i>Figure 19: Kernel density map of funerary petroform distribution at Rocky Point, illustrating funerary petroform density without imposed site boundaries or landscape attributes.....</i>	<i>183</i>
<i>Figure 20: The Yates Cemetery and surrounding area.....</i>	<i>190</i>
<i>Figure 21: The Edye Point, Eemdyk Passage, Bentinck Island, and Cape Calver Cemeteries in relation to contemporaneous villages.....</i>	<i>192</i>
<i>Figure 22: Funerary petroforms at DbRv-3, looking west from Edye Point towards Feature DbRv-3:C144 (foreground).....</i>	<i>192</i>
<i>Figure 23: Oblique perspective of Edye Point, looking west. The red dots are funerary petroforms and the dashed black line illustrates the best canoe route from east to west.....</i>	<i>193</i>
<i>Figure 24: Eemdyk Passage Site, looking southwest to Eemdyk Passage and Bentinck Island. Note low-lying funerary petroform in foreground.....</i>	<i>194</i>
<i>Figure 25: Greater Race Rocks looking south from the Bentinck Island tombolo, 10x zoom.....</i>	<i>195</i>
<i>Figure 26: Greater Race Rocks and associated funerary petroforms.....</i>	<i>196</i>
<i>Figure 27: The Cape Calver site setting. Looking southeast to funerary petroform (DbRv-50, Feature 1).....</i>	<i>197</i>
<i>Figure 28: The Manor Point fortified defensive site.....</i>	<i>198</i>
<i>Figure 29: Looking southwest from Manor Point to the defensive trench (foreground) and linear arrangement of funerary petroforms (centre background).....</i>	<i>199</i>
<i>Figure 30: Partially deflated funerary petroform features DbRv-35:28 and 35 (left) at Bentinck Island, showing extent of cremated human remains. Feature 35 (right) is a small funerary petroform with highly fragmented and burned human bone.....</i>	<i>200</i>
<i>Figure 31: Completely deflated funerary petroform feature DbRv-35:27 at Bentinck Island, illustrating extent of cremated human remains in relation to the deflated burial feature.....</i>	<i>200</i>
<i>Figure 32: Areas of recent disturbance at the Yates Cemetery.....</i>	<i>203</i>
<i>Figure 33: Areas of historic and contemporary disturbance on Bentinck Island.....</i>	<i>204</i>
<i>Figure 34: The author recording funerary petroforms at Race Rocks.....</i>	<i>205</i>
<i>Figure 35: Historic and contemporary structures on Race Rocks.....</i>	<i>205</i>
<i>Figure 36: Pebble lag aggregate on funerary petroform DbRv-35: 9, illustrating deflationary site formation process at Rocky Point. 20 cm photo scale.....</i>	<i>206</i>
<i>Figure 37: Hypothetical deflation of a funerary petroform (Feature C89, Edye Point).....</i>	<i>207</i>
<i>Figure 38: Final cluster solution, illustrating the material relationships within and between the eight dispositional types.....</i>	<i>222</i>
<i>Figure 39: Examples of Type 1 features from Rocky Point. 1 m photoscale.....</i>	<i>228</i>
<i>Figure 40: Examples of Type 2 Features. 1-m scale. The bottom two features are examples of deflated funerary petroforms. 1 m photoscale.....</i>	<i>230</i>
<i>Figure 41: Photographic examples of Type 3 features. 1 m photoscale.....</i>	<i>232</i>
<i>Figure 42: Box plot showing feature volume (in cubic metres) by type (left) and number of visible stones (right).....</i>	<i>233</i>

<i>Figure 43: Feature DcRv-24:55, the largest funerary petroform at the Rocky Point, looking northwest (and uphill). 1 m photoscale.</i>	234
<i>Figure 44: Hill-shaded relief map of feature DcRv-24: 55, based on three dimensional point data collected in 30 cm intervals. Note rectangular basal outline, rounded profile, and substantial trench excavation. Oriented looking northwest (the same orientation as the above photograph).</i>	234
<i>Figure 45: Two other Type 4 features, DcRv-24: 60 (left) and DcRv-24:61 (right). Both have square bases and peripheral trenches. 1 m photoscale.</i>	235
<i>Figure 46: Type 5 features, DbRv-3:C144 (left) and DbRv-9:14 (right). 1 m photoscale.</i>	235
<i>Figure 47: Comparison of plan views between the excavated portion of Mound 1 at Qithyil (left, after Thom 1995) and DbRv-3:C144 at Edye Point (right).</i>	236
<i>Figure 48: Features DbRv-3:C82 (left) and DcRv-24:52 (right). 1 m photoscale.</i>	237
<i>Figure 49: Photographic examples of Type 7 Features. 1 m photoscale.</i>	238
<i>Figure 50: Examples of smaller Type 8 hybrid boulder crevice-cairn features. 1 m photoscale.</i>	239
<i>Figure 51: Type 8 Feature DcRv-24:H30 (left) showing the four large stones angled together. The dashed line (right) indicates in plan view, the approximate size of the internal chamber, presumably used for burial.</i>	240
<i>Figure 52: DcRv-24:H30, illustrating the front profile of the feature (left) and the plan view of the burial and platform fronting it (right).</i>	241
<i>Figure 53: Proportions of funerary petroform feature types across the Rocky Point cemeteries.</i>	248
<i>Figure 54: Feature volume by site.</i>	249
<i>Figure 55: Quadrat counting test for complete spatial randomness of funerary petroforms at Edye Point (left) and the Yates Cemetery (right). Both cemeteries have clustered distributions of funerary petroforms.</i>	253
<i>Figure 56: Type 1 Feature Nearest Neighbour and kernel Density analyses results, Edye Point (above) and the Yates Cemetery (below).</i>	256
<i>Figure 57: Type 2 Feature Nearest Neighbour and Kernel Density Analyses results, Edye Point (above) and the Yates Cemetery (below).</i>	257
<i>Figure 58: Type 3 Feature Nearest Neighbour and Kernel density analyses, Edye Point (above) and the Yates Cemetery (below).</i>	258
<i>Figure 59: Type 4 and Type 8 Feature Nearest Neighbour and Kernel Density analyses for the Yates Cemetery.</i>	259
<i>Figure 60: Map illustrating the distribution of the four volume classes of funerary petroforms at Edye Point (above) and the Yates Cemetery (below). The black polygons denote the extent of the PPA sample window at each cemetery.</i>	261
<i>Figure 61: K(L) function Result for the Edye Point Dispositional Funerary Petroform Types.</i>	267
<i>Figure 62: K(L) function Result for the Yates Cemetery Dispositional Funerary Petroform Types.</i>	268
<i>Figure 63: Edye Point Ripley's-K(L) function analysis for Volume Classes 2, 3 and 4 (99 permutations, 10 distance bands at 35 m increments).</i>	271

<i>Figure 64: The Yates Cemetery Ripley's K(L) function analysis for the four volume classes of funerary petroforms. The sample size for Volume Class 1 was too small for analysis.....</i>	<i>272</i>
<i>Figure 65: Edye Point NNH analysis results (First and Second order clusters) using all funerary petroforms, with a 99.9% confidence level. Spatial hierarchical cluster analysis (Mathews 2006) results superimposed upon the kernel density analysis (grading from green to orange with increasing density).....</i>	<i>277</i>
<i>Figure 66: NNH analysis results for Edye Point Type 1, 2 and 3 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group. ....</i>	<i>281</i>
<i>Figure 67: Edye Point feature type frequency, expressed as a pie chart, for each of the 99% NNH-derived spatial clusters. Relative circle size represents the number of features per spatial cluster. Superimposed on the kernel density analysis results.....</i>	<i>284</i>
<i>Figure 68: NNH analysis results for Edye Point Volume Class 2, 3 and 4 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group. Volume Class 1 is expressed as point data. ....</i>	<i>287</i>
<i>Figure 69: Edye Point funerary petroform 99% NNH-derived spatial clusters and the largest funerary petroforms superimposed on the kernel density analysis results.....</i>	<i>290</i>
<i>Figure 70: Yates Cemetery NNH analysis results (First Order clusters) using all funerary petroforms, with a 99.9% confidence level. Also illustrated are spatial hierarchical agglomerative cluster analysis localities. Results superimposed upon the kernel density analysis (grading from green to orange with increasing density). ....</i>	<i>293</i>
<i>Figure 71: NNH analysis results for Yates Cemetery Type 1 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group.....</i>	<i>294</i>
<i>Figure 72: Yates Cemetery feature type frequency, expressed as a pie chart, for each of the 99% NNH-derived spatial clusters. Relative circle size represents the number of features per spatial cluster. Superimposed on the kernel density analysis results. ....</i>	<i>295</i>
<i>Figure 73: Feature DcRv-24:60A (foreground) and DcRv-24:60 (background).....</i>	<i>297</i>
<i>Figure 74: DcRv-24:61 (left) and DcRv-24:55 (right), smaller and larger versions of Dispositional Type 4 funerary petroforms on the central hill at the Yates Cemetery.....</i>	<i>297</i>
<i>Figure 75: Yates Cemetery Volume Class Intensity for Volume Classes, using 99% NNH-derived spatial clusters. Volume Classes 1 and 2, which do not form NNH clusters, are expressed as data points.....</i>	<i>299</i>
<i>Figure 76: The spatial relationship between the largest funerary petroforms (Volume Classes 1 and 2), the central hill, and the NNH-derived clusters of funerary petroforms at the Yates Cemetery.....</i>	<i>301</i>
<i>Figure 77: Continuous Sector Analysis results for the Yates Cemetery (left) and the Edye Point Cemetery (right). ....</i>	<i>308</i>
<i>Figure 78: Results of the Edye Point Continuous Sector Analysis superimposed on terrain units.....</i>	<i>309</i>
<i>Figure 79: Results of the Linear Kernel Density Analysis for the continuous sector data. ....</i>	<i>309</i>
<i>Figure 80: Linear kernel density analysis of continuous sector analysis results with field observed pathways (Mathews 2006) superimposed.....</i>	<i>310</i>

<i>Figure 81: Linear kernel density analysis of continuous sector analysis results with simplified pathways.....</i>	<i>310</i>
<i>Figure 82: Possible Edye Point cemetery pathway with funerary petroform 99% NNH-derived spatial clusters and the largest funerary petroforms superimposed on the kernel density analysis results.....</i>	<i>312</i>
<i>Figure 83: Oblique hill-shaded GIS-rendered image of the Yates Cemetery, with places and possible path locations discussed in the text.....</i>	<i>313</i>
<i>Figure 84: Cross section of the Yates Cemetery drawn obliquely through the largest features, with generalized surficial geology, informal landform names, and possible path locations.....</i>	<i>313</i>
<i>Figure 85: A visual analogy: American Museum of Natural History photograph by Harlan Smith (negative 42786, originally numbered 497), taken during the Jesup North Pacific Expedition excavations at Cadboro Bay.....</i>	<i>320</i>
<i>Figure 86: Yates Cemetery viewshed viewpoints.....</i>	<i>321</i>
<i>Figure 87: Example of a viewshed from the East Trail (450m south of beginning), showing the three visibility zones. Those features within the orange zone are not visible and those funerary petroforms highlighted in blue fall within the 2m liminal buffer. Features outside of these two layers are visible from the viewpoint (black square in centre of the 200 m viewpoint radius).....</i>	<i>322</i>
<i>Figure 88: The constricted “bottleneck” of Eemdyk Passage, looking north from shoreline fronting the Bentinck Island cemetery, to the Edye Point cemetery.....</i>	<i>328</i>
<i>Figure 89: Looking from viewshed vantage points along Eemdyk Passage to funerary petroforms at the Edye Point cemetery, illustrating and zones of partial visibility and lack of visibility.....</i>	<i>329</i>
<i>Figure 90: Yates Cemetery intervisibility analysis between NNH clusters of funerary petroforms.....</i>	<i>331</i>
<i>Figure 91: Yates Cemetery multiple viewshed analysis showing funerary petroform types and areas that are never visible from either intervillage trail.....</i>	<i>332</i>
<i>Figure 92: Limits of visibility around each of the NNH-derived clusters at the Edye Point Cemetery.....</i>	<i>334</i>
<i>Figure 93: Cross-section of terrain from the Edye Point village, east (right) to the beginning of the funerary petroform cemetery.....</i>	<i>335</i>
<i>Figure 94: Sequential viewsheds simulating the movement and changing pattern of visibility from the Edye Point village to the cemetery.....</i>	<i>337</i>
<i>Figure 95: The internal structural similarities between Qithyil Mound 1 (left) and partially deflated funerary petroform DcRv-24:C144 at Rocky Point (right).....</i>	<i>341</i>
<i>Figure 96: Feature DbRv-35:27 on Bentinck Island, an example of a deflated burial mound.....</i>	<i>342</i>
<i>Figure 97: Coast Salish funerals as a Rite of Passage.....</i>	<i>360</i>
<i>Figure 98: The rectilinear house-like structure of large funerary petroforms at Qithyil (left) and Rocky Point (right).....</i>	<i>368</i>
<i>Figure 99: Two historic examples of Coast Salish grave houses. The one to the left is from an unknown location (Richardson 1864) and the one to the right (McMurtrie 1849-1853) is from Victoria.....</i>	<i>369</i>
<i>Figure 100: Rocky Point is a place entangled with a complex history of practices.....</i>	<i>415</i>
<i>Figure 101: Placenames and groups discussed in the text.....</i>	<i>477</i>
<i>Figure 102: Example entry for the FileMaker Pro project database.....</i>	<i>483</i>

*Figure 103: Examples of funerary petroforms affected by natural site formation processes. Deflation (left, feature DbRv-35:12) and conifer encroachment (right, DcRv-24:26) are the most significant factors affecting funerary petroform condition at Rocky Point..... 486*

*Figure 104: Example of funerary petroform built primarily with gabbro bedrock (left, feature DbRv-3:R8) and granodiorite glaciofluvial till (right, feature DbRv-3:C144). ..... 487*

*Figure 105: Example of funerary petroform with minimal sediment (Feature DbRv-3:C83, foreground) and feature made primarily with sediment (Feature DbRv-3:C82, background)..... 489*

*Figure 106: Example of feature built against erratic (Feature DbRv-3:C63). ..... 489*

*Figure 107: Funerary petroforms built against exposed bedrock. Feature DbRv-3:R57 (left) and Feature DbRv-3:R55 (right). ..... 490*

*Figure 108: Sequence of photos showing clean up procedure for removing invasive floral species, (Feature P11). ..... 491*

*Figure 109: Mapping square used to produce detailed plan view maps of funerary petroforms (Feature 28, Bentinck Island—Emily Benson mapping). ..... 492*

## **Acknowledgments**

My research was done within the traditional territory of the Scia'new First Nation and I thank my research partners there for entrusting me with the responsibility to do this work. I thank elder Bert Charles for his patient guidance with issues relating to the reburial of the dead. I acknowledge Chief Russ Chipps and councilor Bernice Millette for their kind support. Hank Chipps and Dr. Allis Pakki Chipps-Sawyer have been wonderful supporters since the beginning of my work at Rocky Point, and I thank them for their encouragement and help over the past decade. I draw great inspiration from Dr. Chipps' dissertation (Chipps-Sawyer 2007). Sadly, Pakki passed away on Aug. 23, 2014. She is dearly missed.

My graduate committee has challenged me, cheered me on, and kindly pointed me to new possibilities and ways of thinking. Dr. Quentin Mackie has served as my graduate supervisor for over ten years, and this dissertation, and my progress as a scholar, is in large part due to his support, encouragement, and occasional carrot and stick methodology. I hope these plums measure up. I thank Dr. Ann Stahl for her expert editing and commentary, for her collegiality and advice, and for pointing me in novel theoretical directions. Dr. Peter Stephenson has been supportive and encouraging throughout my degree, and his publications on death and ritual have been very influential. I have known Dr. Eric Higgs for almost twenty years and his work around cultural contributions to landscape has challenged me to consider Rocky Point as a perceptual landscape, a panorama of practices through time.

I am very grateful to Dr. Barbara Mills for serving as my external examiner. Her work continues to inspire me and provides much of the theoretical foundation I work with today. Dr. Mills very kindly travelled to Victoria to attend my defence in person, and her contributions there were one of the highlights of my doctoral degree.

The work was done with the cooperation of the Department of National Defence and CFB Esquimalt (Formation Safety and Environment Branch). In particular, I would like to thank Tracy Cornforth (Environment Officer) for working to facilitate this research. The DND is to be commended for their ongoing and proactive management of the funerary petroforms at Rocky Point, and the other material remains of First People's history there.

For several years, the now-disbanded Environmental Sciences Advisory Committee worked with DND to oversee my research at Rocky Point. In particular, I thank Andrea Schiller at the Pacific Forestry Centre for facilitating my work. The ESAC committee also included Dr.

Tony Trofymow (Chair), Dr. Elizabeth Campbell, Dr. Réal Roy, Ken Morgan, Bruce Chambers, Dr. Matt Dodd, and Sgt. Fraser Thompson.

I thank John and Ina Homer for kindly allowing access to their property, which includes a substantial part of the Yates Cemetery. Their grassroots caretaking of the burial features is admirable and I applaud them for their efforts. John and Ina facilitated a significant part of this research by allowing me on to their property.

Many volunteers contributed days, months, and even years to the fieldwork. This involved intensive surface survey and the removal of vegetation—both enormous tasks. In particular, Pete Dady, Emily Benson, and Thomas Munson contributed countless weekends over many years and I thank them for their friendship, dedication, and expertise. Many others contributed their time in exchange for beer and nachos. This includes Ryan Blackburn, Kristi Bowie, Johnny Hall, John McGrath, Ryan Acebedo, Christine Stathers, Nick Waber, Holly Williams, Roger Eldridge, Andrew Eckart, Alyssa Parker, Ramsay McKee, Kelsey MacLean, Jonathan Grieve, Jenny Storey, Brendan Grey, Megan Fisher, Gino Shiffren, Catriona Brown, Deborah Merrett, Megan Helgeson, Claire Adamczyk, Jim Spafford, Eva Brooke, Erin Wardie, Steve Douville, Nicole Nicholls, Ivan Casselman, Iain McKechnie, Nicole Smith, Monica Smith, Caitlin Gordon-Walker, B.J. Temple, Casey O'Neill, Maddie Bassett, and Adrienne Marr.

Many Northwest Coast researchers have visited me in the field and offered advice and a stimulating exchange of ideas and critique. This includes: Madonna Moss, Duncan McLaren, Terry Clark, Bill Angelbeck, and Al Mackie. In particular, Dana Lepofsky, Mike Blake, and Morley Eldridge have been very supportive and engaging, and I thank them for their expertise and encouragement throughout both of my graduate degrees. I also thank Nicole Oakes for discussing her innovative work with the burial mounds of the Fraser Valley and providing some comments regarding ritual burning there. After kindly making the time to visit to Rocky Point, Bryan Hayden and Suzanne Villeneuve invited me to participate in their Ritual Spaces and Places symposium at Simon Fraser University in 2012, which was wonderfully engaging. There, I had stimulating conversations with Barbara Mills, Lynn Gamble, Mark Aldenderfer, Christine Hastorf, and Peter Jordan, among many others. Roy Carlson (professor emeritus at SFU) has provided papers, comments and encouragement throughout this project and I am grateful for his support. The Late Roderick Sprague (University of Idaho) provided comments and encouragement during the process of defining a typology for funerary petroforms. Lastly, I thank

Brian Thom (University of Victoria) for many engaging conversations, and for his body of work that is clearly influential to my own.

Many experts also contributed to this work. Naoko Endo (SFU) generously volunteered her time and expertise to do species identification for charcoal samples from Bentinck Island. Liv Nilsson Stutz (Emory University) kindly supplied me with a copy of her book, *Embodied Rituals and Ritualized Bodies* (Nilsson Stutz 2003). Kathleen Matthews, data librarian at the University of Victoria, helped with procuring some of the digital data. Linda Elliot and Helen Jacks patiently provided my introduction to the SENĆOŦEN language and Ewa Czaykowska (University of Victoria) and Tim Montler (University of North Texas) provided linguistic help.

I thank Paul Bramadat and the Centre for the Studies in Religion and Society at the University of Victoria for a stimulating and productive graduate student fellowship.

Funding was provided by a Social Sciences and Humanities Research Council Canada Graduate Scholarship. At the University of Victoria, the Vanderkerkhove Family trust, the Sara Spencer Foundation, and a Department of Anthropology student fellowship provided additional funding.

Lastly I thank my family: Doreen, A.J., Lorne, Naty, Stacey, Ann, Sela, Joy, Geoff, Liam, Nicole, and Sharon. I also thank my uncle, Bill Mathews, for introducing me to critical thinking and the wonder of nature at a very impressionable age.

## ***Dedication***

This dissertation is dedicated to the many Coast Salish cultural experts who, over the years, have kindly and patiently schooling me in a different way of approaching the past. This includes Hank Chipps, Dr. Allis Pakki Chipps-Sawyer, Burt Charles, Harold Joe, Philip Joe, Chief Ron Sam, David Dick, Simon Smith Sr., Simon Smith Jr., Ed Thomas, Corey Joseph, and Adrian Underwood. HÍSWKE.

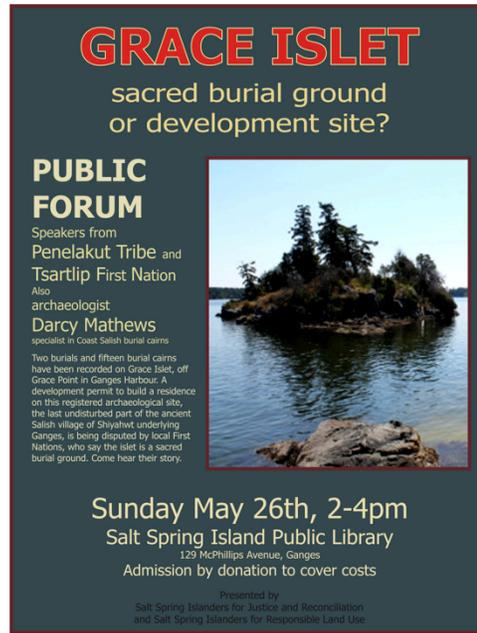
This work is also dedicated to my incredible wife Holly Williams and our beautiful and wonderful sons Arlo and Elias. Their love sustained this work.

Susan Trent and Ken Musch—they are the best friends one could ever hope for.

## **Prologue: Reflections on Building a Funerary Petroform**

Grace Islet is a small isthmus of land in Ganges Harbour, in British Columbia's Gulf Islands. At the time of this writing, the islet is the stage for intense conflict over the rights of the landowner to build a luxury home, the role of the provincial government in their management of the islet, and Coast Salish communities and local residents who are outraged that this house is being constructed in the centre of an ancient Coast Salish cemetery (Cherry 2014; Petrescu 2014).

At the centre of this controversy are funerary petroforms—arrangements of stone and soil—built over the dead by the Coast Salish peoples more than a millennia ago. These visible markers cover much of Grace Islet, and are one of the fulcrums upon which the debate concerning ownership, sacredness, money, power, and history are balanced. The partially finished house—some funerary petroforms encased within its foundation—now bisects the Grace Islet cemetery. The situation has called into question the identification and significance of funerary petroforms—a burial practice that we know little about—and challenges us to consider what constitutes a cemetery (Figure 1). The stakes are high for the Coast Salish people, whose histories and connections to sacred places are being severed, and whose traditional laws and protocols concerning respect for their dead are being questioned. Conversely, owners of private property and land managers at all levels of government struggle with the administration of what we call archaeological sites and what the Coast Salish peoples call sacred places. Grace Islet is not an isolated event or place, it is one many such funerary petroform cemeteries around the Salish Sea. The challenges and conflicts unfolding there call into stark relief the need for greater understanding of these burials and cemeteries.



**Figure 1: Funerary petroforms continue to be disturbed and Coast Salish cemeteries developed for residential housing, such as is occurring at Grace Islet at the time of this writing.**

Not far away is Rocky Point, an epicenter of funerary petroform distribution in the Salish Sea. Located on the southernmost tip of Vancouver Island, Rocky Point is many things. Presently a large military installation, it is also one of the largest intact Garry oak ecosystems remaining in the region, and a landscape with a remarkable number of funerary petroforms, most placed within and between two large neighbouring cemeteries. It was at one of these cemeteries, Edye Point, that I began my work with funerary petroforms ten years ago, recording more than 300 burial features concentrated on and around Edye Point. I expanded the scale during my doctoral research to include most of the eastern half of the peninsula, recording what I now call the Rocky Point funerary landscape. I have maintained this research in partnership with the Scia-new Nation and the Canadian Department of National Defence (DND)—both communities engaged with treaty issues concerning ownership, access, and other property rights at Rocky Point. The Scia-new entrusted me to work with their ancestral dead—a responsibility I took very seriously. The DND similarly assumed some risk by allowing a civilian access to a secure military base. Both sides agreed to this research, in part, because of the information I could provide on the then unknown number and locations of funerary petroforms at Rocky Point. The hundreds of days that my field crew and I spent traversing the landscape provoked us to consider movement and visibility in the building of this landscape through time. Looking for

signs of funerary petroforms and removing windfelled branches and invasive plant species from each burial challenged us to see the landscape through different lenses. In particular, sitting with each burial and thinking about the funerary orchestrations of stone and soil schooled us, in a sense, in the use of materials and spaces by the Rocky Point peoples. These experiences not only encouraged novel research questions, but also imparted in us a profound respect for the Rocky Point peoples, their burials, and their cemeteries.

My research partners had justifiable concerns over the possibility of finding human remains. While my study did not include the excavation of funerary petroforms, instead focusing on the external material and spatial attributes of these features, within the first few months of fieldwork, we found skeletal remains eroding out of the root well of a wind-felled tree. This spruce tree had grown next to a funerary petroform and pulled much of the burial up with its roots as it fell over. The process that unfolded afterwards changed the way I thought about funerary petroforms.

After some difficult phone calls, the Scia-new and DND agreed the remains should be reinterred within the original funerary petroform, which required complete rebuilding. With representatives from both communities present, I worked with Hank Chipps, a Scia-new cultural expert, to excavate the remainder of the funerary petroform. Most of the bone, which was partially cremated, was still encased in a block of soil and stones suspended almost two metres off the ground between the roots of the windfall. Working quickly and quietly, we collected the remains and carefully wrapped them with a blanket. Amongst the human bone was burned clamshell and animal bone—the remnants of food burned for the dead. Hank and I were then directed by Scia-new elder Burt Charles to gather stones from the disturbed funerary petroform and the surrounding area. Each stone we collected and brought to the blanket was carefully arranged under Burt's guidance, and a funerary petroform took shape. In turn, Burt informed us, the entire process was being watched over by the ancestors. Placing of the stones ended when Burt said the ancestor was satisfied.

Burt offered a prayer and thanked the attending members of the DND, not only for witnessing the reburial, but also for facilitating the archaeological work. Burt acknowledged the differences between their two communities but thanked the DND for working to care for the Scia-new dead, who, while located within the fence line of federal property, remain citizens of the Coast Salish world. This experience, like others I have since had in different parts of Coast Salish

territory, focused my attention on the role of ritual in the burial of the dead and its concomitant effect on relationships of power between differing communities of practice. As the present-day events at Grace Islet exemplify, cemeteries are venues for the often-elliptical relations of power evident in the treatment of the dead.

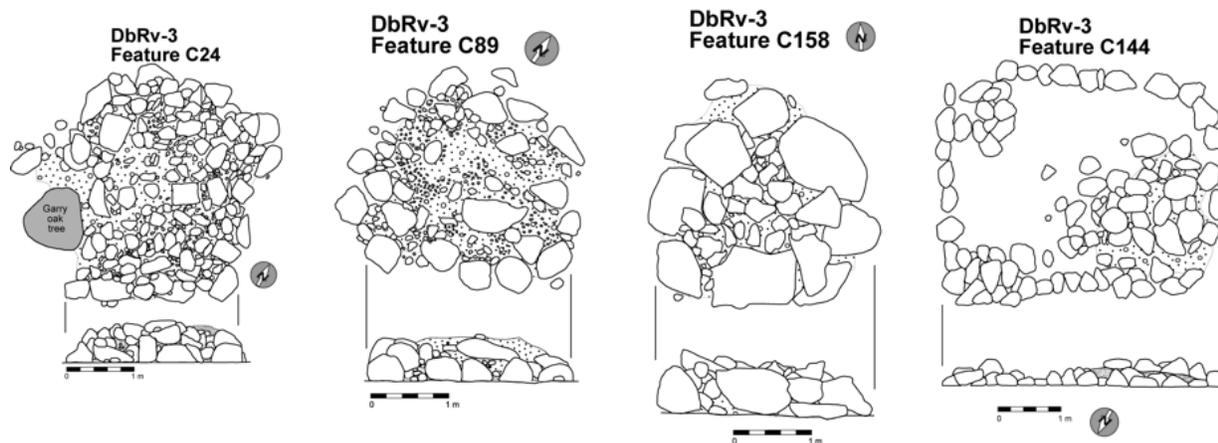
This experience of building a funerary petroform also underscores the durability and resilience of Coast Salish ritual practice. While similar aspects of this reburial are evident in the archaeological record at least 4,000 years ago—such as ritual feeding of the dead (Carlson 2011; Carlson 1999) and wrapping the body—the building of funerary petroforms is no longer, to my knowledge, part of Coast Salish funerary practice. Rather, the ritual process that unfolded that day at Rocky Point required a measure of improvisation—yet there was a sense at the end of it, that the dead were appropriately and respectfully attended to. As I argue in this dissertation, the seemingly improvised and anachronistic building of that funerary petroform drew upon and was legitimated by long practiced themes in the use of materials and spaces in Coast Salish funerary ritual, such that the process seemed both appropriate and conclusive in its objectives. It was not merely a process of replacing dislodged stones over a skeleton; it was a funeral requiring witnesses, protocols, ritual expertise, and the embodied engagement of its participants.

To study funerary petroforms, then, is to consider the process by which bodies, stones, and soil were brought together in ritual practices to make places—places that through time and shifting cultural contexts continue to enmesh the living. There is a persistence of the dead in the affairs of the living. The dead possess longevity and an ability to cross temporal and cultural divides in ways that the people who built funerary petroforms at Rocky Point a thousand years ago could not have foreseen. We are entangled with the Coast Salish dead today and their presence is undeniable.

## **Chapter 1: Funerary Practice and the Power of Rituals**

Funerary ritual is a practice in which all scales of the social experience—from the individual and the household, to the community and cosmos—may be aligned in a larger narrative of power relations. The process of burying the dead, while a focus of grief and commemoration, is simultaneously the social stage upon which the production, maintenance and contestation of power is enacted (Parker Pearson 1993). Funerals take the form of ritual practices materialized in space, with successive deaths building landscapes and places that are simultaneously physical, social, and metaphorical. Monumental traces of funerary ritual, for example, are powerful things situated in places that in turn inform or even prefigure future funerals and the ways that people experience cemeteries. Living bodies are ritualized and schooled not only within the cemetery and during funerals, but even from outside these sacred places and events. The habits and dispositions of people may be formed even when the dead are situated away from the living, with the dead existing at the threshold of the world of the living. In short, funerary rituals produce socialized bodies, entangling the living and the dead in webs of social relationships. As such, the materials, places, and things associated with the burial and transformation of the dead from corpse to ancestor may be invested with considerable power outside as well as within cemeteries.

The transitional period between the Middle and Late Pacific periods (cal A.D. 500–1400) marked one of the most significant shifts in funerary ritual practice evident in the archaeological record of the Northwest Coast (Ames and Maschner 1999:192). During this time, the Coast Salish peoples of southwestern British Columbia began using materials and space in novel ways in the burial of their dead. An upward and outward movement of the corpse began from unmarked inhumations, situated within the domestic spaces of village shell midden, to above ground mortuary architecture, including arrangements of stone and soil positioned in cemeteries at the edges of these villages (Lepofsky, et al. 2000; Mathews 2006b, 2008; Oakes, et al. 2008; Thom 1995). These features, which I call funerary petroforms, consist of an arrangement of stone and soil used in patterned ways to create both very small and very large burial monuments. Ranging in maximum dimension from less than a metre to ten metres, and containing more than 100 cubic meters of stone and soil, funerary petroforms vary in outline and construction, including straight-sided features, as well as those with rounded outlines (Figure 2).



**Figure 2: Examples of funerary petroform, with curvilinear outlines (Features C24, C89, and C158) and a rectilinear outline (Feature C144).**

The transition from below ground midden inhumation to above ground features built of stone and soil marks a significant change in the placement of the dead, the use of materials in new and novel ways, and an emerging visibility of the dead individual. At the core of this is ritual practice. The advent of funerary petroforms, as part of a larger coast-wide transition in mortuary ritual practice, moved the corpse outside of the village and thus created places specifically for the dead. While shell midden cemeteries were likely distinctive places and landscapes, the individual dead interred within them were removed from view. For the first time, the individual dead were demarcated with visible stone and soil monuments. The building of durable and visible funerary architecture for the dead implicates ritual with the visual appearance and structuring of space, with implications for people’s sense of a place: it embodies and structures movement, feelings, dispositions, and relationships of power. Recognizing that materials and spaces can be used as strategies of ritual, the task for archaeologists is discerning those strategies of materials, space and visibility in the building of monumental features.

Funerary petroforms are exemplified at the Rocky Point Peninsula on the southernmost tip of Vancouver Island (Figure 3). This landform has the greatest density and largest number of undisturbed funerary petroforms in the region and is one of the most significant mortuary complexes on the Northwest Coast of North America. I recorded 553 funerary petroforms along a 4.5 km long section of coastline on the east side of the Rocky Point Peninsula, the majority of which were distributed within two cemeteries. These sites, the Yates Cemetery and the Edge Point Cemetery, are each associated with a nearby village (Figure 3), with smaller numbers of funerary petroforms distributed between the two larger cemeteries.

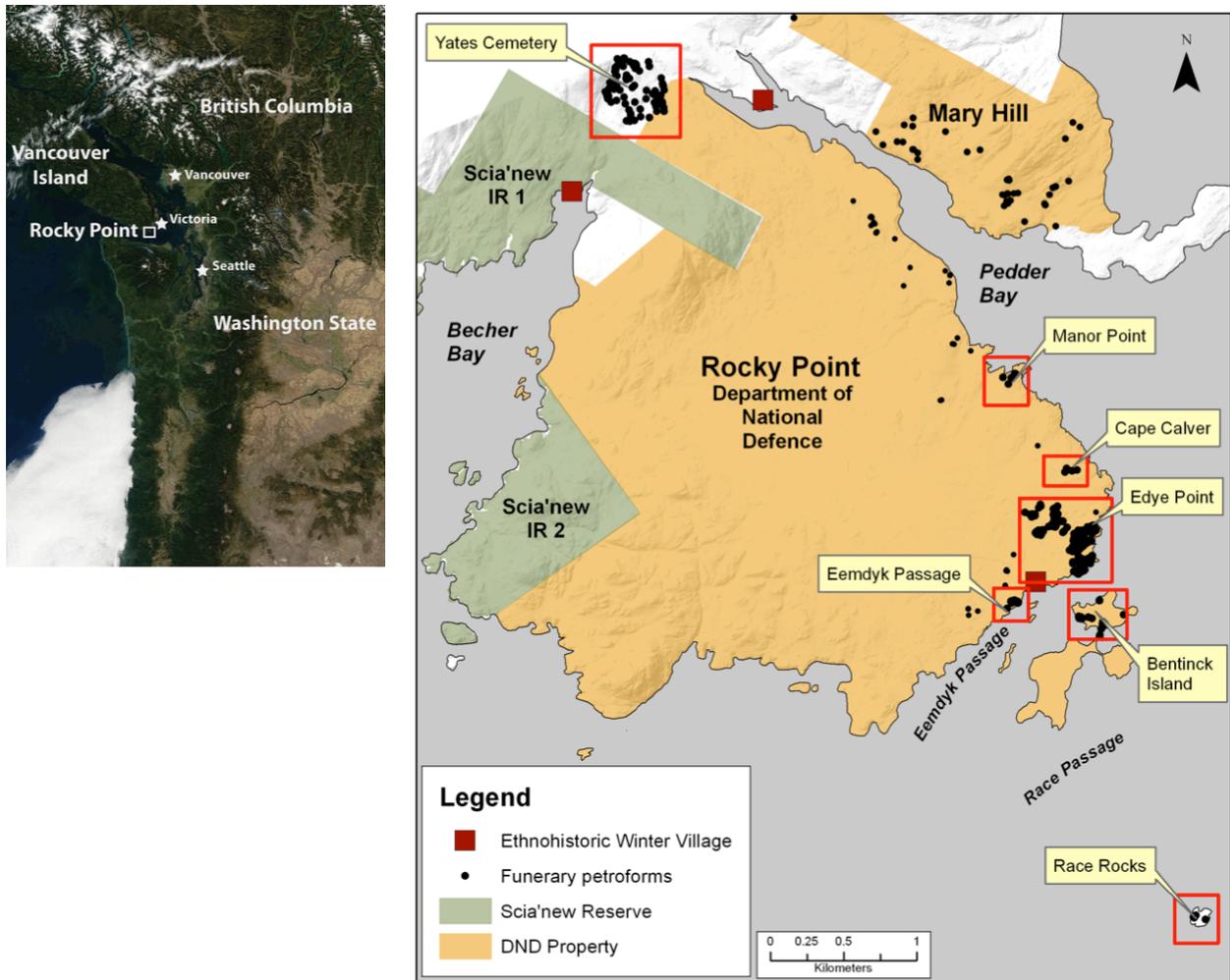


Figure 3: Overview maps illustrating the location of the Rocky Point Peninsula, showing contemporary land tenure, distribution of funerary petroforms, winter village locations, and the seven cemeteries included in this study (outlined in red).

I did not excavate the funerary petroforms at Rocky Point. To disturb these burials is to violate Coast Salish customary law, predicated upon the understanding that to the Coast Salish, their ancestors remain powerful and sentient beings. The Coast Salish trace historical and familial connections back to cemeteries, and living descendants have obligations to care for the remains of the dead (e.g., Amoss 1972; McKay 2009; McLay, et al. 2004). Disturbance of ancient human remains is often a catastrophic disruption to the continuity of relations between the living and the ancestors, and can provoke confusion and anger from the dead, thus preface disaster for the living (e.g., Boyd 2009; Mapes 2009).

Guided by these principles, my work at Rocky Point was done in collaboration with the Scia'new First Nation and followed protocols set forth by them. While skeletal and grave good

data are the mainstay of much of mortuary analysis, respecting Coast Salish traditional law meant engaging with and analyzing funerary petroforms outside of more traditional archaeological approaches.

My work is oriented around the idea that funerary petroforms were built as living bodies gathered around dead ones, as individual stones and baskets of soil were selected and brought together during a ritual process to produce monuments that were meaningful to those who built them. The resulting funerary petroform—its composition, form, size and placement—are the material and spatial medium of funerary ritual. If we can accept this, then we can consider the external attributes of funerary petroforms as providing insight into the depositional practices associated with funerary ritual. This idea centres the focus of archaeological analysis on the material and spatial aspects of the burial form and architecture rather than the associated corpse. In addition to working respectfully within the ethical parameters of my Scia'new partners, the focus on the external and spatial attributes of funerary petroforms offered novel possibilities for data collection and analysis. The external attributes of funerary petroforms are evident without excavation and are quickly recorded and quantifiable. This means that a very large number of funerary petroforms could be recorded.

The number and density of funerary petroforms at Rocky Point, the integrity of the landscape, and the detailed data I collected on the morphological and spatial attributes of each feature offers an unprecedented opportunity to consider how materials and spaces were used during funerary ritual during the transitional Middle/Late Pacific period. The connection between the analysis of space and materials and questions of social power hinges on a recursive tacking back and forth between Coast Salish oral history, ethnographic tradition, and the archaeological record. As such this study draws upon a thematic analysis of contemporary and historically documented Coast Salish ritual practices and their complex relationships with material and space. Collecting and placing stones are actions of practice detectable and measurable in the archaeological record. As such, quantitative methods may identify some of these patterned uses of materials and spaces in these practices of ritual deposition. I argue that this in turn provides an entry point into tracking the social contours of power relationships among and between the Rocky Point peoples.

Approaching the building of funerary petroforms through the lens of ritual process opens the study of funerary petroforms to a consideration of how these burials were both structured by

the living, and in turn structured practices inside and outside of the cemetery. The places for the dead, and how materials were used therein during the ritual process provides a venue for the archaeological consideration of ritual as actively producing, maintaining, and transforming relationships. This refigures the study of funerary petroforms to consider what the building of these burials accomplished, how funerary traditions developed and retained consistency, and how they changed through time. Fundamental to this is ritual practice in the process of making peoples, places, and things and how the ritual deposition of materials structures the relations of power beyond the funeral, outside of the cemetery, and through time. As I will discuss shortly, there is a relationship between ritual and religion, but ritual is not subordinate to belief, nor is it a secondary aspect of religion. It is through ritual action that religious beliefs are transmitted, as well as contested and negotiated.

### ***The Entangling Power of Funerary Petroforms***

To consider the Rocky Point ways of death, I frame my research within the developing literature on the archaeology of material practices (e.g., Meskell 2005a; Miller 2005a; Mills and Walker 2008b) built on the premise that while people made these burials through ritually prescribed depositional practices, these burials also made people. Contemporary perspectives on materiality take an encompassing view of the relationships between humans and nonhumans, recognizing the capacity for nonhumans to participate in the social and material relationships of people. Things are not inert; some things have the capacity to shape present and future practices and dispositions. Humans depend upon things, things depend upon humans, and things depend upon other things, all along chains of interdependence (Appadurai 1986; Hodder 2011). Neither is agency located solely in human “subjects” but potentially in non-human “objects” as well as in the mixed and entangled associations of humans and nonhumans. Latour’s (2005) concept of *actant* considers both human and non-humans—people, stones, spirits, prayers—as having the potential to be a source of action, and as such, analytical focus is trained on the articulation between actants (Joyce 2008:30). In this sense, funerary petroforms, as inalienable monuments on the landscape, have the capacity to engage and entangle people. They ‘act back’ in a recursive relationship between place, materials and beings.

Through time, things and our relationships to them can persist, be forgotten and abandoned, or take on new meaning and significance. Kopytoff’s (1986) notion of object biographies offers a historical perspective on the dynamics of ritual and depositional practices

that produced funerary petroforms. The movement of stone and the anchoring of the body to place was not the sole chapter in the biography of these burials. Funerary petroforms are powerful actants on ancient as well as contemporary landscapes. Biographies, genealogies, and histories of people, places and things are not the residuals or byproducts of cultural practices, they *are* cultural practices (Gosden and Marshall 1999; Kopytoff 1986; Meskell 2004; Pauketat 2001b). These are things with histories; an ongoing process linking families, ritual specialists, ancestors and other actants to places.

Our entanglement with things through time is not simply cultural transmission; it is the indelible entanglement of humans and things. The materiality of funerary petroforms—specifically their relative visibility and durability—makes them things that participate in constructing the experience of the present (Nakamura 2004; Oliver 2001). In other words, funerary petroforms inform the ‘now’ as much as they are a record of the ‘then’. At larger scales, the cemeteries and landscapes that funerary petroforms constitute are always in an act of *becoming* (Ashmore 2004; Ashmore and Knapp 1999; Thomas 2001). People do not merely interact with these cemeteries or move through them; these places become an indivisible part of people, their perceptions and their dispositions (Ingold 2000).

The sociohistorical significance of Rocky Point is an ongoing process; it is in a perpetual process of becoming (*sensu* Meskell, et al. 2008; Pauketat 2001b; Sassaman 2005). We can consider funerary petroforms at Rocky Point as both durable and visible archaeological features, while recognizing these burials are persistently powerful and entangling things. I will argue in this dissertation that funerary petroforms are conduits of Coast Salish history and identity, and that there is a remarkable perdurance of ritual practice and significance steeped in ancestral connections to place that both precede the practice of building funerary petroforms and continue in practice today. As such, an archaeological understanding of the ritual practices that produced funerary petroforms is not a history of temporally distant peoples. The materiality of these burials as visible and recognizable ancient human burials, and their durability as things made largely of stone, also means they can not easily be ignored by non-Coast Salish peoples, even though the descendants of those buried in funerary petroforms have been intentionally marginalized by colonial and settler culture over the past 170 years.

The relations of power that created and emerged from the ritual practices of funerary petroform building were moments long ago; however, the trajectory of power associated with

these burials ebbs and flows through time, and today entangles Coast Salish descendants as well as the descendants of colonial settlers and their institutions. Much of the Rocky Point Peninsula is presently a Department of National Defence (DND) property, and has been under the jurisdiction of the Federal Government of Canada since 1952. This means that the DND, concerned largely with the military defence of Canada's international interests, has assumed the *de facto* mantle of stewardship for these hundreds of burials, despite the lack of a coherent legal framework to protect archaeological sites on Federal lands. When DND assumed a presence at Rocky Point with the intention of building an ammunition depot, it also became entangled in managing the 'archaeological resources' there, as well as in contemporary aboriginal issues such as land and resource ownership. Funerary petroforms are an indelible statement of aboriginal occupation at a time when First Nations are negotiating a wide range of issues that include governance, land, resources and fiscal matters. Fundamental to the resolution of these claims are familial and community histories and connections to place, which can be demonstrated both through community knowledge, and by archaeological and ethnohistorical means.

The Scia'new Nation, the Department of National Defence and private landowners thus operate in fields of power in which funerary petroforms can be understood as actants. Archaeological sites, particularly sacred sites such funerary petroform cemeteries, are nodes in a meshwork of relations that are delicately balanced and sometimes upset. In fact, it is these contemporary relations of power and my entanglement with it that guided me to consider these burials as sites of power in the past. Once, when frustrated with this process, a friend chided: "Why are you surprised that this work is so political? Aren't you the one who thinks these burials are about power?" Why should that power have stopped when the funerary petroforms were built? As memory of these funerary petroforms at Rocky Point may have slowly waned over the last millennia, these burials have been quietly waiting as the forest and moss began to slowly enclose and cover them. But in the present environment of contested ownership, issues around access and movement on the property, and the ongoing process of defining histories and identities, these places retain an emergent power capable of entangling peoples and institutions a thousand years after they were built.

My involvement at Rocky Point began in 2003 when I was retained as an archaeological consultant by DND to perform a series of impact assessments and inventories at Rocky Point and the adjacent Mary Hill property in Metchosin (Figure 3) (Mathews 2004a, b). This work was

commissioned by DND to take stock of the archaeological sites on these very large and mostly undeveloped properties, information they deemed critical to their management decisions and land use practices. This work coincided with an increasing concern and mandate for environmental stewardship within the DND (Minister of Public Works and Government Services Canada 2003). Extending from this environmental stewardship mandate, the archaeological work commissioned by DND was largely a proactive measure and speaks to their recognition that heritage and land management practices have profound implications for relationships with the Scia'new Nation and other descendant communities.

The archaeological approach I take in this dissertation is in large part the product of many years of working alongside Coast Salish cultural experts who have kindly and patiently shared with me the importance of their connection to their ancestral dead. As both an archaeological consultant and as an academic, I have participated in the reburial of disturbed human remains on several occasions. As I introduced in the prologue, two of these funerals involved the construction of funerary petroforms. These rituals, conducted by two different groups of elders and ritual experts in two different places, were remarkably similar. While the building of funerary petroforms has not been practiced, to my knowledge, for about six hundred years, the ritualists conducting the burials decided that circumstances in these two cases called for this kind of burial. In addition to the building of the funerary petroform at Edye Point, the other instance involved the reburial of several inhumation burials on Salt Spring Island, where these human remains, buried within shell midden, were disturbed by road construction (Eldridge and Mathews 2005). While waiting for the appropriate time to begin the reburial, I was walking behind the village midden with elders from the Tsawout First Nation and talking about the funerary petroforms there. When the time came to begin the reburial, it was decided that the human remains, previously buried below ground, would be reinterred within funerary petroforms. New stones were collected and the human remains were subsequently buried amongst existing funerary petroforms behind the village midden.

In both cases, the process unfolded with the elder ritual experts in direct communication with the dead whose skeletal remains were about to be interred within funerary petroforms. The elders in turn communicated to the 'gravediggers'<sup>1</sup> that stones should be collected and brought

---

<sup>1</sup> As I discuss in Chapter 6, Coast Salish gravediggers are well-respected experts with the hereditary knowledge and expertise to work with the dead.

back to the place of burial. The elders mediated the movement of stones, listening to the dead as they voiced their wishes, then worked at directing each person to place specific stones in specific places. Once the elders said the ancestors were satisfied with the results of this choreographed process of funerary petroform construction, all work on the burial immediately ceased. Food and clothing were then burned nearby. Transformed by fire and carried by smoke to the world of the ancestors, these goods set the spirits of the dead at peace.

These experiences impressed upon me the power of ritual process in building funerary petroforms, with its rich engagement between knowledgeable specialists, witnesses, and the material world of stone and soil. It also underscored that although the finding of human remains was an emotional experience and initially a moment of upset for both the DND and the Scia'new communities, funerary rituals are a negotiated and mediated time of connection that can both renew and create relationships. At the graveside, the Scia'new acknowledged the DND witnesses and thanked them for both facilitating the archaeological work at Rocky Point and for doing what was required in the caretaking of their ancestors. In this sense, the reburial was initially a site of tension, but ultimately served as an experience for two communities to convene for the purposes of attending to the dead. And in doing so, present-day tensions were addressed.

These experiences also served as plausible analogues for the ritual process that created the archaeological record at Rocky Point. For example, in both cases, many stones were collected and brought to the burial site, but not all were used. In fact, in both experiences, the ritual experts made it very clear that not all stones were to be used, even though at Rocky Point we were using stones from the original uprooted funerary petroform. This resulted in a distinct funerary petroform surrounded by a loose concentration of stones. Most funerary petroforms at Rocky Point have a similar distribution of stones around them and this pattern was also noted by Harlan Smith, who excavated funerary petroforms around Victoria as part of the Jesup North Pacific Expedition between 1897-1899. He observed that “the ground is so strewn with boulders that lines and circles may be imagined in many directions” (Smith and Fowke 1901:68). These contemporary ritual experiences provide potential analogues to what is observed in the archaeological record—in this case the possibility that leaving a certain proportion of stones unused may have been an intentional and important aspect of funerary ritual, as I take up in Chapter 10 below.

During the reburials in which I was privileged to participate, I was struck by the fact that the ancestral dead were present and active participants in their own reburial, guiding the ritual specialists in the orchestrated movement of bodies, stone and soil. These contemporary funerary practices underscore a long-term ritual engagement of Coast Salish peoples with their ancestral dead, as I discuss in Chapter 5. Aspects of this ritual practice, such as ‘feeding the dead,’ exhibit remarkable continuity over millennia, even if the form and practice of the rite changed through time (Carlson and Hobler 1993). The dead are a powerful presence in Coast Salish society, and to take this seriously means to acknowledge that relationships between the living and the ancestral dead are central to the building and placement of funerary petroforms, and thus the making of the archaeological record. As such, the materiality of funerary petroforms provides archaeologists some purchase to consider past ritual practices, and thus examine the intersections between things, people, perception, and landscape.

Approaching the building of funerary petroforms as a process—namely a ritual process—opens the study of funerary petroforms to a consideration of how these burials were both structured by the living, and in turn structured practices inside and outside of the cemetery. The archaeologically detectable use of spaces and materials in cemeteries is an entry point through which to consider ritual as a process for actively producing, maintaining, and transforming relationships. This refigures the study of funerary petroforms as a study in what the building of these burials accomplished, how funerary traditions developed and retained their consistency, and how they changed through time.

### ***Background to the Research Problem***

Northwest Coast archaeologists have approached their subject primarily as an ecologically informed culture history (Mackie 1995; Moss 2011). This perspective highlights the productive and economic aspects of past peoples, especially when coupled with the environmentally rich archaeological data sets of shell middens. This almost singular focus on economy and food production, however, foregrounds assumptions of “economic rationalism and pervasive need” (Martindale and Letham 2011) and, when combined with notions of social evolution, situates the conversation around ideas of emergent cultural complexity—the default model for conceptualizing culture change on the Northwest Coast (Mackie 2001; Moss 2011). As I discuss in Chapter 4 however, the Coast Salish understood the basis of their individual and corporate economy as founded on spiritual connections, ancestral precedent, and the other

inherited prerogatives of one's family, history, and connection to place. The ability to produce food was seen as a logical outcome of spiritual and ancestral relationships, and it was through ritual practices that these relationships were often established and mediated. Furthermore, it was ritual practices through time that promoted both continuity and change; not evolution but an ongoing negotiation and navigation of power relationships and entanglements at scales ranging from the individual, house, and region, as well as between the communities of the living, the dead, and the other powerful agents in the Coast Salish world.

The relative lack of theoretical and methodological engagement by archaeologists with the funerary record contrasts starkly to the rich ethnographic record of funerary ritual practice on the Northwest Coast. Sergei Kan's (1989) work on ethnohistoric and contemporary Tlingit funerary practice, for example, highlights the richness of ritual practice and how it articulates with the relationships of power. This anthropological work casts in relief archaeological approaches to funerary ritual practice on the Northwest Coast where emphasis has been placed on grave goods as relative measures of complexity and human remains analyzed as biological populations evidencing status and ethnicity (e.g., cranial modification) or pathologies. While it is unreasonable to compare the range of possible inferences available to ethnography with that of archaeology, archaeological method and theory has an attendant and capable focus on questions of material, form, space, and time that make it well situated to consider aspects of ritual practice often not considered by ethnographers. This is exemplified in recent work in the American Southeast (e.g., Pauketat 2008, 2013; Pauketat, et al. 2002); the American Southwest (Mills 2008; Mills and Ferguson 2008); Mayan archaeology (e.g., Gillespie 2000b, 2002, 2008), Mesolithic Europe (e.g., Nilsson Stutz 2003, 2010), Ghana (e.g., Insoll 2009; Stahl 2008), Early Bronze Age Jordan (e.g., Chesson 2001a), and Egypt (e.g., Meskell 1999a, 2000b, 2001).

Understanding how funerary ritual influences the lives and affairs of people means identifying where and how the ancestral and the ethereal are present among the living (*sensu* Parker Pearson 2001). At Rocky Point, how stone and soil were brought together by mourners and ritualists to make funerary petroforms, and the location of those features relative to one another and in relation to landscape, is the material and spatial outcome of ritual practice. As I will outline in Chapter 2, when ritual is viewed as a form of practice, the intersection between materials and deposition are an entry point through which we can consider ritual as action (Bell 1992), particularly when the significance of the materials used is considered within their historic

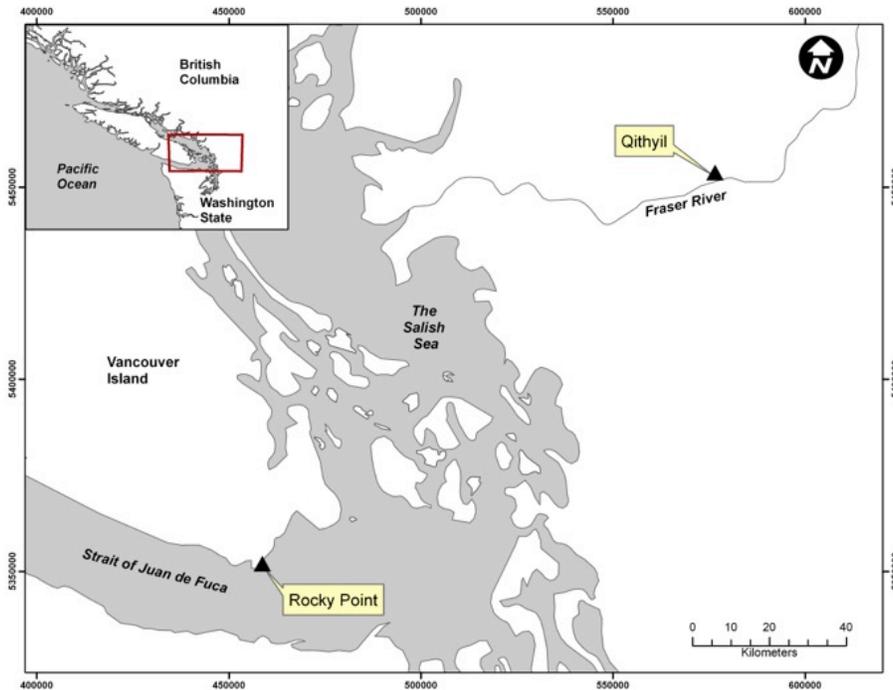
and cultural context and the practice of deposition is understood as a performance with intentional and strategic objectives (e.g., Gillespie 2008; Mills 2008). Funerary petroforms can then be considered as places where ancestral and supernatural power converges with the power of the living through ritual and the medium of stones and soil.

The transition from midden inhumation to above ground burial during the Late Pacific period is part of the most dramatic shift in funerary ritual and mortuary practice in the eleven thousand year prehistory of the Northwest Coast (Ames and Maschner 1999:192). Beginning as early as A.D. 500, the practice of midden inhumation ends along the length of the Northwest Coast by A.D. 1000-1200. This transition took different forms along the coast, but often involved the movement of the corpse away from villages. By the 18<sup>th</sup> century, the bodies of high-status peoples were wrapped in blankets and placed in elevated canoes or other containers. This included posts, scaffolds, and tree limbs. These practices, which account for most funerary practices documented in the ethnographic literature, have little archaeological visibility. These practices, however, may not represent all classes or groups.

Intermediate in this progressively upward and outward movement of the dead was the advent of funerary petroforms in the Salish Sea and Fraser River Valley. Exploration of this funerary record is exemplified in two contemporary cemetery-level analyses of funerary petroforms. Situated at opposite ends of the Coast Salish ethnolinguistic area, these are the Qithyil site in the Fraser Valley and Rocky Point on southern Vancouver Island (Figure 4).

The Qithyil site, at the confluence of the Harrison and Fraser Rivers is a model of collaborative archaeology between the academic researchers and their Stó:lō community partners. From this partnership emerged an understanding of Qithyil as a village site occupied year-round until around 1800 years ago, when the permanent longhouses were no longer occupied (Lepofsky, et al. 2000). A shift began around 1400 years ago when a very large funerary petroform, Mound 1, was built at the edge of the main residential terrace in an area that had not been previously used. Sometime after the building of this very large burial mound, continuing until at least 800 years ago, funerary petroforms of various sizes were constructed throughout the terrace and surrounding hillside. In total, 198 funerary petroforms are distributed over a 10 km<sup>2</sup> area, in at least 15 distinct clusters (Oakes, et al. 2008). The burial features on the hillsides may represent an expansion of the cemetery into areas that had never been occupied. The burial

complex shows considerable variation from the few large, elaborate earthen mounds to much greater numbers of small earthen “oblong domes” and some stone cairns (Oakes, et al. 2008).



**Figure 4: The Rocky Point and Qithyil funerary landscapes, southwestern British Columbia.**

The Qithyil work presently lacks a formal analysis of feature morphology and placement. Based on their qualitative reading of the layout of the main terrace, however, Lepofsky, et al. (2000) infer that the size and placement of these burials are statements of the social standing of the dead at the time of their death. Whereas most people did not merit large visible monuments, those interred within the largest funerary petroforms may represent individuals ranking within the highest stratum of society (Lepofsky, et al. 2000:412). The Qithyil researchers concluded that, although site use shifted through time from residential to funerary, the descendants of Qithyil village maintained their connection to the place by burying their dead in highly visible mortuary features on the terrace. The Qithyil work is not explicitly situated in a theoretical framework, but aspects of its interpretation are reminiscent of Saxe's (1970) Hypothesis 8, which states that groups are more likely to maintain formal disposal areas for the exclusive burial of their dead, rather than dispersed grave sites, when control of restricted resources is crucial. This control is attained and legitimized by means of lineal descent from the dead, and the maintenance of lineal ties to ancestors (Saxe 1970:119). This was expressed by Thom (1995), who speculated that at

Qithyil, the highly 'visibly markers' manifested a connection between those buried in the mounds, their descendants, and owned territories, and that such mounds and cairns were built by collective labour as emerging elites became more exclusive and competitive with one another. Saxe's Hypothesis 8, based on an analysis of global mortuary practices, does have some utility, however, the Qithyil research would have benefitted from an analysis of a more culturally and historically contingent analogue of Coast Salish funerary and ritual practices. This would, I suggest, provide a better understanding of the articulations between the transition from residential space to cemetery space, and the upward and outward movement of the dead from inhumation to funerary petroform, and situate this more explicitly within a process of both continuity and change in ritual practices.

The Qithyil work, like good research should, prompts more questions than it answers. For example, if the Qithyil funerary petroforms are intentionally visible statements of the social persona of the dead and an accurate reflection of their social status in life, then it might be expected that larger features are more central and visible than smaller ones. Why then was Mound 1, the earliest and largest funerary petroform at the site, peripheral to the main residential terrace? Furthermore, while they may be visible monuments commanding "a dominating view down the Fraser River" (Ames and Maschner 1999:193), just how visible are they *from* the river to people passing by the cemetery in canoes? If there are formal and exclusive areas for the burial of corporate or kin groups, how are they arranged both internally and relative to one another and the landscape? Representing several years of large scale excavation, survey and analysis, the Qithyil work is remarkable in its ambitious scope, spirit of collaboration, and represents a first contemporary effort at understanding this ubiquitous yet little understood form of burial.

The Qithyil work, in particular its contribution to culture history, provided a starting point for my master's thesis research at Rocky Point (Mathews 2006b). Between 2003-2006, I collected morphological and spatial data for 333 funerary petroforms at Edye Point. This formed the basis for an exploration of patterning in funerary petroform morphology, independent of the *ad hoc* typology that is generally used to slot these features into categories of "cairn" and "mound." I used cluster analysis to sort funerary petroforms into groups based upon degrees of association between similar attributes. This resulted in the identification of six basic types of funerary petroforms. Although there was some overlap among attributes between types, when all

attributes were considered together, these feature types were internally homogenous and externally diverse. The cluster solution did not differentiate between the *a priori* categories “mound” and “cairn,” suggesting that the attributes of these features grade into each other rather than representing truly distinct forms of burials. I then conducted a heuristic GIS-based analysis of the distribution of the features types within seven spatial clusters. While these results were exploratory, they indicated that certain kinds of funerary petroforms were isolated to specific parts of the cemeteries, whereas other types were built throughout the site with no apparent spatial preference. The largest features, while accounting for only 3% of the overall number of funerary petroforms, were distributed across most of the site.

I concluded that funerary petroforms at Rocky Point are deliberate constructions situated within specific locations—above ground monuments that contrast with the prior practice of below ground interments. Based on phenomenological experiences of boating past the cemetery, I suggested that, contrary to the implied visibility of the Qithyil features, the funerary petroforms at Edye Point are not built on the most visible parts of the landscape, such as along waterways or topographic high points (Mathews 2006b). In fact, it appears that efforts were made to hide the burials from view along the waterway, situating them, for example, on the leeward side of bedrock exposures, rather than on top or in front of them. It is possible that funerary petroforms at Qithyil and Rocky Point have two different kinds of visibility (Moss 2011:126), but I suspect that visibility at both places is more complex than either of these studies suggests. As monuments with some kind of presumed visibility, this apparent contradiction of visibility must be tested if we are to understand the social significance of these burials.

The previous work at Rocky Point and Qithyil acknowledged ritual as part of the production of funerary petroforms, but neither project considered ritual as the principle cultural practice that produced the archaeological record. Recognizing and articulating ritual practice and the archaeological record is a problem that extends beyond the Northwest Coast to global archaeology. An early hesitance to consider ritual in the interpretation of the archaeological record (Hawkes 1954) was partially overcome through theorizing and debate in Processual (e.g., Binford 1971; Braun 1981; Goldstein 1980; Saxe 1970) and post-Processual and social archaeology approaches (e.g., Barrett 1990; Cannon 1989; Meskell 2000a, 2001; Pader 1982; Parker Pearson 1982, 1993; Williams 2001a). However, the approach I take is one that considers mortuary practice—the physical preparation and burial of the corpse—as just one aspect of

funerary ritual that encompasses a broader range of ritual practices. Fundamental to archaeology, this includes (but is certainly not limited to) depositional practices and engagements with materials and spaces. Through time ritual forms traditions of practice. It is these traditions and practices that create the archaeological record.

To advance the idea of ritual as an active producer of the archaeological record at Rocky Point, I engage the work of Catherine Bell.<sup>2</sup> In *Ritual Theory, Ritual Practice*, rather than impose categories on what is or is not ritual, Bell (1992) challenges us to consider what ritual does. We cannot assume that ritual re-enacts some underlying meaning or myth, since, as Bell argues, the interpretation of meaning is often a reflection of the theorist's own methods and discourse (Bell 1992:54). Problems of meaning-centred approaches are well discussed in anthropology (e.g., Bloch 1995a) and Stahl (2002) outlines both theoretical and methodological reasons for de-privileging meaning as a focal point of inquiry in archaeology. Implicit in the idea of meaning is the view of culture as a finished and cohesive product, rather than as a process of negotiation and strategizing. Meaning varies within and between societies, as well as through time. Particularly significant to archaeology, meanings do not inhere in objects; objects are endowed with meaning according to local cultural logics, and meanings are creatively re-contextualized when they cross cultural boundaries (Stahl 2002; Thomas 1991). Bell's main contribution to the study of ritual is to insist on giving priority to practices over meanings. This active nature of ritual is what Bell terms *ritualization*. It is "a way of acting that is designed and orchestrated to distinguish and privilege what is being done in comparison to other, usually more quotidian, activities" (Bell 1992:72).

To advance the idea of ritual as an active producer of the archaeological record at Rocky Point, I engage the work of Catherine Bell. In *Ritual Theory, Ritual Practice*, rather than impose categories on what is or is not ritual, Bell (1992) challenges us to consider what ritual does. We cannot assume that ritual re-enacts some underlying meaning or myth, since, as Bell argues, the interpretation of meaning is often a reflection of the theorist's own methods and discourse (Bell 1992:54). Problems of meaning-centred approaches are well discussed in anthropology (e.g., Bloch 1995a) and Stahl (2002) outlines both theoretical and methodological reasons for de-privileging meaning as a focal point of inquiry in archaeology. Implicit in the idea of meaning is

---

<sup>2</sup> In Section II, I develop a theoretical framework that articulates Bell's notion of ritualization and its engagement with the material and spatial aspects funerary practice.

the view of culture as a finished and cohesive product, rather than as a process of negotiation and strategizing. Meaning varies within and between societies, as well as through time. Particularly significant to archaeology, meanings do not inhere in objects; objects are endowed with meaning according to local cultural logics, and meanings are creatively re-contextualized when they cross cultural boundaries (Stahl 2002; Thomas 1991). Bell's main contribution to the study of ritual is to insist on giving priority to practices over meanings. This active nature of ritual is what Bell terms *ritualization*. It is "a way of acting that is designed and orchestrated to distinguish and privilege what is being done in comparison to other, usually more quotidian, activities" (Bell 1992:72).

It has recently been argued that archaeologists tend to conflate ritual with religion (e.g., Aldenderfer 2010, 2011; Rowan 2011). While this may be true, I maintain a focus on ritual in this study. Regarding Coast Salish belief in their ancestors—or other agents of the supernatural—as part of a religion does not particularly illuminate Coast Salish funerary practices. Rather, approaching these practices as a form of ritualization provides the footing by which we can escape concerns with belief and meaning and focus on practice. While religion and belief can be a useful heuristics, we have used the term “belief” in the supporting role of religion and in specific reference to those things that we hold to not exist in fact. If a group “believes” in less empirically problematic things (e.g., a sense of equality), we tend to refer to these not as beliefs, but as cultural values, attitudes, or dispositions. If a group holds convictions about ghosts, we tend to describe such attitudes as beliefs, not as culture. Belief, in other words, is our characterization of the specific illusions of others (Bell 2002:106).

Using the example of Chinese peasants, Bell sees what the peasants themselves think of as religion as more a matter of loosely packaged sets of behaviours—bundles of behaviours or “habits of action.” These packaged sets of distinct behaviours are used to deal with events and life-crises such as death, birth, illness, and misfortune. This also includes the ritual life of defined communities of practice—extended family gathered for a funeral or a secret society for an initiation, for example. In fact, “family, jobs, and personal projects of service to others were more obvious overarching systems of meaning; religion appeared to be invoked simply to support them” (Bell 2002). Such bundles of practice blur religion and indicate the existence of something both durable and mutable: they are less concerned with coherence and more so with practice. Coast Salish funerary practices, considered as bundles of action and disposition, allows for

individual and local-level “takes” on those practices. It allows us to consider what their relationships with their ancestral dead accomplished, without implying the illusion or falsity of specific ideas, and grounds those practices in the embodied actions of people, their engagements with materials, and their practices in places and through time.

Drawing on this notion of ritualization, I approach the funerary practices of the Rocky Point peoples as active processes involving living bodies moving stones and soil around dead ones. This places primacy on the effects of actions and a “sense of ritual,” rather than the specific intention or meaning behind action. Bell—drawing heavily from Bourdieu (1977, 1990)—develops a theory of agency in which ritual participants may have little in the way of coherent beliefs or religious conceptions, but can still have an accurate knowledge of matters of ritual practice and mundane taboos (Bell 1992:185). Framed as “habits of action,” ritual participants become imbued with knowledge of ritual schema—the structures and practices that constitute and legitimate ritual. This enculturation produces ritualized individuals embodying historical traditions of practice.

Learning theory in anthropology also recognizes, however, that social interaction occurs at larger scales than the individual body. Social interaction and learning within the longhouses and the villages at Rocky Point may have produced what Lave and Wenger (1991) call communities of practice. This conceptual framework has recently been used in archaeology, particularly in discussion of pottery making (e.g., Cordell and Habicht-Mauche 2012; Eckert 2008; Habicht-Mauch, et al. 2006; Roddick 2009; Sassaman and Rudolphi 2001). This approach concerns networks of situated learning and practice (Minar and Crown 2001). Communities of practice are formed through shared, transmitted knowledge among individuals and within groups. Learning is both an ongoing and changing set of relationships in which individuals have multiple, varied ways of being located in fields of participation defined by a community (Lave and Wenger 1991:50). Individuals learn and develop social identities within memberships that stress social identity and historical context. Examples of this membership can include formal apprenticeships. As I outline in Chapter 5, the Coast Salish had hereditary and privileged categories of ritual experts, including those whose proprietary knowledge extended to funerary ritual. As such, I expect that the building of funerary petroforms may be a site where learning, local-level knowledge and decisions, secrecy, and relationships of power were negotiated within and between communities of ritual practice at Rocky Point.

Returning to Bell's notion of ritualization, ritual is neither a practice for directly controlling society or individuals, nor is it an expression of something deeper such as belief or ideology. As something that is not isolated from other contexts of social activity, ritual is an arena for the embodiment and negotiation of power relations. Individuals may embody ritual practices that are implicitly learned through imitation and habit, in social settings such as wakes and funerals. Communities of practice, however, may work as groups that promote social inequities in ritual mastery. Ritual skill and knowledge is not the exclusive domain of the specialist. Rather, based on the socialization, personal capabilities, and resources available to an individual, communities of practice may promote learning and practices that differentiate an individual or household's capacity to exercise ritual schemes. Both Bell (1992) and Lave and Wenger (1991) understand power as relations that are inescapable, present at every level of the social body, and operate at the smallest levels of social relationships (Foucault 1982, 1983; Foucault and Gordon 1980). But for the exercising of power to be effective, there must be a sense of benefit for all participants, even if the benefit is unequal. In other words, for power to be effectively generated by ritual, there must be conduits for that power between both the top and the bottom. Although there are allowances for the conscious or unconscious manipulating of ritual schemes with the purpose of attaining some particular objective or putting a particular idea into effect, the outcomes of power produced by ritual are often unpredictable, chimerical and unwieldy. What makes the mastery of ritual effective in relationships of power is the control of the ritual environment itself. Ritual practices in a cemetery, for example, may depersonalize authority as something invested in the place, although groups or individuals may command some measure of control over how these places are used. This is a point that I explore further in Chapter 2.

In short, this dissertation proceeds from the premise that the construction of funerary petroforms is not a reflection of power: it is the very production of power through ritual action. The Rocky Point peoples were part of a community of ritual practice, and in Bell's formulation of ritual and Foucault's dynamic of power, we must consider ritual as implicit in the context of negotiated power relationships both inside and outside of the cemetery. Funerary ritual is also susceptible to manipulation by agents and, over the long term, these often-subtle manipulations in funerary ritual result in unintended consequences, producing patterns of materiality and space beyond the conception of any individual or community of practice in the past (Barrett 1994; Mizoguchi 1993).

Funerary petroforms and the cemetery landscapes that they form are the materialized result of long-term ritual action. Materiality is an acknowledgement that power and agency reside within the funerary petroforms themselves and that things, places, memory, and people are inseparable in the production and reproduction social action and relationships of power (Gosden 2006; Gosden and Marshall 1999; Hodder 2011; Ingold 2007; Meskell 2003, 2004, 2005b; Miller 1998, 2009), as I take up in Chapter 2.

### ***Statement of the Problem***

Rather than approach funerary petroforms as a reflection of increasing hierarchy or changing social structures, considering ritual as a strategic and negotiated practice encourages us to understand the advent of funerary petroforms as a process of power rather than an effect of it. This reframes the object world of stones and soil—and the funerary petroforms they constitute—as a shaping force of power.

Archaeology is well suited to detecting ritual through the ways that material and spaces were used (Pollard 2001), thus providing an entry point into questions concerning the articulation between power and the structure manifest in the depositional practices that produced the archaeological record. There may be a performative aspect to the ritualized moving and placing of stones and soil. These performances are often identified in the archaeological record through the recognition of assemblages deposited by formalized, repetitive behaviour (e.g., Joyce 2001; Richards and Thomas 1984). The concept of structured deposition acknowledges that past actions engaged in meaningful ways with materials, producing traces of structure in the archaeological record (Joyce and Pollard 2010). More recently, however, a broader focus on depositional practices gives serious consideration of the aesthetic and sensuousness of things (Pollard 2001), phenomenological aspects of the experience of materials (Boivin and Owoc 2004), and as I discussed above, the agentic and entangled qualities of materials, places, and people (e.g., Latour 2005; Miller 2005a).

Material culture engages in the transmission of memory. Depositional practices and the materiality of these practices are a form of memory work (Mills 2008; Mills and Walker 2008a). Social memories are made through the repetition involved in ritualized deposition of materials, which entails a reproduction of practices over time—a chain of performances—that challenges us to think about sequences of ritual actions as histories of practice (Joyce 2008:28; Joyce and Pollard 2010). There is a process of remembering realized through depositional practices that

relates networks of persons, things and places over time (Joyce 2008). But forgetting and concealing knowledge are also important aspects of memory work (Mills 2008). Secrecy, for example, is an important principle among ethnohistoric and contemporary Coast Salish peoples and there may be historical continuities with ancestral material practices at Rocky Point.<sup>3</sup> In her work on memory and forgetting at Chaco Canyon, Mills (2008) outlines how the closing off of spaces associated with the death of a ritual leader is implicated in a kind of ‘remembering while forgetting’, as the memories associated with secret locations and closed-off spaces are retained long after they are sealed. This conclusion is particularly relevant to my work at Rocky Point where I will similarly explore the power of the unseen to shape visceral effects (Meskell 2008:237). As Mills (2008) states, the power of secrecy and the concealing or controlling of access to forbidden places or things can heighten their intensity and perhaps even reframe them as sacred. Because things are shielded or out of daily view does not mean that those things are not working; they may still be very active and powerful agents and shielding them from the day-to-day often only enhances their power.

Together, these approaches allow for the historicized consideration of material effects as well as social strategies in the study of deposition (Joyce and Pollard 2010; Pauketat and Alt 2004). The concept of depositional practice is significant because I contend that the act of building funerary petroforms was central to the structuring of fields of power, and that use of space and material in the building of funerary petroforms and cemeteries was a historical process of making people, places, and relationships.

In this study I look at the lived scale, the localized and situated context of ritual practice, and ways in which two neighbouring villages at Rocky Point buried their dead. It is at this local and lived scale—communities of overlapping ritual practice—that tensions between shared practices and interactions, prohibitions, and the presumed need to maintain secrecy and ritual prerogatives, were negotiated and performed in the burial of the dead. Although it is not a topic I explore in this dissertation, I am aware that the funerary practices at Rocky Point are situated within larger regional practices, such as those previously discussed at Qithyil. As Stahl challenges us, archaeologists “should be attuned to the possibility of nested communities of practice of varying scale that simultaneously defy the tidy boundaries of twentieth-century ethnographic

---

<sup>3</sup> This idea is developed in Chapters 5 and 6.

maps” (Stahl 2013:65). As such, understanding both continuities and change in ritual practice at Rocky Point has implications for understanding ritual practice at different scales. This approach recognizes the unique historical and cultural situation of the Rocky Point peoples, yet acknowledges their entanglement within larger social relationships between neighbours both near and far and the power of material and space to both structure and be structured by ritual practices at multiple scales through time.

**Purpose of the Study**

The research hinges upon a practice-based body of social theory that bridges qualitative thematic analysis with a quantitative analysis of funerary petroform morphology and spatial data (Figure 5). The social theory models the ways in which Bell’s practice-based notion of ritualization articulates with the material, spatial and temporal archaeological record. It recognizes that these aspects of the archaeological record are themselves active agents (Joyce and Pollard 2010).

The qualitative data includes the results of two different thematic analyses to identify patterns within the existing literature associated with histories of funerary practice over the past four thousand years. I argue that there is a continuum of knowledge, history and ritual practice anchored in Coast Salish communities.



**Figure 5: The theoretical, thematic and archaeological data used to identify and contextualize Rocky Point funerary ritual practice.**

In the first thematic analysis, I use the existing culture history to contextualize four thousand years of funerary ritual practice in the Salish Sea, thus providing a historical context for the building of funerary petroforms in the region. Next I conduct a thematic analysis of

ethnographic Coast Salish funerary practices, which provides a historically situated analogical framework with which to test and interpret the archaeological record. The themes become categories for analysis, directing the analysis of the quantitative data.

A suite of quantitative analyses are then used to test for and define patterns both in the morphology of funerary petroform construction, as well as patterns in how funerary petroforms are distributed on the landscape relative to each other and aspects of the natural and cultural landscape. This includes their relative visibility. My approach entails a recursive movement between the micro-scale of individual funerary petroforms and the intra-cemetery space of two neighbouring cemeteries. While I do not explicitly analyze it, I recognize that this ritual practice is situated in the macro-scale of regional patterns and histories (sensu Pauketat and Alt 2005).

### **Primary Research Questions**

I contend that Late Pacific period Coast Salish funerary ritual was not the reflection of, nor the instrument of power, politics or social control; rather, ritual practice and the building of funerary petroforms were bound up in the very production and negotiation of power relations. Funerals, when considered as rites of passage, may involve specific kinds of materials, spatially patterned placement of features, and distinctive architectural forms designed to produce and facilitate repeat ritual performances. The archaeologically detectable depositional practices of moving stone and soil in the making of funerary petroforms is an entry point through which we can consider ritual as a practice that affected both continuity and change among the living. Through the long-term process of ritualization, funerary petroforms emerged as a form of burial implicated in the production of power in precontact Coast Salish Society. Material and space form the structured depositions of funerary ritual and are one of the most archaeologically detectible means of studying the long-term burial of the dead in south coast prehistory.

To test these hypotheses I pose three related research questions.

### **Dissertation Question 1:**

*Considering the ritualized use of space and materials within the two largest cemeteries at Rocky Point, how were distinctions between different kinds of funerary practices manifest in Late Pacific Period depositional practice?*

### **Dissertation Question 2:**

*How are funerary petroforms, as the material and spatial depositional practices of funerary ritual, implicated in the long-term process of producing and reproducing power relationships at Rocky Point?*

### **Dissertation Question 3:**

*What were the scalar effects, spatially and temporally, of the funerary landscape transformations and what might their implications have been for the larger social structures of Rocky Point peoples during the Late Pacific Period?*

The first question, which considers archaeologically detectable patterns in the use of materials and space, is further subdivided into a subset of five questions and associated methods. The sources of data and methods of analysis I use to test the first question are outlined in Table 1, below. This approach builds successively on each proceeding result, culminating in how different kinds of funerary petroforms are positioned relative to other burials and aspects of the landscape. Particular emphasis is placed on the visibility of funerary petroforms in different contexts of viewing. The remaining two dissertation questions contextualize the results of the material and spatial analysis and consider how the materialities of funerary petroforms contribute to fields of power.

**Table 1: The inferences, subset of questions, sources of data and methods of analysis used to answer Dissertation Question 1.**

	<b>Inference and questions</b>	<b>Sources of data</b>	<b>Methods of analysis</b>
1.1	The structure of funerary petroforms concerns differential knowledge and the relations of power within and between social groups. Regularity of form is the materialization of tradition, structured by past actions and structuring present and future actions.  Based on their non-spatial attributes, which funerary petroforms are most similar? Which are least similar?	Funerary petroform data	Agglomerative hierarchical cluster analysis
1.2	The physical presence of funerary performs influences the movement, orientation, and interaction of peoples at multiple scales. Funerary petroforms are material and spatial cues that structure dispositions in a place, inscribing the landscape and structuring movements and experiences.  What is the nature of feature distribution at Rocky Point? To answer this question I explore the following: <ul style="list-style-type: none"><li>• How are feature types distributed between the Rocky Point cemeteries?</li></ul>	Funerary petroform data  Results of cluster analysis	Descriptive Statistics

	<ul style="list-style-type: none"> <li>How is the attribute "volume" distributed between the Rocky Point cemeteries?</li> </ul>		
1.3	<p>Clustering of funerary petroforms may indicate that ritual practices produced material and spatial outcomes that articulate membership to specific groups through distinctive burial types and places.</p> <p>Within the two largest cemeteries, do funerary petroforms attract, repel, or behave randomly in their intensity towards one another? To answer this question I explore the following:</p> <ul style="list-style-type: none"> <li>Do funerary petroforms, when considered as a whole, attract, repel or behave randomly in their intensity?</li> <li>Do funerary petroforms of the same dispositional type attract, repel or behave randomly in their intensity?</li> <li>If there are clusters of the same dispositional type, at what scales does this clustering occur?</li> <li>If there are clusters of the same dispositional type, where are these clusters located?</li> <li>Do funerary petroforms of the same size attract, repel or behave randomly in their intensity?</li> <li>If there are clusters of the same funerary petroform size, at what scales does this clustering occur?</li> <li>If there are clusters of the same funerary petroform type, where are these clusters located?</li> </ul>	<p>Funerary petroform data</p> <p>Results of cluster analysis</p>	<p>Nearest neighbor analysis</p> <p>Kernel density analysis</p> <p>Ripley's K-function</p> <p>Nearest neighbor hierarchical cluster analysis (NNH)</p>
1.4	<p>Trails have biographies based on the people, events and places associated with them, endowing routes with cultural meaning and significance that are often entangled in relations of power.</p> <p>Based on the distribution of funerary petroforms and the kind of landforms at Rocky Point, where were trails located through or around these cemeteries?</p>	<p>Funerary petroform data</p> <p>Digital elevation data</p>	<p>Continuous sector analysis</p>
1.5	<p>Ideas of monumentality understand visible burials as markers inscribing landscape with the fields of power. Furthermore, the physical presence of monuments serves to influence the spatial movements, orientation and interaction of peoples.</p> <p>How did the Rocky Point peoples use visibility in the building of funerary petroforms? To answer this question I explore the following:</p> <ul style="list-style-type: none"> <li>Were funerary petroforms at the Edye Point and Yates Cemeteries visible in the day-to-day context of traveling around or past them?</li> <li>Were clusters of different funerary petroforms intervisible?</li> <li>Are there places within the cemetery that are never visible from travel routes?</li> </ul>	<p>Funerary petroform data</p> <p>Digital elevation data</p>	<p>Visibility analysis</p> <p>Multiple viewshed analysis</p>

The building of funerary petroforms was likely part of larger, more protracted, funerary process. Each part of this larger ritual process was located in a sequence of practices that preceded and succeeded it. For example, a funerary potlatch or ritual feasting may have followed the building of funerary petroforms. This was not only a ritual occasion outside of the cemetery, but was predicated on what happened within the cemetery, perhaps months or more, after the building of the funerary petroform. My focus is on the spatiality and materiality of funerary petroforms, but it is possible using the thematic ethnographic analysis to consider the broader structure of rites of passage as a means to contextualize the particular stage of the ritual process in which funerary petroforms were built. In this way we can begin to apprehend the larger transformative qualities of Late Pacific period funerary ritual as a total social process, contextualized within the larger Coast Salish cultural schemes and practices. By positioning funerary ritual at the centre of this archaeological problem, it is possible to refocus attention on what makes ritualization such a necessary part of Coast Salish cultural life and what the performance of ritual acts might have accomplished for both the living and the dead.

### ***Analytical Strategies***

I do not assume culture continuity and persistence in all aspects of Coast Salish society throughout the past 4,000 years. In fact, it is very likely that the Coast Salish peoples underwent major social and ideological changes during this time, the advent of funerary petroforms being one of them. Despite influence by outside pressures and institutions, including European contact, changes were accommodated and guided by Coast Salish social, cosmological and economic principles (e.g., Lutz 2008). There remain today recognizable continuities in several spatial, material, and symbolic patterns observed in the archaeological, ethnohistorical, and ethnographic records that have persisted over the last four millennia that allow us to reliably connect important principles of organization, historical processes, and social meanings across time and space. One of the most striking is the enduring relationship between the living and the ancestors, and the ways in which the dead are transformed from the former to the latter through ritual practice.

I propose that Coast Salish knowledge of death and burial are the most apt analogy building tools available to the understanding of any morphological and spatial patterning of funerary petroforms. I am not proposing a naïve Boasian analogy, looking for explicit explanations of funerary petroform construction. By all accounts none exist. Furthermore, I

acknowledge that there have been significant changes in the cultural practices of the Coast Salish over the last millennium. What I am proposing is an ethnographic approach that highlights principles of Coast Salish ritualization and the production of power. I suggest that there has been significant continuity in the fundamental and core idea of the relationship between an active and powerful ancestral dead and the living over the past four millennia<sup>4</sup>. Funerary petroforms and the burial types before and after are implicated in the ways in which these relationships were articulated over time and through space.

This research was done in consultation with and guided by the principles and protocols of the Scia'new First Nation. I have worked with the Scia'new chief and council and some community members for ten years, and they entrusted me with the responsibility of working with their ancestral dead and doing so in accordance with the wishes of their elders and community members. Previous archaeological approaches to mortuary archaeology on the Northwest Coast have focused on excavation, but the excavation of human burials is often incongruent with the respectful treatment of the ancestral Coast Salish dead. The work at Qithyil was an exception, done at the request of, and in full collaboration with, the Stó:lō peoples (Lepofsky, et al. 2000). While several funerary petroforms were excavated at Qithyil, producing valuable results, the logistics of excavating these large features means that researchers could only consider the internal aspects of a small number of features. The approach I take at Rocky Point followed protocols set forth by my Scia'new research partners. As funerary petroforms are on the ground surface and detectable through cost-effective surface survey, I could conduct a very thorough inventory of a large number of features. The size and quality of this field data facilitates statistical inferences and spatial statistics that are otherwise not possible with smaller sample sizes. With no skeletal material or grave goods, the research moved away from traditional archaeological inquiry and considered the form of burial and the use of space as the principle sources of data.

Data collected from intensive surface survey included high precision Global Positioning System (GPS) locations for all archaeological features. In addition to provenience information, 44 attributes were recorded for each funerary petroform. Photographs and scale sketches were completed for each feature. Landscape data was also collected, and micro-terrain features within the study area were mapped. This includes hydrological features, such as wetlands and seasonally saturated areas, as well as low bedrock outcrops, the shoreline, and rocky areas with exposed

---

<sup>4</sup> In Section II, I outline this process of reasoning in relation to archaeological and ethnographic analogies.

glaciofluvial till. Three-dimensional landscape data was interpolated from a Light Detection and Ranging (LiDAR)-derived bare earth model, as well as high-resolution orthographic photos. This provided very detailed landscape data. The entire dataset was managed in a Geographic Information System (GIS) and a relational database<sup>5</sup>. These spatial and morphological data formed the basis of the subsequent quantitative analyses.

Feature morphology was explored through the use of cluster analysis, to identify patterns in how materials were used to create different types of funerary petroforms. The results of the cluster analysis were then incorporated into spatial analyses that determined how these different kinds and sizes of features reacted spatially to one another: either attracting, repelling, or behaving randomly with regard to the same type of features as well as other feature types. I also considered the clustering of features at multiple scales, examining the scales at which features may have clustered and where those clusters (and clusters of clusters) were located. These analyses involved a novel suite of spatial statistics that fall under the rubric of point pattern analysis (PPA). Some of these analyses, such as Ripley's  $K$ -function have seen some initial and successful applications in archaeology prior to my study (e.g., Sayer and Wienhold 2012). My research marks the pioneering use of some newer techniques, such as Nearest Neighbour Hierarchical Cluster Analysis (Levine 2006) and continuous sector analysis (Hammer 2009) that have not, to my knowledge, been used in other archaeological analyses of spatial data<sup>6</sup>. These are analyses well suited to both the Rocky Point data and the research questions.

The field methods produced precise and detailed data from an intensively surveyed landscape, resulting in an extremely large data set on a highly significant and complex archaeological landscape. Tacking back and forth between this field data and the ethnographic and archaeological thematic analyses, and the body of social theory discussed in Chapter 2, presents the opportunity to consider the intersection between culturally and historically contingent ritual practices and the ways they were enacted through the depositional practices of moving stones and soil to bury the dead. These methods will be outlined in Chapter 10 and 11, as well as Appendix 4.

---

<sup>5</sup> See Appendix 3 for data collection practices.

<sup>6</sup> A discussion of the application of Point Pattern Analysis (PPA) in Archaeology is outlined in Chapter 9. PPA methods are outlined in Appendix 5.

## ***Significance of the Study***

In this dissertation, the data and the research methods I employ have both regional and global implications for considering how ritual articulates with space, material, and time in the archaeological record. I am approaching a problem that has not been adequately addressed in Northwest Coast archaeology, but I am also addressing more global issues concerning novel ways that ritual can be approached in the archaeological record with methodological rigour.

This work is done in a historically and culturally contingent context, recognizing that ideas of power, materiality, and monumentality must be understood in their own situated context. My intention is to first identify what made stone an effective and appropriate material for the Rocky Point people to use in the burial of the dead. This means linking the Coast Salish significance of stone with how this material was used during ritual (and other contexts) and defining patterns in the use of stone in the archaeological record using quantitative methods. Exploring Coast Salish ideas of space then allows us to consider how arranging burials relative to one another and the landscape—observed in the archaeological record through spatial analysis—might be understood by looking at the ways space was used in other homologous contexts, such as houses and villages. I argue that Coast Salish material and spatial entanglements outside the cemetery are homologous to material and spatial syntax inside the cemetery. This does not mean that funerary petroforms are a reflection of ideas concerning the ideological or economic significance of stones, or the interior architecture of a longhouse, but that ritual effectively employs these unspoken understandings within the cemetery to produce meanings that work in conjunction with the discourse of song, incantation, prayer, and the organization and spatial layout of the longhouse, to make ritual effective at what it does. As I outline in Chapter 2, and implement in Chapter 10, these understandings can take the form of conceptual metaphors (e.g., Ortman 2000, 2012).

In this research I abide by the Coast Salish ethic and protocols of not disturbing the dead. While the absence of excavated materials at Rocky Point might seem a limitation of the study, what it provokes is a serious consideration of the ritual production of place through the use of stone and soil in the burial of the dead. This acknowledges ritual as a recurrent depositional practice and as a producer of the archaeological record. What makes this analysis both novel and effective is the tacking back and forth between social theory, a Coast Salish sense of materiality and place, and the archaeological record. My intention is to ‘follow the stones’ (sensu Stahl 2008)

as they were moved from the landscape and brought together in ritually orchestrated ways to build funerary petroforms. I am attentive to the performative and ritualized movement of each stone to make an individual funerary petroform, and that each funerary petroform in turn relates materially and spatially to those around it. This is not a chaîne opératoire-like approach, in which I consider the full sequence of funerary petroform construction. Rather, looking at the resulting material and spatial attributes of each funerary petroform, I consider the relationships (spatially, materially and visually) between funerary petroforms, cemeteries, trails and villages.

### ***The Rocky Point Peoples***

I use the term *Coast Salish* in reference to the sources of information from which I derive ethnohistorical practices, material metaphors, and other analogical means to connect ritual and depositional practices with the material and spatial patterns in the archaeological record. I also use this term in reference to the regional scale analysis of past mortuary and ritual practices in the archaeological record (Chapter 3). I do this in recognition that Coast Salish peoples and their neighbours exercised rights of access to villages and resources through a complex web of genealogical ties that extended beyond the boundaries of a single house, village, or language dialect (Roy 2010; Suttles 1987). Western ideas of property and ownership—defined by a bounded group of people associated with a specific piece of land—does not acknowledge the complexity of these genealogical ties or a Coast Salish ‘sense of place’ (Thom 2005).

Furthermore, I discuss the ethnohistoric occupation of Rocky Point in Chapter 5, outlining what I understand to be a cosmopolitan community of houses, each incorporating members of various Coast Salish families and groups from throughout the Salish Sea and Strait of Juan de Fuca, as well as members from other ethnolinguistic groups from the ‘outside coast’ of Vancouver Island. Dr. Pakki Chipps-Sawyer, a Scia’new Nation cultural expert, expresses it thus:

It is important to remember what a First Nations Family is, and how incredibly spread out we are. My family exists in virtually every Band on Vancouver Island, but most specifically in Beecher Bay, Sooke, Pacheenaht, Nitinaht and Kyuquot. In addition, our family extends to Neah Bay in Washington. Originally, villages were composed of family members, and usually neighbouring villages were all related. Families spread through marriage, but generally family and First Nation Community was the same thing. Since the establishment of reserves, however, people from different families were gathered on single reserves and at the same time, a single family was assigned to different reserves and often given unrelated names. This has been the cause of endless problems in governance and the passing on of hereditary knowledge. To add to the confusion, traditionally inherited grounds (burial, fishing, berry gathering, hunting, whaling, seafood gathering, bathing, etc.) were not included in the reserve lands,

forcing people to stay within one community instead of maintaining and visiting the hereditary grounds. Most of these grounds are now on private property and are therefore inaccessible to us. The present struggle for land management by many Bands is an attempt to get back at least some of the hereditary grounds—but again, *which* family’s hereditary grounds? This too is awkward since we can really only look at lands near the reserves to which we have been assigned. (Chipps-Sawyer 2007:4-5)

To reflect this pluralistic composition of house and village, I use the term *Rocky Point peoples* in specific reference to those who built the funerary petroforms at Rocky Point. My intent is to acknowledge that the descendants of the Rocky Point peoples today include members of many First Nations communities, including the nearby Scia’new First Nation and the Tsou’ke Nation.

Susan Roy (2010) outlines how temporal and spatial archaeological classifications such as ‘site,’ ‘culture type,’ and ‘phase’ can have the effect of distancing Aboriginal peoples from their past. She argues this terminology does not credit a deep history of residency and ownership, thus denying Aboriginal peoples connections to villages and burial places located off reserve. In an effort to acknowledge this effect, I use the term *cemetery* and *Rocky Point funerary landscape* in place of “archaeological site” to underscore that these are intentional burial places situated within and inseparable from the larger landscape, and are places that retain a profound significance for descendant communities today.

In this dissertation I explore the funerary ritual and depositional practices of the Rocky Point peoples as both communities of practice, but also as traditions of practice (Pauketat 2001a). Archaeologists have variously used the concept of “tradition” as a device implicit in cultural continuity, often defined as constellations or lists of traits, signaling long periods of cultural stability and reflecting stable eco-functional adaptations. The breakdown of tradition has conversely been understood as disjuncture—a transition from one kind of society, social structure, or level of complexity to another. In this research, I use a practice-based approach to tradition, recognizing that traditions of ritual and funerary practice, for example, are produced through enactments and are thus sites for the active production of continuity and change. In Chapter 4, I outline traditions of funerary ritual practice that traverse four millennia. This includes, for example, ideas of ‘feeding the dead.’ The larger narrative I develop in this dissertation concerns the legitimation of change based on historical precedents, namely the transition from inhumation to funerary petroform, to grave house. This understanding of tradition directs attention to how social action was both shaped by what went before and

reproduces or transforms prior conventions. In this view, both change and continuity require investigation, and the salient question becomes *how* rather than *why* cultural practices produce change or continuity in specific contexts (Pauketat 2001a).

In tacking back and forth between Coast Salish ethnography and ethnohistory, the deep history of archaeology, and the localized temporal and geographic scale of Rocky Point, I do not intend to identify the original meaning of these burials or places, but rather to consider what the depositional practices and ritualizing that produced them accomplished, and how these burials have subsequently continued to “act back” through time. An arcing narrative in this dissertation is the entangling nature of the materiality of funerary petroforms at Rocky Point. These burials continue their work within the present-day social and political contexts. While they have taken on a new significance and entanglement that the original builders could not have anticipated, they remain at the centre of relationships of power and concepts of ownership, history, occupation and place, as I take up in Chapter 11.

### ***Assumptions, Limitations, and Scope***

There are several limitations to this study. First is the assumption that a specific group of people was being interred within funerary petroforms. I outline in Chapter 3 that this form of burial likely does not account for all the people who died at Rocky Point. While we know that there was some temporal overlap between midden inhumation and funerary petroform burial practices, there were other burial practices—forms of surface exposure, for example—that were used for many people who died at Rocky Point during the Middle and Late Pacific periods. These kinds of burial practices have a limited archaeological visibility and are in contrast to the unusually durable and visible nature of funerary petroforms. In one sense this may be a limitation of the study, but this difference in the materiality of funerary ritual is also at the centre of understanding the social significance of funerary petroforms.

Second, and most significant, is that I have little temporal control over the Rocky Point data. Through cross dating with excavated sites in the region, such as Qithyil, I expect that the practice of building funerary petroforms at Rocky Point occurred between ca. cal A.D. 500–1400 (Lepofsky, et al. 2000; Thom 1995). It may be that these dates do not encompass the entire duration of funerary petroform practice. Excavation and the radiometric dating of human bone at Rocky Point is not possible due to concerns expressed by my Scia’new partners. Even with this permission, however, only a small number of dates would be logistically feasible, and may do

little more than confirm the cross dating. This was also a major limitation of research at Qithyil. The number of features that would have to be excavated to provide a chronological range of this practice, let alone some sense of the sequence of funerary petroform construction would be prohibitively large. Non-radiometric techniques, such as lichenometry, luminescence dating, and the study of weathering rates on exposed stone surfaces may prove useful in providing calendrical or relative dates (Beck 1994; Ericson 2004; White, et al. 1998), but all were prohibitive in both time and cost. As such, I accept that the Rocky Point cemetery is a temporally conflated whole. While this work lacks a chronological scale, other than that of cross dating provided elsewhere for the region, I recognize that time has a significant role in both continuity and change in ritual practice (e.g., Mizoguchi 1993). While I do not have synchronic dates for the building of funerary petroforms, and this shapes the kinds of questions I can pose of the data, this does not mean that time is absent in this study.

The two contemporary episodes of building funerary petroforms I began this chapter with underscore the palimpsest quality of the landscape as a component of people's performative engagement with it. People actively engage that palimpsest character—interacting with monuments created at different moments. As such, the monuments created at an earlier point are coeval with the socially significant actions of people at another point in time.

Recognizing this, I approach the Rocky Point landscape as a single temporal entity spanning about 900 years, aware that within this conflated millennial scale, the spatial and material form of funerary petroforms is the result of an unfolding ritual process. Each funerary petroform was not simply a single punctuated and materialized moment in time; rather it was part of a larger ritual process inseparable from previous and subsequent funerals. The passage of time to the Rocky Point peoples had no intended breaks in the 'ebb and flow' of activity. Time was experienced as a succession of events, one relative to another. In this sense, time in the cemetery was measured by the building of one funerary petroform relative to its predecessors, and in turn cuing and shaping the building of subsequent funerary petroforms. This means that the funerary landscape at Rocky Point was an ongoing process of interaction between people and their surroundings (spirits, ancestors, stones, and so forth). This was an integration of time, space, and experience (*sensu* Bourdieu 1977; Ingold 1993) connecting ancestors and living groups or persons. As I discuss in Chapter 4, the Coast Salish people were acutely aware of the temporality

of the landscape and their links to the history of these places—with both continuity and change recognized as socially meaningful (Oliver 2010:45).

Temporality is implicit in the ritual process. Time and history are merged together through human activities; it is through human practice and relationships that social memories and histories are made (Connerton 1989; Mills and Walker 2008b; Van Dyke and Alcock 2003) and social life is carried forward (Ingold 1993). Practices and performances are inscribed on the landscape at the same time that they become embodied by human agents through experience (Joyce and Pollard 2010). The landscape becomes a historicized narrative of past human action (Ingold 1993). In the absence of an archaeologically detectable temporal scale, understanding this triangulation between temporality, and the spatial and material aspects of ritual action underscores the productivity of focusing upon the funeral as ritual practice. In other words, ritual practice and knowledge, constituted by community and personal traditions and histories, determined the form and placement of funerary petroforms through time. These are the practices evident in the archaeological record at Rocky Point.

As a final limitation, I am assuming at least some contemporaneity between the two neighbouring villages at Pedder Bay and Edye Point, and their associated funerary petroform cemeteries. This assumption is based on a limited amount of cross dating of materials (Chapter 3). The occupation and use of these villages and cemeteries is equally conflated to a roughly 900 year period spanning the Middle to Late Pacific periods, although neither is solely limited to this time period.

### ***A Note on Dates and Phonemic Orthography***

In this dissertation, I use calibrated radiocarbon dates, derived from the protocols for calibrating regional radiocarbon dates proposed by Eldridge and McKechnie (2008). This is done using the Calib610 program (Stuiver, et al. 1998) and marine reservoir corrections derived from Reimer, et al. (2004) and their marine reservoir correction database using 10 average values centered on the Salish Sea region ( $\Delta R$  value of  $411 \pm 12$ ). The radiocarbon dates are converted to an absolute timescale and presented as a one sigma age range (Eldridge and McKechnie 2008:2). A summary of all calibrated radiocarbon dates is included as Appendix 1.

I include a Coast Salish phonemic orthography as Appendix 2. Within the text, I use the phonemic orthography of the original source, and where appropriate, provide variations of the

same term or placename between cited sources. Appendix 2 provides a measure of comparability between different different sources.

### ***Overview of the Chapters***

This dissertation is divided into four sections comprised of 11 chapters. Section I (Chapter 2), outlines the theoretical model of the dissertation. Here I expand upon Practice Theory as a theoretical foundation upon which to define ritual and fields of power. I articulate ritualization with the archaeological record, first through analogy building—considering the parallels between houses and burials—after which I consider the space of ritual practice at the landscape and cemetery scale. I also outline the active role of space and material, as something that is both produced by, and produces human actions, perceptions, and practices. The materiality of funerary ritual considers the tensions between funerary petroforms as both a process and product of ritualization. This prompts a consideration of ideas of monumentality and the work of making memories, histories and places. I then elaborate on funerals as rites of passage in the transformation of the dead from corpse to ancestor, and the parallel transformation of mourners to inheritors.

Section II is a thematic synthesis of both the archaeological culture history and ethnographic record of ritual and mortuary practice in the Salish Sea. In Chapter 3, I consider the ritual antecedents for funerary petroforms and the transition from midden inhumation to funerary petroform burial. An ethnographic history of Rocky Point is offered in Chapter 4 and in Chapter 5, I outline the entanglements between death, the ancestors, and power. This articulates the earlier theoretical concepts of ritualization, materiality, and the space and place of ritual with ethnographic Coast Salish funerary practices. This theoretical culmination of culture history and ethnography provides the scaffolding upon which I then build the analysis and interpretation of ritualized depositional practices at Rocky Point.

Section III presents a detailed outline of the Rocky Point landscape and funerary data used in the spatial and material analysis. This section encompasses the analysis of the Rocky Point data from the two major cemeteries: Edye Point and the Yates Cemetery. In Chapter 6, I describe the Rocky Point landscape and each of the seven funerary petroform cemeteries. An outline of the dataset and a discussion of the field survey and recording methods are included as Appendix 3. Chapter 7 is concerned with using both metric and qualitative attributes from all the recorded funerary petroforms to define and discuss patterns in the depositional practices of these

burial features. These results are then considered spatially in Chapter 8, where I conduct a series of spatial analyses to identify the way that funerary petroforms spatially relate to one another, either clustering, repelling, or situated randomly to one another. This is done using both the results of Chapter 7, as well as considering funerary petroforms solely by their size. The spatial analysis culminates in Chapter 9, wherein I consider movement and visibility within the two largest cemeteries. I identify likely travel routes through or around these cemeteries, and then conduct a series of visibility analysis from these trails, as well as testing the intervisibility of clusters of funerary petroforms within the two largest cemeteries.

In Section IV, I discuss the results of the analysis and contextualize the results in Chapter 10, using the body of social theory framed within the archaeological and ethnographic thematic analyses. Chapter 11 concludes the dissertation, culminating in a discussion concerning the transition from midden inhumation to the advent of funerary petroforms, and the implications for change in funerary ritual during the transition Middle to Late Pacific periods. Drawing on the preceding chapters, I conclude by considering the entangling power of funerary petroforms through time.

### ***Summary Statement***

Archaeologically detectable information about precontact Coast Salish social relationships is materialized in spatial ways. Funerary petroforms and cemeteries are the long-term outcome of the process of ritualizing the burial of the dead at Rocky Point. The use of stone and soil, and the spaces in which these ritualized practices occurred, offers an entry point into exploring the articulation and tensions between ritual, practice, and power.

I argue in this dissertation that funerary ritual is a process central to the production of fields of power. I consider the fundamental role of ritual and burying the dead with the process of making places, peoples, and histories. Funerals are formative to fields of power and discourse, at both the local lived scale and the larger regional arena. Funerary petroforms are not the passive reflection or symbolic representation of ritual action. Neither are they a symbolic representation of social relationships.

My goal is not to understand the meaning of funerary petroforms to the people who made them, but to understand how they were built, where they were built, and what effect this ongoing process of ritualization had both inside and outside of the cemetery. The act of selecting a stone for a funerary petroform, placing that stone on the burial, and repeating this practice for

other burials, through time and across space, constitutes a matrix of engagements. The manner in which funerary petroforms were built, with what and where they were built relative to each other and elements of the natural and cultural landscape participated in the production and reproduction of power. While retaining a sensitivity to Coast Salish ideals, such as the permeability between classifications of human, mineral, living, and dead, I offer an approach with which to think through ritualization, history, memory, and practice as the processes that produced the Rocky Point funerary landscape which we encounter today.

In this dissertation I shift attention away from economics and technology to ideas of practice, materiality, place, and memory and the nature of continuity and change in the social lives of peoples in two neighbouring communities. I argue that an approach based on ritual practice produces new directions in which to proceed, allowing for a broader conversation about how we approach the history of the Coast Salish peoples. I focus attention on the multiple and entangled relations between people and funerary petroforms. For those who made funerary petroforms, they produced active agents in the social relationships of the Rocky Point people, entangling them in webs of history and anchoring them to place (*sensu* Joyce and Lopiparo 2005). As the unfolding situation at Grace Islet attests, this entangling quality of funerary petroforms continues into the present day.

## **Section I: Theoretical Perspective**

### ***Chapter 2: Funerary Practice, Ritualization, and the Object World***

Funerals are ritual practices concerning the transition from life to death (Parker Pearson 2000) and human burials, when detectable in the archaeological record, are material and spatial evidence for past ritual depositional practices (Joyce 2001). Burials, like the rituals that produced them, do not passively reflect social relationships, they are part of the process through which those relationships are brought into being (Barrett 1990:182). As such, burials may be “active media for the constitution of social relations in ongoing time: points in individual biographies that were partly freed from individual biography to become strands in wider social histories” (Joyce 2001:22).

Mortuary rituals bridge the divide between life and death, using historically and culturally particular architectural settings, material metaphors, and the bodies of both the dead and of the mourners (Barrett 1988:31). Burials may provide a precedent for subsequent funerals and later ritual practices and this continuity of practice through time produces traditions of practice (Mizoguchi 1993; Pauketat 2001a). Although memory is certainly implicated in funerary ritual practice (e.g., Chesson 2001b; Hallam and Hockey 2001; Kuijt 2001; Meskell 2003; Mills and Walker 2008b; Williams 2006), so too is forgetting (Mills 2008). Burials may be visible monuments built for the citation of elite or community narratives (e.g., Barrett 1990; Holtorf 1997; Joyce 2004; Kirk 2006; Urban and Schortman 2012), or they may be secret or forgotten places (e.g., Mills 2008). Whether concealed or publically displayed, however, human burials have the capacity to “anchor historical practice to place, through their permanent emplacement in locations whose character is derived in part from the presence of the dead” (Joyce and Pollard 2010:22).

In this chapter, I elaborate on the notion idea of ritualization that I introduced last chapter, and highlight its intersection with materiality, place, and memory work in the burial of the dead. This intersecting theory provides the scaffolding upon which I consider depositional practices associated with funerary ritual at Rocky Point during the transitional Middle/Late Pacific periods. Citing the work of Catherine Bell (1992) and others, I outline how ritual is central to the process of creating socialized bodies and environments that embody and sustain asymmetrical relations of power at scales ranging from the individual body and the house, to the

larger mesoscale within and between neighbouring communities. These power relations may be extended beyond the mortal and material world, into the world of the ancestors and the cosmos. They may also be projected into the past and the future. This is not to diminish the grief, loss, and crisis that may have been experienced by the Rocky Point people when one of their own died—I recognize these were subtle, complex, emotional, motivated people (*sensu* Tarlow 1999:24). But a practice-based approach to funerary ritual acknowledges that the burial practices of the Rocky Point people also occurred within a world with its own agents, powers, relations, and structures. A theory of practice is concerned with how social beings, and their diverse motives and intentions, make and remake the world in which they live (Bourdieu 1977, 1990; Giddens 1984; Ortner 1989).

### ***Ritual as Practice***

Practice theory has been foundational in contemporary archaeological approaches to ritual—in reference to overlapping topics such as materiality, landscape, and monumentality—and acknowledges the entangled nature of the relationships between things, places, and the structures of society on one hand, and the nature of human action on the other (e.g., Berggren and Nilsson Stutz 2010; Fahlander 2003; Gillespie 2008; Mills 2008; Nilsson Stutz 2003; Pauketat 2001a, b; Pauketat and Alt 2005; Pollard 2009; Shanks 2005). To approach the Rocky Point data this way, I draw on Catherine Bell's (1992) practice-centred re-examination of ritual. Her work is a critical discourse on ritual in anthropology, deconstructing fundamental anthropological understandings of ritual, primarily those of Geertz (1957) and Rappaport (1967, 1979, 1999). Bell contends she is not offering a new theory of ritual, but is repositioning ritual upon the work of practice theorists such as Bourdieu (1977, 1990), Sahlins (1985), and Ortner (1989, 2006). Recasting ritual as a form of practice, Bell's main concern becomes what ritual accomplishes. A practice-based theory of ritual steers us away from the unproductive debate over definitions of ritual, and offers the argument that some sets of actions become formalized and repeated through their social value. This leads us to questions of why and how certain aspects of practice are selected and ritualized, with an emphasis on the ritual process as it relates to production and reproduction of power asymmetries. The archaeological record can highlight the contexts in which ritual was practiced, the materials used in those practices, and the traditions of practice that emerged over time. As such, understanding the dynamics of ritual practice is essential to exploring the archaeological record produced by that ritual. In other words, a

practice approach does not seek interpretations of meaning, but an understanding of the process by which burials were made and how landscapes for the dead came into being through successive burials.

Bell first engages the category of ritual, pointing out the tendency to view ritual in terms of a dialectic of binary oppositions—most pervasively the division between thought and action—that is, people *do* ritual, and *think* something else. Bell deconstructs this underlying opposition between thought and action and in doing so, highlights the inclination of researchers to privilege thought over action. With dichotomous thinking there is always a subordination of one of the terms (usually of action to thought). Furthermore, Bell illustrates that a circular discourse is created by the idea that ritual is a mechanism for the integration of thought and action, or self and society. Rather, ritual practices themselves can generate culturally effective schemes that produce categories of people through which self and society, thought and action are differentiated (Bell 1992:218).

Ritual activities are not unique acts and therefore should be understood in the larger context of social activity (Bell 1992:81). Ritual is not the reflection of social practice; ritual is a practice with social objectives. As I introduced in Chapter 1, this active and structure-generating nature of ritual is what Bell terms *ritualization*. A focus on ritualization leads us to ask how ritual distinguishes itself from other practices and what ritual accomplishes in doing so (Bell 1992:89). Ritualization then, approaches ritual as a contextualized cultural strategy. Rituals are not a means of preserving or enacting stable sets of religious or other beliefs; rather, rituals construct, create, or modify beliefs. Ritual is a practice—more a process than an event.

This framework of ritualization recasts the purpose of ritual activity, its social efficacy, and its embodiment in complex traditions and structures—structure being the ways in which relationships between people, materials, and places are held together over periods of time, thus forming an enduring framework of dispositions imprinted on actor's being (Giddens 1984:16-28; Ortner 1989:13). This is what Bell calls the *sense of ritual* (Bell 1992:67). Like Bourdieu's *habitus*, a sense of ritual entails socially acquired norms or tendencies that all people know when it comes to improvising or participating in a ritual. This is neither a result of free will, nor determined by structures, but created by the recursive relationship between the two over time. Dispositions, both inside and outside the cemetery are shaped by past events and structures, which not only inform current practices and structures but also condition our very perceptions of these “without

any deliberate pursuit of coherence...without any conscious concentration” (Bourdieu 1984:170). Invested with a sense of ritual, the ritualized body (Bell 1992:98) is not about conscious knowledge of any explicit rules of ritual; rather, it is an implicit cultivated disposition, or what Bourdieu would call “practical mastery” (Bourdieu 1977:87-95, 118-120).

Through physical movements, ritual practices spatially and temporally produce this ritualized body through its interaction with a structured and structuring environment. The space of the ritual environment is defined and redefined by the movement of people. Bodies and dispositions structured through funerary ritual can in turn generate enduring and transferrable strategic schema that can appropriate or dominate other social and cultural situations outside the cemetery. Ritualized actions are internalized and can be evoked outside the ritualized setting. This means that funerary ritual becomes embodied in participants and has the power to transfer strategic schema from one context to another, facilitated by the prestigious and privileged status that ritualized activities claim (Bell 1992:218). For example, kneeling creates subordination in the one who kneels, and subordination in one context may manifest itself in another (Bell 1992:98-100). In effect, the end of ritual is a ritualized body, with a cultivated set of dispositions, which echo through the rest of life. By extension, embodied actions and practices inside and outside of ritual are often a play or riff on one another, such that there are embodied equivalencies between the action of moving of stones in the building of funerary petroforms within the cemetery and moving of stones in the clearing of fields outside of it. The moving of stones in both contexts is entangled in relations of power. Thus, ritualized activities become part of the overall panorama of social practice, with social effects that extend beyond ritual itself.

### ***Power and Ritual: Equality and Inequality***

The ways that power articulates with funerary ritual practice is fundamental to understanding the embodied ritual practices of the Rocky Point peoples. In Chapter 4, I consider the kinds of power that differentiated the upper and lower classes of the Coast Salish, much of which was predicated upon proprietary ritual knowledge and differing levels of ritual mastery. To contextualize both ethnohistoric relations of power, and their potential antiquity at Rocky Point, I outline a practice-based approach to the intersection between ritual and power.

The fundamental characteristic of ritual is deference to greater authorities (Bloch 2005). Ritual is fully implicated in the relationships of power, creating social differentiation and hierarchy, while representing it as naturalized, all encompassing and beyond contention (Bloch

1986). Ritual, however, is not an instrument of power, politics or social control: ritual practice is the very production and negotiation of power relations (Bell 1992:196). Ritual is a strategy for ordering and reproducing the organization of power structures. Ritual does not control; rather, it constitutes a particular dynamic of social empowerment (Bell 1992:181).

I employ Foucault's notion of power as something that is diffuse rather than concentrated, embodied and enacted rather than possessed, and discursive rather than purely coercive (Foucault 1991; Rabinow 1991). Power is not something deployed by agents, it is a process that constitutes agents; it is a history of the different modes by which people are made subjects (Foucault 1983). In other words, it is less important what power is than what power does. Foucault viewed social institutions and relationships as discursive, but in his historically grounded studies (e.g., Foucault 1991) attended to the material and bodily forms of power that shape relations between peoples at all levels in a society. Power is not only a function of formal political institutions, it is something inscribed in everyday life. Power is productive of people and the many different practices of both individuals and communities of practice bear the mark of certain kinds of power relationships. Foucault recognized that power is not a negative, coercive or repressive thing that forces us to do things against our will (that is violence or domination), but is a necessary, productive and positive force in society:

We must cease once and for all to describe the effects of power in negative terms: it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact power produces; it produces reality; it produces domains of objects and rituals of truth. (Foucault 1991:194).

Every individual is an outcome of the production of truth and knowledge and fully entangled in the relationships of power. The human body is located at the centre of ritual practice and it is through ritual practices that social bodies come to embody relationships of power. The space and materiality of ritual acts upon the bodies and actions of others. In *Outline of a Theory of Practice*, Bourdieu (1977) demonstrates that the material world actively works below the level of discourse, recognizing that some objects are capable of socializing human actors, and implicitly conditioning us as social beings. The experiences of living and being in the world are shaped through our bodies (Meskell 1996; Meskell and Joyce 2003) and the categorization, ordering and placement of objects and our daily interactions with things and places, from birth to death, imparts in us the expectations of the social group (Bourdieu 1977). The ordering of the house, for example, may be homologous with other orders such as social hierarchy or gender,

grounding intangible social ideals in the tangible material world. This habitual way of being in the world and the underlying social order becomes second nature—this is *habitus*. Much of our behaviour is cued by context and our prior experiences with context, which determine our expectations and frame our actions in those times and places. In this way, we “know” how to behave in a cemetery or in a longhouse, as we take note, often unconsciously, of these places and the clues they provide for appropriate behaviour.

As such, power is not something external to the body; power schools the individual lived body and the social body in these schemes of power (Bell 1992:204). For Foucault (1980), the body is the most basic level of power relations. It is a political field where power relations take immediate hold, shaping and marking the body through ritual tasks and ceremonies. In this way, the ritually constructed body is both a means and an end of ritual practices, involving the mastery of specific strategies of power (Bell 1992:206-207). Often working below the level of discourse, bodily placement, posture, and movement allow ritual to say what words may not be able, or allowed, to express (Combs-Schilling 1989). The schemas that structure the ritual environment produce constructions of power, which the social agent then re-embodies. Agents do not see themselves as projecting this schema; rather they act in socially instinctive ways.

Foucault’s concept of power has been influential in pointing to the ways that norms can be so embedded as to be beyond perception—causing us to discipline ourselves without any wilful coercion from others. Bourdieu saw symbolic capital (e.g., prestige, honour, the right to be listened to) as a crucial source of power. A holder of symbolic capital uses power to alter the actions of those with less symbolic capital, exercising what Bourdieu calls *symbolic violence* (Bourdieu 1991). Symbolic violence is fundamentally the imposition of categories of thought and perception upon dominated social agents who then take the social order to be desirable. Symbolic violence is embedded in the very modes of action and structures of perceptions and practices of individuals, thus imposing the vision of the legitimacy of the social order.

Cultural capital (e.g., competencies, skills, qualifications) can also be a source of misrecognition and symbolic violence (Bourdieu 1991). For example, working class children can come to see the educational success of their middle-class counterparts as always legitimate, seeing what is often class-based inequality as instead the result of hard work or even “natural” ability. A key part of this process is the transformation of people’s symbolic or economic inheritance (e.g., accent, knowledge, property) into cultural capital (e.g., university qualifications) (Bourdieu 1991).

But power does not require a renunciation of freedom, transference of rights, or the delegation of power to a few. The reality of power is that it is complicated, elusive, indirect and chimerical (P. J. Wilson 1988:147). Power is not an effective implementation of a dominant ideology perpetrated by the ruling class to serve their own interests (Foucault and Gordon 1980:235). Rather, power is a process that over time acts indirectly on the actions of others, structuring the very field of their actions. Relations of power, however, are not engendered just from the top; there can be no movement down without conduits from below. For this to work, there must be a sense of freedom and personal options in the successful exercising of power, necessarily different from violence or coercion. Any strategies of power used by those seeking to control others are embedded within and dependent upon the level of microrelations of power, the local interactions of everyday life (Foucault and Gordon 1980:187-188).

According to Polly Wiessner (2002) both structural stability and change are evident in the tensions between equality and inequality. I outline her argument here, as it considers power relationships in societies like the ethnohistoric Coast Salish, where overt aggrandizement is resisted (Chapter 4), yet structural power inequalities exist. Wiessner's approach is also congruent with a practice-based approach to power, in that it acknowledges the recursive interaction between the agency of the powerful and the less powerful, and the social structures (such as ritual) in which equality and inequality plays out. Wiessner argues that while aggrandizing and hierarchy are innate to humans, so is resistance to them (Wiessner 2002:234-5). What defines an egalitarian society, according to Wiessner, are the complex structures and ideals that support the ethos of equality despite inherent inequalities. The structure of society is one in which complex institutions and ideologies are created and maintained by cultural means which empower alliances of the people to resist the assertions of aggrandizers and curb the aspirations of the powerful. Power inequalities exist, but they are often the unintended outcome of self-interested competition among political actors competing for social capital (e.g., prestige) by using tactics that are in alignment with the self-interests of their followers (Clark and Blake 1994). In this sense, the competition for land, resources, labour and so forth is a process in which people allow others to take some measure of control because they have a sense of being invested in, and benefiting in some way from, this imbalance.

Wiessner (2002:250) argues that the initial steps from equality to inequality are rarely the product of aggrandizing agents appropriating the resources of their followers (cf. Hayden 1990,

1995, 2001), or of people even attempting to do so. Individual success is too dependent on group welfare, and personal success is deeply embedded in group ideals and group welfare. Egalitarian coalitions are also very strong and provide limits around individual assertions of power. This is not to deny individuals seeking power, but successful inroads to inequality are not top-down assertions from ambitious aggrandizers. Rather, power is invested in those individuals assisting with the development of new institutions (such as ritual) that tap into previously unknown economic and other activities that can change norms and ideals for the benefit of all.

In Wiessner's case study of the Highland Enga of New Guinea, for example, new institutions could arise when competing and locally powerful individuals such as clan leaders recognized the potential in events, and had an ability to form group consensus and frame those events in ways that addressed group interests. While the innovations promoted may be ones that leaders feel work to their advantage, it is only those innovations that work to the mutual benefit of the individual and the group (even when the benefit may not be equal) that became part of social structure. In this way, it is not about a societal change from egalitarian to inegalitarian, but more of a sliding scale of increasing differentiation between people, a transformation or expansion of existing inequalities (Pleog 2002:259). As I discuss in Chapter 11, this sliding scale of differentiation is significant to understanding the building of funerary petroforms at Rocky Point.

The emerging new structure or ideal may be legitimated by ideals and structures of the past; however, it is also often contingent on and interacts with older structures and ideals in ways that may produce unintended consequences (Wiessner 2002:251). All structures have a significant history that cannot be ignored. In this way, structure, ideals, and individual agents work together in complex ways that can produce both stability and change. Stability and change, however, are predicated upon, often in unpredictable ways, with the interaction of the present with the past. Precedents for inequality are often in the form of social capital (particularly differential access to restricted information and the kinds and extent of social ties) such that while an ethos of equality might exist, the difference between the ideal and the reality may be great. Social order is maintained because patterns of actions and interaction that recreate it are based on the perception that current conditions are the inevitable outcome of history, thus effecting "the misrecognition of the arbitrariness on which they are based" (Bourdieu 1977:164).

In ritual, what one knows, experiences, and accepts may depend directly on one's gender, age, familial association, position in society, and other social factors that may change throughout

one's lifetime (Barth 1975). As such, ritual can produce unevenly distributed knowledge, with attendant implications of power. Those who control ritual command an effective form of power over people's dispositions, particularly in cultures where there are relatively few rival structures (Bourdieu 1977:41). Participating in this schema therefore seems mandated by the ritual environment itself. Participants misrecognize both the source of the schema and the changes that occur to this embodied schema over time. This in turn produces a structured and structuring environment of the participant's own creation with which they interact, with each agent repossessing these schemes as practical knowledge of their world.

The production of structured and structuring schema often involves misrecognition of the source and arbitrariness of these schemes, which appear to be derived from powers or realities beyond the community and its activities. Assertions that power has been granted by external sources, such as ancestors or spirits, attributes the legitimation of that power to the ultimate organization of the cosmos. This reinforces that particular power as something only accessible to those in the appropriate positions. Ritualization also has the capacity to depersonalize authority, particularly for ritual specialists, entrenching the power of the specialist in a formal position or status, not in the person (Bell 1992:212). The Coast Salish had several classes of ritual experts, who exerted considerable influence on funerary ritual practice. As I discuss in Chapter 4, these are individuals who possess greater ritual knowledge or expertise than others (Eller 2007:77-78). Ritual expertise may come from training, inherited or privileged knowledge, personal experience, inherent talent, spiritual power, or other factors. Ritual experts are often the conduit between the natural and supernatural; they may be those with the capability to cross back and forth between these worlds or serve as spiritual emissaries. These often powerful people are vested with authority that comes from the office they hold, which may be sanctioned or validated by the supernatural. As such, ritual specialists may hold considerable social capital in society, as leaders or other functionaries. Ritual experts are central to conceiving, defining, shaping and sometimes magnifying ritual, establishing the authority of ritual, diagnosing its problems, and organizing the relationships between ritual and social change (Bell 1993:99-100). They are agents of both ritual stability and innovation, and understanding their potential role in the building of funerary petroforms at Rocky Point is central to understanding ritual and depositional practices that produced these cemeteries.

There are limits to ritual practice as a means of power. Ritualized agents bring with them a personal history of compliance, resistance, and misunderstanding within the social structure. Participants in a funerary ritual may have ties to different social groups with competing interests, thereby approaching their role in any given funerary ritual from a position of negotiating these complex interrelationships with the different segments and factions of society (Meskell 1999b). There must, however, be some level of consent for ritualization to be effective. Participants, as ritualized agents, already possess schema that they can deploy, with varying levels of effectiveness, to produce actions that are congruent with what is going on. Agents can therefore orchestrate and appropriate for their own purposes the ritualized reconstitution of the power structure, even though their understanding may not be very explicit or coherent (Bell 1992:208). There is negotiated consent and resistance on a variety of levels. But ritualization, which implies and demonstrates a relatively unified corporate body often leads participants to assume there is more consensus than actually exists. In reality, however, there may be little conceptual consistency or consensus across any given social group about ritual practices (Keane 2008:111).

Ritual can tolerate a certain degree of dissent; all that is required is some modicum of consent. While there are susceptibilities to the power of ritual, ritual is also fairly resistant to casual disagreement. According to Bourdieu, “the most successful ideological efforts are those which have no needs for words, and then ask no more than complicitous silence” (Bourdieu 1977:188). While ritual participants might retain limited and negotiated involvement, there remains social pressure to participate in ritual. In this physical participation, ritual imperceptibly schools the social body in the schema of acting in a way that one cannot easily, or perhaps ever, consciously articulate. In other words, you cannot argue with a song (Bloch 1974:71) or challenge what is being said while praying on your knees (Kertzer 1988:97).

Power invested in ritualizing can establish authority, but it is a blunt tool, often unwieldy and lacking precision (P. J. Wilson 1988:147). While misrecognitions in both inequality and the sources of that inequality make ritualization so effective, empowerment through ritual is imperfect and even constraining (Bell 1992:201). Power constituted in ritualization must regularly sustain itself through the continual depersonalizing of the privileged ritual office and the recreation of tradition that is legitimated and authenticated by its participants. This creates a sense of adherence to precedence, a collective and continued confidence in the continued well

being of society, and participation in a process that creates a sense of contributing to the well being of the self and the community (Bell 1992:212). But as the ritual construction of power is built upon the microrelations of power that shape the daily life of society, ritual is therefore susceptible to crises when changes in society mean that ritual can no longer conform to tradition. As such, the “traditionalism, authority, and dramaturgy of ritual power can be as fragile as they can be impressive and enduring”(Bell 1992:213). Ritualization necessitates and creates both consent and resistance. It does not assume or implement total social control. Instead, it is a flexible scheme that requires complicity to the point of public consent, but not much more than that (Bell 1992:218). Simply by participating, relations of domination and subordination are created and coordinated by agents. The resistance that ritualization addresses and produces does not simply limit ritual’s ability to control; it is also a feature of its effectiveness. Even resistance to the power structures of ritual practices is an acknowledgement of that power.

### ***Tradition: Continuity and Change in Ritual Practice***

The cumulative effect of practice, at both micro- and macroscales, is the construction of history (Bloch 1971, 1977; Sangren 1987:217). The goal of practice-based archaeology is to identify, as evidenced in the archaeological record, how traditions were constructed and transmitted through space and time (Pauketat 2001b:87).

Tradition is a tension between an ideal atemporal order of unchanging structure on one hand and compromise and changing history on the other (Tambiah 1979). While it is clear that some practices stay consistent over considerable periods of time (e.g., Hugh-Jones 1979), practices also change in structure, details and interpretation (e.g., Bloch 1971). And even though rituals may remain the same over periods of time, their meaning or significance are constantly recontextualized in society.

The historical dimension of ritual derives from ritualized practices passed down through the generations, creating traditions of practice (Pauketat 2001b). While many positivist and contemporary archaeologies focus on ideas of mortuary variability and change through space and time, what has been under-appreciated is ritual consistency and stability. Consistency in tradition does not mean an absence of social tensions or ritual work to maintain tradition. While a very stable and longstanding pattern in material culture may be evidence of stable ritual practices, it may, on the other hand, be evidence of just the opposite: that there is an enforcement of orthodoxy in the face of challenges to ritual stability (Arnold 2001; Sommer

2001). Ritual invests tradition with a sense of legitimacy and continuity with the past; it is this investment that creates the sense of tradition as fixed (Hobsbawn and Ranger 1983:1). The seeming immutability of ritual's structure lies in the prestige of tradition and in this prestige is power. Every ritual contains some portion of traditional or unchanging material (Rappaport 1979). Tradition is something that exists nowhere but in its flexible embodiment in memory and in current community life:

Ritual must have both a convincing continuity with remembered rites and a convincing coherence with community life. As one of the most visible embodiments of tradition in oral societies, ritual ratifies the traditional in general, even as it recreates it in the specifics of each performance. (Bell 1993:106)

Knowing how funerary traditions change through time, and how these changes might be predicated upon earlier practices, leads us to a more encompassing explanation of the cumulative effects of practice. As Pauketat (2001b:79) advises, the alteration of tradition is not merely a tactical decision or a strategy; the motivations to act were not the same as the end results that may be observed in the archaeological record. Producing tradition is often not goal-oriented action; rather it is the unintended consequence of a multitude of negotiations through time (Mizoguchi 1993). Effective ritual does not have to be reproduced smoothly or harmoniously, and incremental (or even imperceptible) change in ritual practice over time may produce profound changes in the material and spatial record (Mizoguchi 1993). The long-term perspective of archaeology can approach funerary practices that to the people conducting them seemed static and timeless. Small, incremental, and perhaps even imperceptible changes, often introduced by the elite (e.g., Cannon 1989), are predicated upon dispositions created and routinized through past practices (Bourdieu 1990:52). Through time and incremental changes, these dispositions would also unknowingly be changed through practice. Even seemingly dramatic changes, such as a transition from inhumation to cremation burial practices, are the consequences—both intended and unintended—of strategic as well as routinized ritual actions (Mizoguchi 1993).

Bloch (1975:1-23) analyses the construction of ritual authority, arguing that social control is inherent in the construction of tradition. Central to this is the process of formalization in ritual. Formalization works within the pre-existing order, and as such determines to a significant degree the content. For Bloch, formalization produces and maintains tradition, but also produces a form of authority fixed in the historic appeal to the past. The effectiveness of formalization stems, in

part, from its intangibility. This can subtly induce compliance, putting people in a situation that discourages challenge due to conventions of politeness or etiquette, since as Bloch asserts, the burden of social control is situated in the norms of polite behaviour (Bloch 1975:12, 16). Importantly, to maintain the authority and prestige of formalized functions, such as conducting funerary rituals, there must be a restricted access to the required skills or training. The effectiveness of formalization as a means of social control, however, is offset by its own inherent constraints, as the necessary formality can restrict what one can, or cannot, say. One must then navigate formality delicately to successfully and effectively wield it as a source of power, despite power being constituted by all involved.

History making is an active and ongoing process central to the delineation of group identity and power (Trouillot 1995). As introduced in Chapter 1, communities of practice participate in shared learning, or what Lave and Wenger (1991:29) term *legitimate peripheral participation*. This is a process by which newcomers, such as spirit dancer initiates (Chapter 4), become experienced members and eventually experts, as a community of practice works towards forming a member's participation in, and orientation to, the ritual community (Eckert and McConnell-Ginet 1992). For a community of practice to function it needs a shared repertoire of practices, as well as the memory work (such as that outlined in Chapter 1) necessary to carry forth the accumulated knowledge of the community. Central to this is generating a shared consensus about an authoritative past, but also a set of distinct aspects of practice, seen as rooted in the past, which differentiates one group from other groups (Bell 1992:121). Subsuming foundations or aspects of practice that are already closely associated with collective images of the past, and the values they entail, can effectively create traditions. Rituals may present a timeless continuity with the ancestors and an idealized past, creating a sense of continuity through repeated and episodic practices (Bloch 1977). In this sense, ritual practice may legitimate inequality "in its masquerade as natural and inevitable" (Pader 1982:42). This claim to the timeless authority of "the presence of the past in the present" (Bloch 1977), however, is not unquestionable. Ritual is vulnerable to social upheavals, political manipulation and ritual specialists risk losing authority if ritual fails, or they undermine people's sense of what is efficacious and fitting. The creation or assertion of tradition can be an arena for dramatic struggles among groups to stake out their own differentiated identities through the use of shared practices (Hobsbawn 1983:279-280).

Just as strategic differences in ritual traditions can differentiate communities of practice, ritualization can simultaneously work to integrate communities. Bell (1992:125) outlines this dynamic and recursive relationship through ritual's temporal dimension. As some communities of practice reproduce their local practices, there may be considerable subsequent borrowing and local-level improvisation in ritual practice (e.g., Parish 1999; Parker 2004, 2006) by other communities, thereby enabling each community to experience both their own autonomy as well as their dependence within a larger network of relationships between groups. This is particularly significant in understanding the funerary practices at Rocky Point within the larger Coast Salish ethnolinguistic area. As Bell reminds us, this is not a perfect order imposed upon peoples and communities, but a delicate and continual renegotiation of provisional distinctions and integrations to avoid the discrepancies and conflicts that would become painfully apparent if the whole was obvious. This creates, in effect "ritual equivalences" between the practices of different communities of practice (sensu Fox 1979). While a visiting neighbour observing a funeral might find aspects of the ritual peculiar or idiosyncratic, they would also perceive the funeral as perfectly correct.

### ***Funerals as Ritualized Depositional Practice***

The theories of practice and ritualization outlined earlier in this chapter offer a robust approach to understanding ritual as an active product and producer of social structure. Next I outline how these ideas can be implemented in the archaeological study of a specific historical and cultural context.

The funerary petroforms built by the Rocky Point peoples—as the material and spatial result of a ritualized and performative movement of bodies (both living and dead)—calls attention to connections between people and the material world of stone and soil. Funerary petroforms and the cemeteries they constitute underscore ritual as an active and multiscale process conducted by communities of ritual practice, entangling individual and ritualized bodies with practices at the household and village scale, and expanding outward to include larger networks of ritual practitioners within and between regions. An archaeology of ritualization in this understanding becomes a project of moving towards a historically specific understanding of the social relations between people and things through time, producing not only traditions and histories in the past, but the kinds of contemporary entanglements I introduced in the last

chapter. Central to this are the depositional practices of placing stone and soil during the funerary ritual.

Bell's concept of ritualization (1992) has been applied relatively widely within archaeology (e.g., Barrett 2000; Berggren and Nilsson Stutz 2010; Bradley 2005; Lamdin-Whymark 2008; McNiven 2013; Meskell and Preucel 2004; Nilsson Stutz 2003; Pauketat 2011; Stahl 2008). An archaeological approach to ritualization provides a launching point for archaeological theory building that acknowledges ritualized bodies as located at the intersections of materiality, spatiality, and history. Bell (2007) acknowledged her under-developed appreciation for both material and space in the ritual process. As such, archaeology is well situated to contribute to ritual studies, as the discipline is well attuned to consider ritual as actions in space, practiced with materials, and through time producing both tradition and an archaeological record.

As I introduced in Chapter 1, there is compelling evidence to support the possibility that the building of funerary petroforms at Rocky Point was a ritual process in dialectical relationship with structure, thus contributing both to change and continuity within the ritual practices of the Rocky Point peoples. A theoretical perspective that recognizes cemeteries and the funerary petroforms therein as both structuring *and* structured by ritual practices means that these burials and the places they constitute are active agents in social structure, and not a passive reflection of it. People tend to view a thing as a totalized whole, but do not consider the individuals making that thing or the process of making the thing itself; we privilege product over process (Ingold 1993). The production of the archaeological record, however, is an ongoing process inhabited by things and spaces, which continue to entangle us. It is practices—both formalized and habitual—that produce archaeologically visible material and spatial patterns (Richards and Thomas 1984:19). Furthermore, the ritual and depositional practices centred on the burial of the dead are historical processes to the extent that they are shaped by what came before them and they give shape to what follows. This historical trajectory of entangling the living with the dead, and the past with the present, continues to this day in a myriad ways unanticipated by those mourners and ritual experts who gathered together to bury one of their own a millennia ago (Chapters 11 and 12).

It was the ritualized movement of stone and soil that created the funerary petroforms at Rocky Point. These materials were collected by living bodies and placed around dead ones and

there was undoubtedly a degree of attention and respect in the placing of stones to produce an effective and appropriate burial for the dead. In a performance likely orchestrated by ritual specialists, this was likely a critical time for both the well being of the living and the dead, where stones on the landscape were collected, concentrated, and reassembled into funerary petroforms with care. There is a sense that contemplation on the form and size of the features was important, since the resulting funerary petroforms seem to produce different ‘types’ (Mathews 2006b).

The concept of depositional practice, introduced in Chapter 1, is an efficacious means of articulating how this movement of stone and soil came to produce the archaeological record (e.g., Joyce 2008; Joyce and Pollard 2010; Meskell, et al. 2008; Mills 2008; Pollard 2008; Walker and Lucero 2000). The concept of *structured deposition* was originally introduced to demarcate instances when materials were intentionally associated in a patterned fashion, particularly in what were argued to be ritual and symbolic contexts in the British Neolithic (e.g., Richards and Thomas 1984). Its use conjures the association of goal-oriented and structured activity more focused on product than process. While people do embody a sense of ritual, and operate within communities of practice and historical precedents, the rather formulaic approach of structured deposition mischaracterizes ritual practice as overly coordinated and patterned. Thus the expectation that depositional patterns observed in the archaeological record will evidence a high level of structure (Richards and Thomas 1984:191). As I have outlined earlier in this chapter, however, ritual is situational and dispositional, being both “strategic,” but also “manipulative and expedient” (Bell 1992:82).

Significantly, it was noted by some early proponents of structured deposition that the act of deposition itself might have been an important social practice. It is this point—that deposition is a process—which most significantly distinguishes structured deposition from *depositional practice* (Garrow 2012:90, 92). Pollard (2008) outlines how depositional practices are a means of using and experiencing materiality and negotiating the entangled relationships between people, animals, spirits, objects, and other actants. Depositional practices served to control, create, channel, and pay respect to these various powerful agents, acts that were foundational to producing and negotiating knowledge, memory, history, and places (Pollard 2008:59). The challenge for archaeology, as he sees it, is to: “put some of these threads together: to look at how the imbricated relationships of people and things were played out through deposition; how the

agency of things was negotiated; as well as issues of display, participation, and memory” (Pollard 2008:49).

Importantly, there is an aesthetic to depositional practice (Pollard 2001) that relates to the performative nature of ritual and the resulting sense of the efficacy of the ritual. The process of bodily actions engaging materials, and properly and respectfully arranging them around the corpse, may have defined in part the ‘effectiveness’ of deposition, and its contribution to the larger ritual process. At Rocky Point, this would have included the moving and arranging of stones, the digging of baskets of soil, and the handling of the corpse. The movements of bodies, and the placement of materials relative to the body may have served to reproduce classificatory principles of purity, transformation, and so forth (Pollard 2001:325), and as such, these respectful performances may have “served to define and fulfill obligations between the living and the dead” (Pollard 2001:317-318). This approach underscores the building of funerary petroforms as a ritual process, engaging ritualized bodies, materials, and spaces, for the effective and appropriate burial of the dead.

The study of depositional practices may point to referential practices that both cite and shape social memory, while simultaneously building relationships between people and things (Joyce 2008; Pollard 2008; Stahl 2010). The burial of the dead and funerary ritual, while involving some level of habitual action, is also a site of conscious action and discourse, including deposition as overt performance (Meskell 2005b). The structuring that may result from ritualization, whether the structure was consciously intended or was the untended consequence of action (Joyce and Pollard 2010:292), means we must consider the tensions between tradition and the active role of past actors in creating each funerary petroform at Rocky Point and the cemeteries they comprise.

I use the concept of depositional practice as I am concerned with the recurrent and repetitive depositional practices at Rocky Point, and how the ritualized actions of moving stone and soil in the process of burying the dead might be implicated in the production of ritualized bodies. This approach acknowledges that people and objects such as burial features are mutually constituted and that burials have the ability to “act back,” elicit responses, and cue present and future dispositions and actions (Pollard 2008:47). There is an active role in the formation of the material world that configures social process and socially constitutes people (Pollard 2009).

## ***The Materiality of Ritual Practice***

As I introduced in Chapter 1, people and objects are actants entangled in heterogeneous and mutually constituting networks. Action can be structured by objects and materials, which then become points around which practice is structured (Gell 1998; Latour 1999, 2005). Archaeology is most effective when the emphasis is on what makes people rather than what people make (Miller 2005b:38). In this section, I outline how this conception of materiality is critical to articulating ritual practice with the archaeological record, as a contemporary view of material, in alignment with practice theory, considers how subjects are created—the ways that the object world, as a product of human action, in turn produces people. What makes us human is the meaningful experience of existing in a material world and of making sense of and finding value in that world (Conkey 1993). This is a world that is simultaneously material and metaphorical and the production of things and the production of structure and meaning are concurrent and reciprocal. While the material world is active and has a force of its own, it is also nuanced. As Miller carefully points out, material fades from view, becomes naturalized and taken for granted, while quietly framing our behaviour (Miller 2009:155). Like ritual, materiality achieves its mastery of us specifically because we fail to recognize what it does. Miller likens materials as the frame around the painting, guiding us towards the appropriate way to behave; something that cannot be easily recognized or challenged since we have no idea we are being effectively and constantly directed as such throughout our lives (Miller 2009:155). This concept is particularly important in the spatial analysis of Rocky Point, as I later consider this kind of perceptual framing effect, and how funerary petroforms as visible features situated strategically on the landscape, disappear from view, while paradoxically bringing into focus social and power relationships at Rocky Point (Chapter 9).

The making of people is bound up in the making of things (Gosden 1994; Miller 2005b:3). Materials and objects are not a passive or symbolic representation of social relations, rather they play a role in human action, fully engaged and inseparably entangled in complex relationships with people, shaping people as social beings. Materiality entangles people into ongoing chains of causes and consequences (Keane 2008:124). Archaeologists must accordingly treat material things as sources of insight into the ways in which culture was, and continues to be, actively produced by engagements with things (Stahl 2010:154). The often abundant artifacts, features, and the spatial association between them represent the material world of past peoples,

so it is critical for archaeologists to understand the effects that things have on people and the obligations objects place upon us, either individually, or as groups of things (Gosden 2005:193). Depending on how this agency is divided by a particular culture at a particular time, these entanglements of practices, experiences, and things have the potential to change landscapes and the relationships between and amongst the various agents, human and otherwise, that reside there.

This is part of a larger trend in the social sciences that recognizes the problematic dualism generated by ideological constructs of Enlightenment thinking. Blurring what he calls *rational taxonomies*, Latour (2005) proposes collapsing distinctions between person and object, and human and non-human. This provokes us to recognize the object world as constitutive and active, meaning that “the taxonomies of people, things, deities, and so on, sometimes overlap or are at least complicated by porous cultural beliefs and practices” (Meskell 2004:15). The context and degree of agency in the material world is culturally and historically specific (Boivin and Owoc 2004; Fahlander and Oestigaard 2008). Stones among the indigenous peoples of Australia, for example, can be understood as sentient and powerful beings (Morphy 1989, 1995), chullpa-towers in Bolivia can be the physical embodiment of ancestors (Nielsen 2008), and shell trumpets in the American Southwest are animate agents with the ability, through ritual performance, to take away or bestow life (Mills and Ferguson 2008). These kinds of object animation allow entities from the mythic or historic past—be they ancestors, ghosts, or spirits—to continue participating in current social practice (Nielsen 2008).

The division between material and immaterial, and the natural and supernatural is also a Cartesian distinction (Fowler 2004; Fowles 2013:8-10). Materiality acknowledges the potential for the intersection between materials and objects, and communities of powerful non-human and supernatural agents. Interactions with (or the avoidance of interactions with) the incorporeal dead, ancestors, spirit guardians, and so forth, are implicated in depositional practices, as people structure their material world to manage these interactions (Mills and Ferguson 2008; Walker 2008). In Coast Salish eschatology, for example, ghosts and spiritual beings are powerful agents, and ritual practices are largely concerned with managing and mitigating this ancestral presence (Chapter 5). To identify material traces of interactions between people and supernatural social actors means to study ritual practices in a historically and culturally appropriate way, citing the intersection between oral tradition and the depositional practices evident in the archaeological

record. Taking this approach, Walker (2008) concludes there is value in expanding the understanding of society to include nonhuman social actors, particularly when oral history or archaeological indications suggest this might be a historically and culturally contingent means of understanding social practices. In fact, to not consider ancient relationships with the incorporeal, we may be missing fundamental practices and beliefs that structure the resultant archaeological record.

The materials used in depositional practices concerned with serving the needs of non-corporeal agents, as well as attending to the corporeal remains of the dead, can form groups of related funerary objects, such as funerary petroforms. These can be socially powerful, as the placement and form of the object socializes dispositions of use, which influence the sensory and emotional impacts of the object (Gosden 2005). Material items are made meaningful through their reference or bundling with those attributes responsible for making things meaningful (Keane 2008:115). While I do not aim to address the specificity of meaning in the archaeological record, I am concerned with the capacity of material things to entangle people, and it may be the properties of material things that do this. The perceived potency of materials may be influenced and legitimated by their genealogy, including historical precedents for continuity and change. The forms of objects, such as the shape or size of burial architecture, may affect the influence and historical trajectories of these objects. This is particularly true for monumental features (e.g., Barrett 1990; Bradley 1993, 1998b; Hodder 2000a; Joyce 2004; Kirk 2006; Knapp 2009; Mizoguchi 1992; Pauketat and Alt 2003; Richards 1996; Thomas and Brück 2001; Tilley 1994, 1996; Urban and Schortman 2012; Williams 1998). Funerals and other rituals are experiences of colour and other sights and senses. Materials are sensuous and ritual may draw upon the physical qualities of materials, such as colour or texture, or metaphoric associations with materials (e.g., Bender, et al. 2007; Boivin 2004, 2009; Boivin and Owoc 2004; Tilley 2004) as part of an aesthetic of depositional practice (Pollard 2001). This is what Bell (1992) would call the “logics of ritual practice.” The aesthetic qualities of things are very potent at engaging people (Jones and MacGregor 2002) and it is this sensuous part of ritual that makes it effective at working below the level of discourse to produce ritualized bodies (sensu Bell 1992). I contextualize this in Chapter 5, where I consider minerals and stones in Coast Salish ritual practice as culturally salient metaphors for ideas such as transforming and anchoring the dead.

Together, these aspects of materiality combine to recursively interact with the dispositions and actions of people. Importantly for archaeology, the relations of power are created and recreated in the use of material and space through time. While material used in funerary ritual may misrepresent, confuse or contradict relationships of power (e.g., Cannon 1989; Lucy 1997; Parker Pearson 1982; Shanks and Tilley 1982), we must approach depositional practices not as a perfect reflection of relationships of power, but a negotiation of them. It is through the identification of depositional practices in the archaeological record (Chapter 8), and a historically informed Coast Salish sense of materiality (Chapter 6), that we can begin to address power as a property of materiality and ritualized depositional practice at Rocky Point. Power necessitates an entanglement with the object world, as things are required to convey ideas, assert ownership over, and restrict access to (Hodder 2012:213). The material world of objects in space can implicitly condition human actors and are one of the primary means by which people are socialized (Bourdieu 1977). The power of things is not in their ability to physically enable or constrain behaviour, but because we often are not consciously aware of them, we do not “see” them. The less we are aware of things, the more powerfully they can determine our expectations, as they create the backdrop against which we act, thereby cuing and ensuring proper behaviour without being open to challenge or question. Material things and places habituate and prompt us, they “determine what takes place to the extent that we are unconscious of their capacity to do so” (Miller 2005b:5). Bourdieu emphasized that the categories, order, and placement of things tend to be homologous with other orders, such as social hierarchy, with the less tangible social relationships grounded in the more tangible material and spatial order. The material and spatial order frames behaviour and educates people in the normative ways of being and the expectations of “rightness” in their society. These dispositions frame any encounter with new objects, as well as create future possibilities of novel uses of material and space predicated upon past and present material and spatial engagements (Miller 2005b:8).

In this sense, some people and their communities of practice master materiality while others were alienated by it. The relative engagement or estrangement from materiality is central to ideas of ownership, property, and power. If an object has a fixed relationship to a particular person or group, that relationship gives it solidity. It gives that person or group the right to claim that thing as something of their own creation and may deny that right to others. Social conventions or rules protect the right of creators. So the ability or inability to mobilize and

engage with the object world relates to ideas of power, ritual, authority, and identity and as such, the study of materiality is an effective way to understand power, not as an abstraction, but as the mode by which certain forms or peoples are invested with power.

The object world, then, is inherent in creating and defining power, identity and the other immaterial aspects of society. Immateriality can take form through materiality, and the more people move towards conceptualizations of the immaterial, paradoxically, the more important the specific forms of materialization (Miller 2005b:28). Furthermore, the more esoteric the thing being conceptualized, the more important the material performance of that specialized and restricted knowledge. This is particularly important in ritual, where the more the cosmological is moved beyond comprehension, the more valuable the medium of its objectification in the material world (Miller 2005b:28). Materiality is the pathway along which immaterial concepts and ideas are conveyed, and while they serve on the surface as a material revealing of reality, the power of materiality lies in the ability to actually mask the immaterial as something other than what it really is. For example, restricting access to the supernatural or the ancestors can be couched in terms of the ongoing difficulties and dangers endured by those few privileged and burdened with this responsibility, and hence the more ritual and material engagements required to perform these solemn duties. There is a rhetoric of “its for the common good” and all do benefit, but the benefit is unequal (Hayden 2012). But while social relations exist in and through our material worlds, this relationship is one that does not proceed in entirely expected or even conscious ways, and may not be traced back to some clear sense of will, intention, or aggrandizement. Rather, new materialities can produce unprecedented consequences, because the novel use of familiar or new objects are a product of history.

### ***Funerary Ritual as Memory Work***

As I introduced in Chapter 1, an archaeological approach to depositional practice considers the collecting and arranging of materials during funerary ritual is memory work concerned with understanding how social practices and the interactions of actants—people, places, and things—mutually create and define each other through time (Meskell 2004; Mills and Walker 2008a, b). Memory is implicated in the continuity of social practices (Pauketat and Alt 2005) and it is a defining part of the identity of individuals, communities of practices, and other social groups. This is not to suggest that all members of society necessarily share a unified understanding of the past, but rather memory is variable by class, gender, and other social

distinctions, allowing for a multivocal, if not occasionally conflicting set of memories in any given society. Memory, as such, is not static, but is mutable and subject to change and manipulation as it emerges and evolves from a process of remembering and forgetting (Mills and Walker 2008b; Van Dyke and Alcock 2003). Although competing interests can recall remembrances of the past, and thus contest, or even obliterate it, the construction of memory is often used to naturalize or justify authority (Alcock 2002). Memory, for example, can empower certain practices, values, or structures of inequality. This is exemplified by the bifurcation of ethnohistoric Coast Salish society into the powerful upper class, identified as “those who know their history,” and the lower class, or “those who have forgotten their history” (Chapter 5). It is the material remains of these competing interests, pressures, and acts that underscore the importance of memory in past societies and provides the interpretive potential for archaeology.

The material world is a historical world (Kopytoff 1986; Stahl 2010) and there is a history of things made by those before us, such that “we both produce and are the products of historical processes” (Miller 2005b:9). Rituals, in particular, are “highly charged moments of memory work” (Mills and Walker 2008a:7). Building on the idea of tradition I outlined in Chapter 1, funerary rituals can be understood as commemorative practices (*sensu* Connerton 1989), combining narratives, bodily movements, and objects within the ritual performance to produce memories, which in turn are transmitted through time with each successive funeral. Stahl (2010:156) refers to genealogies of practice in the recognition that depositional practices provide archaeologists with insight into the processes that both promoted continuity, as well as change, in the social worlds of people and things. Considering genealogies of practice provides insight into the strings of repeated actions that were learned, transmitted, and transformed through time by communities of ritual practice at Rocky Point.

It is the linkages between the spatial and material traces of past depositional practices that are discernable in the archaeological record. The concept of *chaîne opératoire* has been successfully applied in identifying the technical processes and social acts involved in mortuary practice (e.g., Nilsson Stutz 2003), but in following Coast Salish protocols of working with the dead (Chapter 1), I do not have access to the internal structures of funerary petroforms. As such, I am limited to the end product of the ritual depositional process—complicated as it is by site formation issues that have subsequently affected some of these burials (Chapter 7). Therefore, while I have less information concerning the material and ritual sequence of arranging corpse and stones in

specific ways<sup>7</sup> what may be evident are practices of citation (sensu Butler 1993): comparable patterns in the overall morphology of funerary petroforms that may indicate the recursive relationship between prior and subsequent depositional practices through time. Also potentially discernable are the spatial relationships between individual funerary petroforms and the larger scale networks to which they may belong. It is this relationship between groups of materials and how they are distributed that was meaningful to peoples in the past and their practice of memory work (Mills and Walker 2008b).

Ritual is particularly effective at engaging memory and making social structures and power asymmetries appear to be timeless, natural and inevitable (Bell 1992; Bourdieu 1977:164; Pader 1982). As such, the intersections between ritualization and the materiality and memory work involved in depositional practice is significant to understanding relations of power. For example, in the context of his research in the Yayoi Period of Japan, Mizoguchi (2005), concludes that memory appears to have been an authoritative resource by powerful interest groups such as elders and lineage heads (and by extension, communities of ritual practice), providing them with the means by which to legitimate and naturalize their domination over other groups. However, Weiner (1992) contends that the establishment *and* defeat of hierarchy is possible through the practice of memory. While materiality and memory can establish hierarchy by legitimizing the identity and claims of individuals or groups who have a disproportionately greater access to knowledge and resources than other segments of society, hierarchies can be ameliorated or defeated when used to promote communal identities, rather than the individual identities of specific leaders or aggrandizers (Weiner 1992).

### ***The Space and Place of Ritual Practice***

To conclude the theoretical scaffolding used in this dissertation, I now turn to a consideration of space in ritual practice, and the scales at which these practices engage with materiality and memory work in the burial of the dead.

My analysis of funerary practice at Rocky Point occurs at the lived scale of the landscape and the village (Chapter 1 and 7). This is what Bird (1989:19-43) calls the *mesoscale*. It is the scale of the local society; the scale at which lives were lived and how these communities of ritual

---

<sup>7</sup> In Chapter 4 I briefly summarize the archaeological literature pertaining to the excavation of funerary petroforms in the Coast Salish ethnolinguistic area, which includes information on the internal structure of these features and the bodily disposition of the corpse.

practice related to the rest of their world (sensu Anfinset and Wrigglesworth 2012). This is a way to consider the local ritual practices of the Rocky Point people in a context of larger scale processes of ritual continuity, change and transformation, and the dialectical relationship between the individual, the house, and the region. This moves the discussion of scale to consider the ways in which space may subsequently be understood as place.

In Coast Salish epistemology, cemeteries, trails, villages, and waterways are all closely interrelated and cannot be disentangled from one another (Chapter 6). This necessitates a conceptual shift from space as a neutral container for human existence, to that of *place*, where people and other inhabitants such as spirits, the ancestral dead, animals, stones, and so forth, are entangled together as actants in an ongoing process of constituting the lived scale of existence. Places are revealed through the practices that occur therein (Thomas 2001:172) and *placemaking* is the process in which place is recursively constituted by its inhabitants who perform and engage with place, structured by its integration of social, symbolic, and economic experiences, all of which contribute to a sense of social being (Moore 1986).

In many ways, space and place are natural concepts for archaeology. The mapping of peoples and practices across space and time—evidenced by the distribution of artifacts, households, settlements, and monuments—is one of the most basic forms of archaeological analysis. The process of placemaking, however, reframes space as something produced by people through actions, a product of both intentionally conceived action and the unintended consequences of action. Place, then, is not a neutral backdrop or stage of human action, but a simultaneous product and producer of human action.

The analysis of spatial structure is a process by which archaeologists can begin to approach the social significance of place. The analysis of space is not derivative and secondary to the analysis of social structure; spatial structures and social structures have a recursive relationship and one cannot be theorized without considering the other (Gregory and Urry 1985). In this formulation, "social relations become real and concrete, a part of our lived social existence, only when they are spatially 'inscribed'—that is, concretely represented—in the social production of social space" (Soja 1996:46).

In the following discussion of place, I first consider the mesoscale of the cemetery. The spatial analysis I proposed in Chapter 1, and conduct in Chapters 9 and 10, is done at this intra-cemetery scale. Because very little is known about cemetery spatial structure around the Salish

Sea, I use the spatial syntax of the Coast Salish longhouse and the village as analogues for contemplating the use of mortuary space (Chapter 6). It is the domestic space of houses and villages where concepts of privacy, bounded space, and thresholds—aspects of space that may structure social experiences and perception—can provide important analogues for understanding these same concepts in the cemeteries. It is also at the scale of the cemetery, viewed as part of a larger funerary landscape, that I approach cemeteries as places of ancestral power and explore how movement within and between them may have worked towards producing structures and dispositions embodying relations of power.

### ***Funerary Landscapes, Cemeteries, and the Powerful Dead***

As I introduced earlier, landscapes are inhabited by spirits (e.g., David, et al. 2008; McNiven 2003), home to ancestral presence (Barrett 1994:52-5; Meskell 2003) and places where the dead may be anchored and kept in place (e.g., Gillespie 2002). It is where the permeable ideas of personhood are located, creating a place rich with mythical beings, ancestral presence, sentient stones and shape-shifting animals that dwell among humans (Fowler 2004). In the relationships of many peoples with their landscape, they inhabit a “cosmos that is alive, sentient, empowered, and moral” (Thornton 2008:4). It is an animated and enchanted world inhabited by a community of beings constantly in communication and exchange with humans, thus enlivening people in places and places in people (Basso 1996). Physiographic features are residents in a landscape, inseparable from its other inhabitants and the source and subject of social relationships, sometimes linked to ancestral beings embodied on the landscape. In this sense, power and knowledge is located outside of the human body and curated in “ancestral nodes” on the landscape. People tap into this ancestral knowledge through being in a place, as this knowledge often originates from ancestral beings who were transformed into powerful places, thus producing a landscape rich with ancestral presence (Morphy 1995). Boulders, trees, mountains and other residents of the landscape have their own history, motivations, and wants (Gosden 2005), entangling people into complex and intractable relationships (Hodder 2011, 2012). This kind of *interantimation*, as Basso (1996) calls it, means that there is no inherent separation between people and landscape; landscape is a way of living and being (Ingold 1993). These ideational aspects of the landscape provide moral messages, recount mythic histories and record genealogies (Basso 1996; Knapp and Ashmore 1999).

The dead, who may be commanding forces in society, actively engage the living and entangle them through monuments, inhabiting spaces, and constituting places. This recursive and active role in the lives of the living is what Parker Pearson (1993) terms *the powerful dead*. How archaeologists approach the relationship between the living and their dead—as evidenced in the material and spatial record—may have significant implications for interpreting social relationships among the living.

When we study past societies we study their conceptions of themselves and their ancestral pasts, embodied in large measure in their places and spaces for the dead. Cemeteries are a locality in the spatial and topographic sense, and are part of constructed and cultural landscapes. Through ritualization and depositional practices, cemeteries serve as a focal point where landscape, memory, the senses, and emotion converge (Chesson 2001c; Joyce 1999; Meskell 1999b, 2001; Tarlow 1999). They are places where the material and spatial expressions of social, economic and political relationships are created and maintained (Cannon 2002:194). But cemeteries are not simply products of these relationships; they are places in which spaces and materials are manipulated in the production of relationships. The cemetery is an evolving landscape that changes with each burial, and engages the living through its spatial characteristics and the ways that materials are used ritual practice (Silverman 2002). As I will discuss in Chapter 3, the cemetery is also a focal point for the renegotiation of the status of both the dead and their inheritors (Barrett 1990:184).

The spatial order of cemetery space provokes potentially significant interpretive implications. Descendants often have a need to view or reference their ancestors, and the ways in which graves are placed in a cemetery, in relation to each other and to features of the natural environment, is conditioned by social and cognitive ideals or realities. For example, there may be socially significant differences between single and isolated burials and communal or collective burials areas where the dead were clustered together (Härke 2001:10). Placing the dead in prominent or alternatively undistinguished areas, in addition to their proximity to villages of the living, may also be important. This may relate, for example, to cemeteries as places associated with the threshold between the worlds of the living and the dead, and distinguished as such by the location of burials, fences, or other boundaries (Härke 2001:14). As I explore in Chapter 10, visibility may be one of these demarcations. Mortuary landscapes and funerary monuments are a part of the visual aspect of cemeteries that make them sites of memory and remembrance for

many societies. There is power in what is—or is not—visible in a cemetery and in how things are seen as one moves through place. Both the process, and material and spatial outcome of funerary ritual may have contributed to the visual character of the cemetery (Härke 2001:21). Cremations, for example, may have produced columns of black smoke and visually spectacular and incredibly hot fires (Oestigaard 2004; Williams 2001b, 2004, 2008). These sensory aspects of cemeteries work at a level below discourse; they define in an unconscious and often unspoken way culturally and historically significant understandings of cemeteries and the ritualization conducted therein.

Place is constituted by negotiation, and contestation; and power is always involved in its production. Power over cemeteries, and the rituals conducted therein, make cemeteries places of performance, remembrance, and commemoration concerned with ancestors (Williams 2006:197). As sites for the negotiation of genealogical relationships, as well as social and political power, cemeteries derive legitimacy both from the presence of the ancestral dead and the active power of the place itself (Härke 2001). In addition to producing ritualized bodies among the living, the repeated use of cemeteries inscribes memory onto the landscape and through time, graves and cemeteries can come to embody the people buried there, as well as surviving families, households and lineages (Cannon 2002:194). They may also be sites of ongoing ritualization, where social, economic and political relationships in the community of the living continue to be negotiated (e.g., Nielsen 2008), thus entangling the ancestors in relations of power (e.g., Goody 1962). These relationships are informed by the present and the past burial of the dead, while cueing future ritual practice (Barrett 2000). Cemeteries—as the spatial and material results of both conscious decisions, as well as dispositions working below the level of discourse—provide unrivalled access to archaeologically detectible ritual and depositional practice. As such, the cemetery becomes a useful analytic focus when we seek to connect social and power relationships with places through time.

### ***Wayfaring, Procession, and Perception***

Just as the spatial and material aspects of burials and cemeteries are implicated in the production of ritualized bodies, so too is movement of the living within and around cemeteries. As I outline in Chapter 10, the visual dimension of movement at Rocky Point has profound implications for understanding both the placement of cemeteries and funerary petroforms, as well as the concomitant structuring of dispositions and relations of power.

Cemeteries may be part of distinctive and prominent landscapes, with burials placed in such a way that they are unavoidable or on deliberate display, or they may be out-of-the-way places that people rarely pass by (Härke 2001). The placement of the dead may constrain movement across landscapes, or mark paths through the landscape (Barrett 1994; Tilley 1994, 1996). Just as villages and landscapes are ordered by paths which structure movement within and between places, so too are there paths and socially prescribed ways to be in and move through mortuary space. Trails and paths are physical, cognitive and metaphorical; they are lines along which people see and experience sacred places and that frame social, religious, and political relationships through movement (Dillehay 2007:153, 405).

Crossing landscapes is a process that makes reference to the entire complex of significance associated with them (Basso 1996). It is not just dwelling and practice that constitutes places, but also movement: “there can be no places without paths, along which people arrive and depart; and no paths without places, that constitute their destinations and points of departure” (Ingold 1993:167). Movement, or what Ingold calls *wayfaring*, is “the fundamental mode by which living beings inhabit the earth” (2011:12). This may be the extemporaneous movement of everyday life, or the processional movement of mourners travelling through the cemetery. A spirit dance initiate travelling to purify themselves at a sacred pool, a funeral procession of mourning relatives proceeding to the cemetery, or a family walking to tend their fields, all occur along some of the same pathways, yet the context of movement can vary greatly along the very same routes. Unlike Latour’s (2005) idea of network, Ingold sees movement as a metaphor for human activity and social organization, with each trail like “one strand in a tissue of trails that together comprise the texture of the lifeworld...not of interconnected points but of interwoven lines; not a network but a meshwork” (Ingold 2011:69-70). Trails are a “flowing array” which can be rewound for navigational purposes. Pathways that connect seemingly disparate elements of the landscape (burials, sacred stones, wetlands, etc.) and the practices conducted there (burial of the dead, clearing fields, fishing) entangle things, places, and actions. This means that movements of all kinds are profoundly social and entangled activities, which are both perceptive of the world and generative and transformative of it. Walking, therefore, becomes an act of movement but also a practice of instilment, a way of knowing, a process of storytelling, an educating of the body, and a ritual of communion between the human and the more-than-human world (Basso 1996; Bourdieu 1977:94; Ingold 1993; Ingold and Vergunst 2008).

Trails have biographies based on the people, events, and places associated with them, such that through time, movement along trails and through places becomes tradition, and this movement effectively and recursively shapes the experience of movement (Bell and Lock 2000:86). Through time, tradition is generated not through individual intent but by the cumulative effect of generations of movement so that the pathways eventually became actors themselves (de Certeau 1984; Snead 2006). Furthermore, movement may be constrained by what can, or cannot, be seen. Late Neolithic cemeteries, for example, may have channelled movement and created thresholds around the Stonehenge and Avebury landscapes, so that in effect, an observer situated from either of these monuments was situated within a ‘visual envelope’ created by the barrows surrounding these monuments, both containing and defining movement and what could or could not be seen (Watson 2001).

Ritual movement and visibility, from both phenomenological and more representational GIS-based perspective, have been well explored in British Neolithic archaeology (Barclay and Harding 1999; Barrett 1994; Thomas 1993; Tilley 1994) as well as elsewhere (e.g., Insoll 2009 on shrines in Ghana). While I do not fully subscribe to the phenomenological approach, primarily because of its inherent subjectivity, Tilley’s (2007; 1999) collaborations concerning movement draws attention to the unfolding stages and scenes of movement as one traverses the landscape. Wayfaring implies changing vistas, and it is this unfolding character of movement and sensory experience that is part of the larger ritual process central to producing ritualized bodies. The conceptual spaces, bounded contexts and spatially defined cultural meanings of landscape provide a complex surface over which movement happens. Movement is not neutral; there is a kind of lived awareness of crossing through portals, across thresholds, and through or along boundaries. These bounded spaces can be defined by places associated with powerful agents (e.g., shamanic or ancestral space), architectural forms (e.g., burial monuments), visual media (e.g., boulders), and as I discussed earlier in this chapter, the deposition of objects or substances (e.g., Garwood 2011:271; Gillespie 2008; Joyce and Pollard 2010; Meskell, et al. 2008; Mills 2008; Pauketat and Alt 2004; Pollard 2008). These are spaces often laden with ideas of transformation and power, and moving within them situates the walker within the larger social and cosmological world. Passage may entail some performative quality of seeing and acknowledging, or avoiding and intentionally not seeing. And this may mean crossing a boundary between the landscape of everyday life and the sacred (Parker Pearson and Richards 1996:25).

## ***Monumentality as a Practice of Memory Work***

The funerary petroforms at Rocky Point, as above ground constructions of stone and soil, are burial monuments. The depositional practices of ritualization produced these burials—practices that I have argued are integral to relations of power—and as such, we must consider funerary petroforms within the literature concerned with *monumentality*. Issues of monumentality, centred largely on Neolithic Europe, include an extensive literature that explores, among other issues, the process by which architecture was to establish political authority through the control of resources, the ability to orchestrate investments of labour, and the channelling of movement and perception on the landscape (e.g., Bradley 1993; Richards 1996; Thomas 1990; Tilley 1996; Tuovinen 2002). The material representations of the dead, in the form of mounds, cairns, henges, plazas, and other large soil and stone architecture, indicate a desire to maintain the visibility and importance of the powerful dead among the living.

Embodying ancestral or otherworldly power that lies beyond the world of the living (e.g., Barrett and Edmonds 2002), monuments are brought into existence as a material legitimation of the hegemonic order (Parker Pearson 2000). They are “as near as mortals can get to incarnating absolute real power” (P. J. Wilson 1988:134-5). The permanence of monuments embodies these senses of supernatural and earthly power, which are convincing to spectators or witnesses of the actuality of that power. It is in their durability and public setting, that the permanence of monuments changes the lived landscape, forming a fixed point in space for future generations (Parker Pearson 2000). This architecture and the places they constitute produce meanings and help to shape relationships of power both during the process of their construction and afterwards as a product of that power<sup>8</sup>. Monuments produce a kind of gravity in which some persons and things are seen as more material than others. These powerful and weighty things are produced by, and reproduce persons heavy with gravitas, to the exclusion of others who in contrast are superficial and slight (Meskell 2005c).

Most conceptions of monumentality are based on the *a priori* notion that burials are strategically positioned and meant to be seen, their very visibility the potency from which their makers derive authority (Barrett 1999:263). Monuments, and the topography they are often

---

<sup>8</sup> While durable and visible features, monuments are also subject to recontextualization, as I argued earlier in this chapter concerning the temporality of cemeteries. Relationships and significances are refigured with the additional of subsequent monuments, as well as by changing historical and cultural contexts through time.

associated with, shape visual experience and movement (e.g., Bradley 1993, 1998a, b; Thomas 1993; Thomas and Brück 2001; Tilley 1994, 1996, 2004). Whether in the form of wayfaring, pilgrimage, ritualized procession, or other kinds of movement, monumental places provide a spectacle that can serve to buttress elite authority and identity (Ashmore 2004:265). These monumental landscapes are spaces invested with power, defining movement and perception, and directing where people go and what they see and experience (David and Thomas 2008:38).

Immortality is performed through the creation of monumental architecture and the structuring of mortuary space (P. J. Wilson 1988:130). Tombs and other monuments are largely concerned with effecting permanence, overcoming death, and creating space for the ancestors in society to continue serving as active agents among the living. Monuments are implicated in the production of power in that they appear—to both producers and witnesses—to achieve immortality for those buried within. At the societal level, monuments provide an ancestral presence and an expression of the origins, lineage and biographies of families (Barrett 1994). This is an issue I explore in Chapter 11, concerning the building of funerary petroforms at Rocky Point. Tilley (1994) has proposed that Neolithic British cairns, barrows, and other monumental mortuary features signify a will to make ancestral powers manifest in the land and that this in turn was linked to the production and control of knowledge of the ancestral past.

But is monumentality a hallmark of overt hierarchy situated within larger regional belief systems? While it has been argued that the size or energy and resources invested in the building of a monumental burial correlates to the political or social power of the person buried inside (e.g., Tainter 1978, 1980), historical and cultural consideration must be taken into account to understand the scale of monumentality. For example, beliefs about death instead of individual social status may dictate the style, material, and form of a mortuary monument (Rainville 1999). In his ethnoarchaeological study of the Mapuche society of south-central Chile, Dillehay (1990) notes that dead chiefs were buried in earthen mounds, the size of which was dependent upon the duration of office of the dead chief's successor and the number of relatives participating in the mound building, rather than on the actual power of the dead chief himself. Furthermore, Cannon (1989) demonstrates that ostentation in mortuary behaviour does not correlate with elite families consistently through time. For example, ostentatious mortuary elaboration can at first separate elites from non-elites, but non-elites often imitate this elaboration. This results in what Cannon (1989:437) calls “expressive redundancy” wherein elites are no longer symbolically

separated from non-elites who aspire to copy the material symbols associated with higher status. When this occurs, elites often turn to less elaborate mortuary practices, such as the adoption of less elaborate or plain headstones in contrast to more elaborate non-elite markers. This is a phenomenon also observed at historic cemeteries in the United States (e.g., Rainville 1999; Small 2002). This is the kind of apparent inversion of status that confounds approaches to the mortuary record when ideas of social persona and inequality are uncritically equated to the form of burial (Parker Pearson 2000).

While monument building has been interpreted largely as an inherently elite strategy of inequality, as I outlined earlier in this chapter, it is this kind of top-down conception of power that Catherine Bell argues is not an effective form of ritualization. Holtorf (1997) contends, for example, that the building of monuments engendered a sense of a community history and identity, an argument that acknowledges that there must be conduits from both above and below for ritual to be a productive form of power. Pauketat and Alt (2003) advance the idea that the building of monumental mounds at Cahokia was a process more concerned with moving soil than the production of a mound; a ritual process fundamentally bound up in engendering community out of disparate groups that had come into the American Bottom region. This approach does not privilege product over process, recognizing that monumentality at Cahokia was concerned with building local-level memories and not underwriting a central authority (Pauketat and Alt 2003:171).

This last example suggests that monumentality may be concerned with memory work. Rather than approach monuments as prominent features of landscapes, and points of static collective memory, it is possible that the social significance of these locales primarily resided in their constant rebuilding and refiguring as an ongoing process, rather than being complete and finished works (Borić 2003:50). As places of ritual practice, they may be implicated in the production of tradition and authority (Bradley 1998b), but conceptualizing monumentality as an ongoing process of *becoming* and monuments as unfinished projects (Borić 2003:50), recasts monumentality as a process of memory work that continues to entangle people, places, monuments, and materials through time, and in ways that people moving stones and soil millennia ago could not have foreseen.

### ***Burials as Houses, Cemeteries as Villages, and Communities of Funerary Ritual Practice***

As houses contain bodies, so do burial monuments. Archaeologists have considered domestic architecture in the structuring of funerary monuments, finding that the architecture of the house often resonates with the concomitant form of burial (e.g., Parker Pearson 1993; Williams 2007:155). Cemeteries may be modelled on idealized settlements, with tomb and house locations mirroring one another (Midgley 1985). This is an idea that has been particularly studied for Neolithic Europe, where the spatial and architectural forms of linear barrows are architecturally reminiscent of the longhouses of the living (Hodder 1984, 1990; Midgley 1985; Parker Pearson and Richards 1996; Sherratt 1990). Unlike houses, however, tombs can represent solidity and permanence. They can be an idealized representation of the cohesion and permanence of a descent group in contrast to the reality of that group, which has an imperfect and negotiated sense of solidity and a greater degree of fluidity (Bloch 1971, 1994).

The house was the primary social unit of the ethnohistoric Coast Salish (Chapter 5). As I discuss in Chapter 6, there is ethnohistoric information available about Coast Salish house and village spatial structure, yet surprisingly little concerning the layout of cemeteries (despite a larger literature concerning funerary practice). As such, the spatial principles of the house, and how they might be similarly expressed in the cemetery, offers an entry point to contextualize patterns of depositional practice evident in the archaeological record at Rocky Point with the social, spatial, and material practices evident in ethnohistoric houses. The potential symmetry, or lack thereof, between house/village and burial/cemetery is significant, considering that the rituals associated with death and decay work directly towards establishing the long-term continuity of the house as a social group (Parker Pearson and Richards 1996).

The house societies model developed by Claude Lévi-Strauss (1983, 1987) defines the term *house* as an institution in which a moral person heads an estate comprised of wealth that perpetuates itself through the transmission of its name down a legitimate lineage based on kinship and affinity (Levi-Strauss 1983:174). Subsequent work has emphasized the ways in which the house serves as a centre where identity, practice, and memory work converge to support relations that endure over time and space (e.g., Beck 2007; Borić 2007, 2008; Carsten and Hugh-Jones 1995; Gillespie 2000b; Hendon 2010; Kan 1989; Lopiparo 2007).

Social relationships are defined in part by the architecture and spatial organization of the house (Carsten and Hugh-Jones 1995; Gillespie 2000a, b; Hendon 2010:56-59; Joyce and

Gillespie 2000; Kan 1989; Lopiparo 2007; Marshall 2000; Waterson 2000; Weiss-Krejci 2004). While reckoning descent from the house owner is often the basis for a claim of house membership, people are brought together in the house through marriage, alliance, and other means, to create a flexible but enduring social group. Although house members often use kinship as a way of referring to one another, this is often as much a rhetorical strategy as an actual consanguineal relationship (Waterson 1995). Living house members must be concerned with contributing to continuity over time through their actions and interactions for the house to stay in existence over multigenerational time (e.g., Hayden, et al. 1996). The continuity and reproduction of the house may be related to the need to define membership, as well as concerns to protect and promote their common investment in the house estate. For the Coast Salish, this includes the trust of material property and inalienable possessions (sensu Mills 2004; Weiner 1992) such as ritual regalia, as well as intangible property, including ritual knowledge, the birthright to bestow or hold specific names, and the claim to perform certain ceremonies, or sing certain spirit power songs (Chapter 5).

While the house is important centre of memory work and identity, as outlined in Chapter 1, it is appropriate to think about the ritual practitioners at Rocky Point as communities of practice. These communities of practice were mutually associated with particular spaces—such as longhouses, cemeteries, grave houses, proprietary spirit quest sites—and their involvement in series of interactions, relations, actions, and practices through which memory and identity are created and reconstituted over time (sensu Lave and Wenger 1991). In other words, the important relations and interactions are not just between people and the idiom of kinship, but also between people, the places they inhabit, and as discussed earlier, their proprietary, learned, and shared ritual and depositional practices. And just as the house embodies of not only unity but also various kinds of hierarchy and division in society, so to must we consider burial places associated with communities of practice as similarly contributing to the production of inequality and power. Central to this process is the creation and maintenance of privacy and exclusivity.

### ***Knowing What Not to Know: Privacy and Boundaries in the House and the Cemetery***

As I introduced earlier in this chapter, the internal organization of the house and the external organization of the village can be understood as producing and reproducing dispositions of movement (Bourdieu 1990). How people experience living in a house and a village, then, speaks to the way that relations of power are produced and reproduced through bodily

movement. Space, movement and perception may both structure and be structured by principles such as kin membership, status, gender or other factors such as cosmological ideals (Parker Pearson 1993:206). The layout and planning of house and village provides a model for conceiving of the world in a complex and comprehensive way. The house and village are not only an order constructed out of walls, boundaries and fences; they also serve as smaller-scale reproductions of the structure of society and the larger social, spiritual and economic world.

Wilson (1988) advances a thesis concerning the ways in which power relations are naturalized in House-based societies. He proposes that living in architecture implies acceptance of structure and constraint (P. J. Wilson 1988:78). Whether planned or not, delimiting the use of space in a village offers boundary analogies for the definition of the community. Houses and villages demarcate social relations between people in spatial, visual, and material ways. The domestic social unit is produced and reproduced in the practices of the House, often framed in relation to those internal to and those external to the House. Members of the House are defined as those that built or maintained the physical house together, shared in its economic activities, and took part in its rituals. These social units have longevity because they are mutually invested, both socially and economically, in the house. While continuity through periods longer than the life of an individual house may have been dealt with by constructing new houses directly over old ones, the history of the House as a social body was maintained by safeguarding its intangible legacy of names, songs, rituals and so forth so that they could be transferred to future generations (e.g., Borić 2003). Houses are resources for heirs and a commemoration of ancestors and architecture creates a sense of permanence and continuity (P. J. Wilson 1988:57). They are invested with memory and tradition and the architecture of past action legitimates present and future action.

The topology of the physical house situates and schools the body, mapping behaviour, practices, and the dispositions between people (Bourdieu 1970). People embody power relationships through daily repetitive actions, movement, seeing and perceiving within walls, by crossing through thresholds and moving between houses and villages. Acts of negotiating space, such as moving through a house or a cemetery, involve internalizing social and power relationships. This movement is often unspoken and happens at a level below discourse but it is the unspoken quality of this correspondence between social and spatial distinctions that makes it appear natural and unquestionable (Bourdieu 1977). Apparently neutral acts such as entering

and leaving houses or who sleeps where are imbued with social meaning, but they are fully implicated in the production of that meaning. When people learn to behave properly in a house or a cemetery, they are internalizing social distinctions. But while these meanings and structures might be negotiated or challenged, it is harder to challenge what has never been said (Bourdieu 1990). At Çatalhöyük, for example, the reproduction of dominant groups (elders or lineage heads) was intimately tied to the construction of bodily routines that were repeated in daily house practices over days, months, years, and centuries. These practices involved production, consumption, and the social and ritual aspects of life, including practices such as discard, replastering, and burial of the dead (Hodder and Cessford 2004).

Wilson advances his argument with a second idea about the unique relation of structured spaces to relations of power. Whenever people live in communities of houses or bury their dead in cemeteries, boundaries inhere (P. J. Wilson 1988:57). The private domestic domain is physically and socially clearly demarcated from the public domain (P. J. Wilson 1988:104-5). Admitting outsiders, often through ritual or hospitality events such as feasting, serves to make the private space public but in a controlled way in which the resources, unity, and success of the independent house unit can be displayed and revealed. But this is an idealized public representation, similar perhaps in the way that burials are likewise an idealized representation of social relationships.

Houses and villages are about creating physical, social, ideological and spiritual boundaries, often associated with needs of defence, territory, shelter and containment (Parker Pearson and Richards 1996). Entrances and physical barriers, such as house walls and log palisades, mark differences in domains and restrict and control access between them. Thresholds in space, such as doorways and cemetery gates, are transitional, liminal spaces. By physically partitioning and demarcating space, places and relationships can be more readily classified and controlled. Walls and entrances serve to mark transitions between domains such as inside/outside, sacred/profane, public/private, enemy/friend, elite/commoner, initiate/uninitiated and male/female (Parker Pearson and Richards 1996). Boundaries and transitions between domains can be marked in many ways other than simple physical features. Incense can be burned around the edges of villages to keep spirits out, such as practiced among the Coast Salish (Chapter 6), and physical fortifications may work in concert with, or originate from, magical defenses (Eliade 1961:49). Many boundaries are perceptual (Parker Pearson and

Richards 1996) and may relate to features or places that can, or cannot be seen from specific places and vantages (e.g., Desmond 2000; Wheatley and Gillings 2000; Winter-Livneh, et al. 2012). In other words, the absence of a physical boundary does not imply the absence of a conceptual division between domains, although there is often a reflexive relationship between the physical and the conceptual. Within the sequence of building houses in a village, for example, constructing a house or wall where there was none conceptually affects how inhabitants see the village or house and its definition. Similarly, each successive burial in a cemetery works toward redefining the conceptual understanding of that place and the spatial divisions within it.

Secrecy magnifies reality (Taussig 1999). There is power in the unseen and of the imagination to shape and direct fear, desire as other visceral effects (Blakely 2011; Meskell 2008:237). As Mills (2008) observes, the power of secrecy and the concealing or controlling of access to forbidden places or things can heighten their intensity and perhaps even reframe them as sacred. Things shielded or out of daily view do not mean that they are inactive; they may still be very active and powerful agents and shielding them from the day-to-day often only enhances their power. Acts of concealment, such as layering material over and around the dead, are rich with meaning (Jones 2010:106) and speak to ideas of secrecy and privacy shared by those communities of practice burying their dead. Aspects of a funeral, however, may occur within the public sphere and produce a monument and memories retained by the living, even if they are associated with private knowledge or space. “That which conceals also reveals” (Jones 2010:117): while covering the dead is an act of containing and concealing, the funerary ritual conversely draws immediate attention to the dead, just as the tomb both conceals the corpse and simultaneously draws attention to its spatial and material locus. The deliberate partial exposures involved in “the public secret”—defined as what is generally known but for one reason or another, cannot easily be articulated — is a route to social power (Taussig 1999). Secrets held in public trust entail *knowing what not to know*, and as something outside of regular discourse, are invested with social power (Jones 2010:117).

### **Theoretical Summation**

Ritual does not reflect social structure, power, or difficulties. Rather, ritual is an active process, a practice entangled with bodies, materials, and places. In placing less emphasis on ritual as a thing and more on the practice of ritualization, we can appreciate it as a form of action rather than a specialized kind of communication. This reorients our questions to focus on what

ritual does and how it accomplishes it rather than what it means, reflects, or symbolizes. As a distinctive kind of social strategy, archaeologists can consider the contexts in which particular rituals are created and performed and the consequences of such actions, whether they were intended or not. Through material and depositional practices, archaeologists can trace the social history of those practices and the implications for relationships of power, ranging from the individual ritualized body, to the house, community, and the cosmos. As a way of acting, ritualization reveals some of the dominant concerns of society; it is a process by which aspects of life are selected and provided with an added emphasis. As such, actions and practices within the cemetery are a play on practices in the house and the village. Ritualization is a process that is historical, deriving legitimacy from earlier practices, meaning that it can be traced over time and studied in its wider context.

Thus, a practice-based approach to ritual is an effective means by which we can begin to differentiate genealogies of practice and forms of placemaking and memory work in the past. This approach recognizes the active and constituting nature of the world in which people live; a world of burial monuments, ancestral presence, guardian spirits, sentient stones, and so forth. Understanding the material, spatial, and temporal distribution of the practices that produced the archaeological record is a fundamental part of connecting memory, materiality, and place. Paraphrasing Mills and Walker (2008a:16), this approach uses the same skills and data that archaeologists use in any research but with the added layer of attention to the relationality of materials. In other words, context is everything, and understanding the depositional processes as part of human practice means considering the relationships between the context, form, frequency, and distribution of materials to be assessed. As such, we are connecting material remains both to individuals at a moment in time, and to an entire society and its history (Nilsson Stutz 2003:49). Whether intentional or not, “archaeological deposits are created through different practices, and it is in the differentiation of those social practices and their relationship to memory production that we find our toehold on interpretation” (Mills and Walker 2008a:17).

Objects, substances, places and landscapes are the media within which people participate during memory work. By adjusting focus from material culture to materiality and from space to place, we can consider the ways in which communities of ritual practice engaged ritual, depositional practices, and memory work through time and at multiple scales. Ritual practices involve deposition, and over time shape the historical processes through which memories and

places are produced. This continuity is visible in the archaeological record through the chains of repetition that owe their continuity to particular strategies of memory work produced and reproduced through ritualizing.

As I outline in the next chapter, funerals are a ritualized rite of passage concerned with the transformation of corpse to ancestor and mourner to inheritor. The practice-based approach I have outlined in this chapter is historically and culturally conditional. To implement these ideas of materiality, depositional practice, placemaking and memory work, requires a contingent historical perspective on Coast Salish mortuary practices. This is the scaffolding upon which to connect the social theory with the archaeological record of the Rocky Point funerary landscape. This means considering not only mortuary practices, but also the kinds and durations of other ritual practices as well. While the archaeological record of southwestern British Columbia has a developing literature in the mortuary treatment of the dead around the Salish Sea, what is conspicuously absent is an approach that considers the material and spatial record as a product and producer of ritual practice. What is also required is the kind of ethnohistoric and ethnographic analysis, like that conducted by Meskell in Egypt (2001, 2004), Stahl in Ghana (2008), and Nielsen in the Andes (2008), that considers linking ritual practices through time to a culturally and historically contingent understanding of the intersection between the object world and the production of knowledge and power.

### **Chapter 3: Ancestral Presence and the Ritual Transformation of the Dead**

Life itself means to separate and to reunite, to change form and condition, to die and be reborn. It is to act and to cease, to wait and rest, then begin acting again, but in a different way. And there are always new thresholds to cross...the thresholds of birth, adolescence, maturity, and old age: the threshold of death and that of an afterlife (van Gennep 1960:189-90)

Funerary rituals are concerned with the corpse, the ways of handling it, and the practices concerned with the transition from life to death. Funerals can be understood as rites of passage meant to locate the deceased conclusively and permanently in the realm of the dead. The ritual includes the opportunity of renewed discussions or repudiations concerning categories and rules, thus making transitions between sociocultural categories possible. Consequently, social categories are defined, overstepped, and redefined (Barrett 1996). Confronting death, then, provokes those associated with the deceased to review or begin negotiations concerning the mutual obligations and solidarity with regard to ancestors and the supernatural. The version of social relationships shown in the ritual is frequently idealized and legitimized through references to the past and the ancestors; it provides a forum through which to disperse and conceal social conflicts (Bender 1992; Kristiansen 1991; Pader 1982).

It is through mortuary rituals that people often enact a series of stages in which the deceased's social death follows his or her physical death, a process by which the dead leaves the realm of the living and successfully joins with the community of ancestors (Feeley-Harnik 1989; Kan 1989). In addition to this transitory ritual, mortuary ceremonies are a public venue in which to assess relationships, identities and social memories in a significant integrative process for the community (Metcalf and Huntington 1991).

Funerals are rites of passage involving both the transformation of identities as well as states of being (Garwood 2011). The dead may be assigned a new social identity, taken beyond social categorization entirely (Nilsson Stutz 2003), or reintegrated back into society (Fowler 2004). In this sense, the dead are initiates in a rite of passage (Oestigaard 2004). Funerals are a specific kind of ritual practice, one that addresses the fundamental problems presented by death and how a society creates continuity out of discontinuity. Funerary ritual is centered on the transformation of the dead from a living member of the community, to a corpse that poses a

danger to the well being of the living, to an ancestor (Hertz 1960; Metcalf and Huntington 1991; Turner 1969; van Gennep 1960).

Moments such as death in a community shake people from the daily routine. These are life crises implicated in personal, social and power transformations. In *The Rites of Passage* (1960)<sup>9</sup>, van Gennep outlined how rituals that accompany life crises are central to transforming an individual from one status to another. While his work is more than a century old, it is still widely cited and foundational to understanding ritual as intrinsically involved in marking and maintaining social order (C. Bell 1997:38). Van Gennep argued that rites of passage must be understood in their entirety and share a tripartite sequence of beginnings (rites of separation), middles (rites of transition or liminality) and ends (rites of incorporation, or reaggregation). Through this sequence of actions, rituals work to remove a person from one social grouping, dramatizing that change by holding the person in a “betwixt and between” state for a period of time, and then reincorporating them into a new identity and status within another social grouping. In this sense, funerals are a kind of initiation where the dead person is the initiate (Oestigaard 2004:120).

By means of his tripartite system, van Gennep demonstrated a wide degree of similarity among ceremonies of birth, public puberty, initiation into religious societies, and death. He argued this formed a potentially universal logic for managing both human encounters with the supernatural and the very nature of the human lifecycle (Garwood 2011:151). Death is a process in which the old self dies and the new self is reborn. This inevitable and cyclical process of death and rebirth is symbolized, for example, by skulls and skeletons that intrude incongruently at the harvest festival, and death rites filled with the symbolism of rebirth (Metcalf and Huntington 1991:30). Turner (1986:293) extended van Gennep’s model to include what he called social dramas, in which legal, political and religious struggles all require a similar process to re-establish order and validate new social and moral circumstances. I outline this process in Figure 6, below.

Liminality is the experience of being present at the threshold between the worlds of the living and the supernatural. This a time where social norms are suspended and people are in the presence of supernatural powers, situated between the worlds of the living and the dead. Turner (1990:11) argued that the liminal stage is characterized by ambiguity, monstrous images, sacred symbols, and esoteric and paradoxical ideas and instructions. “Symbolic types” that emerge

---

<sup>9</sup> Originally published in 1909. It was published in English in 1960.

during the liminal period are often combinations of symbols drawn from nature and culture where the material or natural world is recast as a metaphor for liminality. For example stones can be a metaphor for containment, transformation, purity, hardness, heaviness, as is the case for the Coast Salish (Chapter 6).

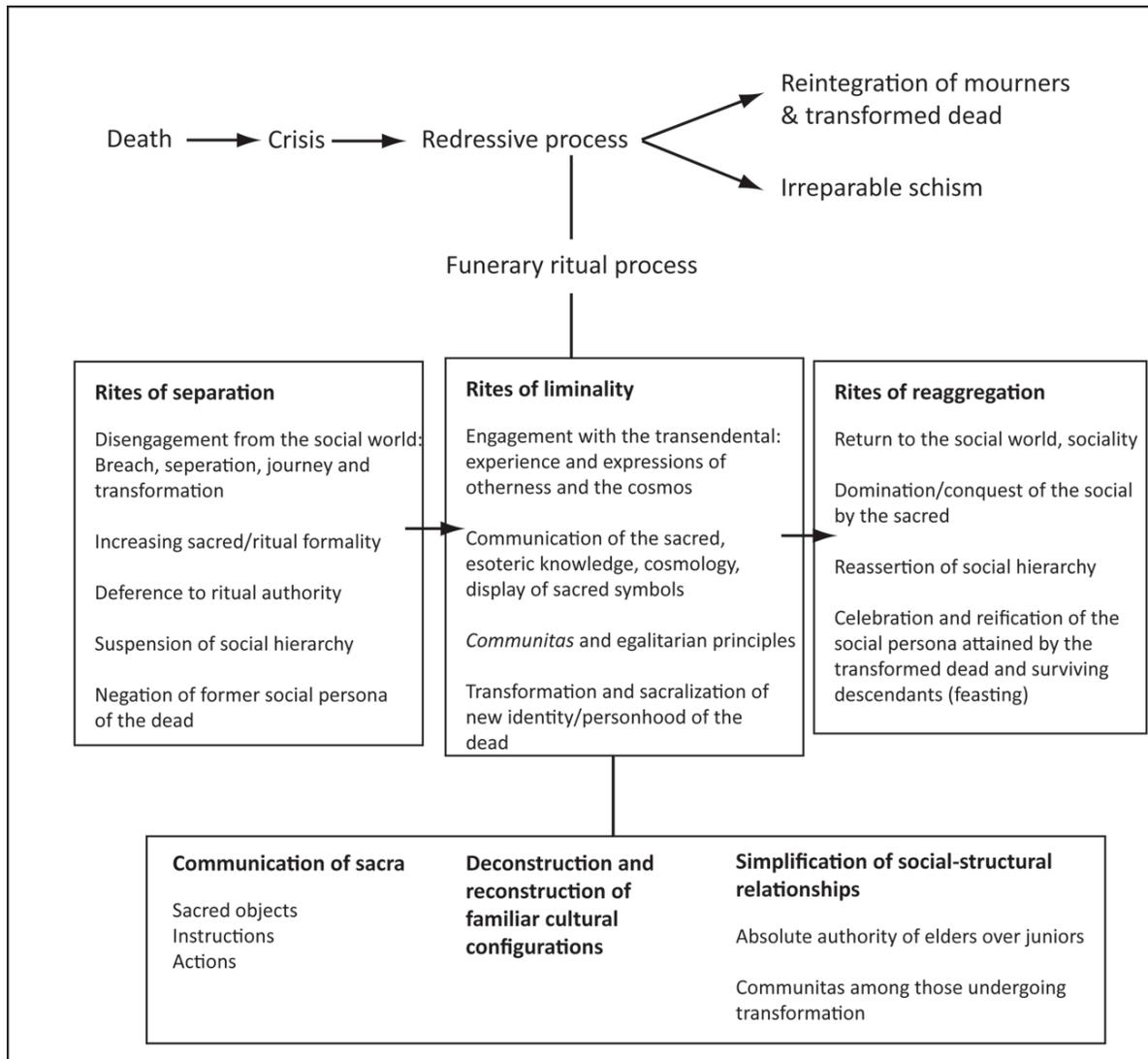


Figure 6: The funerary ritual process, in the context of Van Gennep's (1960) model of rites of passage and Turner's (1986) model of social dramas. Modified from Garwood 2011, Fig. 18.2.

Complementary to van Gennep's theory is Robert Hertz's (1960) essay *A Contribution to the Study of the Collective Representation of Death*. According to Hertz, and elaborated upon by Metcalf and Huntington (1991), funerary practices are concerned with the transformation of both the dead and their descendants. For the dead, this concerns the transformation of the physical body (the corpse) and its metaphysical elements (e.g., the soul). Funerary practices also negotiate the

transformation and changing relationships and status of mourners. These transformations between the living and their dead parallel one another, as the dead are transformed from corpse to ancestor and the living may be transformed from mourner to inheritor. Funerals comprise ritual processes, practices, and technologies concerned with the transformation of these agents' relationships. As summarized in Figure 7 below, people may treat and transform the corpse as the body conversely affects the living through its presence and changing form, influencing the way the funeral is conducted and remembered and how the dead are ultimately regarded (Williams 2006:21). As part of this process, mourners selectively forget, or transfer elements of the deceased's identity elsewhere, and create a new "ancestral" identity for the dead. The grave is a physical and metaphorical proxy for the dangerous and polluting corpse, and serves as a site for the living to access the non-corporeal aspects of the dead. Memories of the dead are performed and composed through the funeral, and the grave becomes a place of both remembering and forgetting.

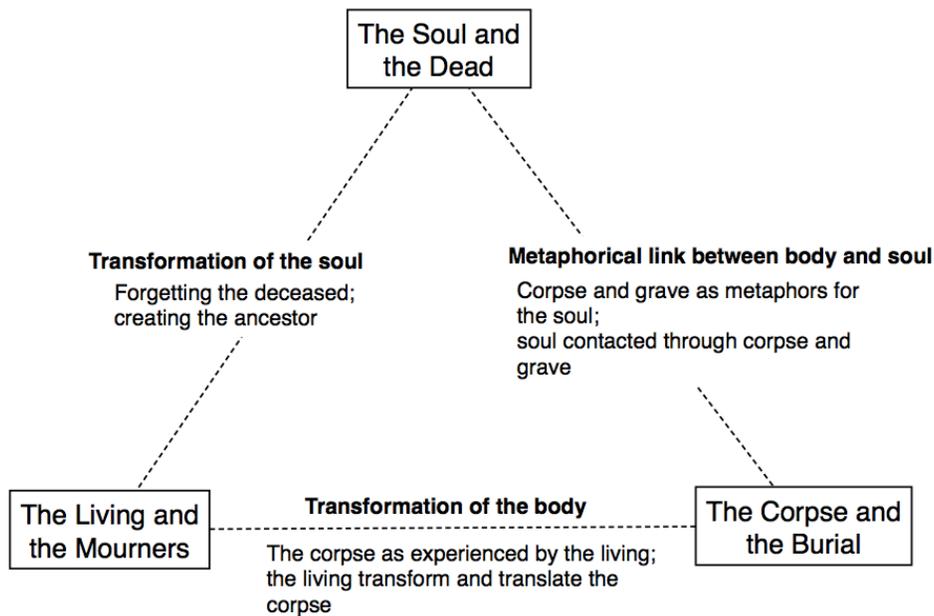


Figure 7: Metcalf and Huntington's (1991) interpretation of Hertz's theory of death as a transformation involving the relationship between mourners, the corpse, and the soul.

Hertz's interprets society as reifying immortality through ritual practice, with the effect of transcending the life of any individual member and conferring upon the dead a new status as ancestor. In this sense, members of society never die but change their relative relationships as they are transformed from living members to dead members of society. Paradoxically however,

society must recognize the death of the individual to accomplish this. The transformation from corpse to ancestor often symbolically relates to the state of the corpse. The dead body is often the focus of painful and intense emotions and elicits action among mourners as they cope with and respond to the decomposition of the corpse. According to Hertz, the decay of the corpse is associated with the fate of the soul of the deceased and the period of mourning. Death is fully consummated only when decomposition has ended or the putrefying body is successfully removed from sight; only then does the dead cease to belong to this world and fully enter another life (Hertz 1960:47). This intermediary period is of interest because in this liminal phase, corpse, soul, and mourners undergo a parallel transition.

Hertz outlines how bodily treatment, such as washing, clothing, cremating, transporting and ultimately disposing of the body are recursively linked with the imagined transformation of non-corporeal elements of the deceased and the survivors. He elaborated this idea by describing many cultures as having a “twice burial.” The first burial symbolizes the biological problem that death represents to a society. The cadaver presents practical problems necessitating disposal, but is also made a symbol of the potential collapse of the social group. The potency of this danger often relates to the social position of the dead. The danger is often expressed through bodily treatment, such as purifying the corpse or treating it in a specific manner that reinforces the danger the body presents to the community. Furthermore, those who come into contact with the corpse at this time are also considered contaminated by the dead; this may range from the immediate family to the whole group. This often necessitates purifying the living through ritual actions such as ritual washing after which kin closest to the corpse may live with a period of prohibitions or isolation. The second burial has little to do with the body and often happens after the disposal of the body. This often entails the redistribution of the dead person’s resources (material or intangible) and the reintegration of the deceased’s social roles in the community.

Importantly, Hertz, van Gennep and Turner argued that the liminal period is a time in which there is room to manoeuvre and effect change in those aspects of funerary rituals concerned with renewing, reorganizing and relegitimizing social and power relations among the living. Rites of passage “are the rare occasions when it is possible actually to hear people giving lists of rights and duties” (Bloch 1977:286). Funerary ritual, when considered as rites of passage, distinguishes status groups with clearly marked boundaries, which contributes to the stability of social identities and roles. Rituals are not just about stability though; they can be considered as a

means for changing and reconstituting groups in an orderly and sanctioned manner. Building on van Gennep's work, Turner envisioned social structure as a dynamic and ongoing process, recasting ritual as central to the process by which the community continually redefines and renews itself. Turner reformulated van Gennep's tripartite scheme into a more fundamental dialectic between social order (structure) and a period of social disorder and liminality (antistructure). Turner argued that rituals affirm the social order, while simultaneously facilitating disordered versions of that order. Through these inversions, the original order is legitimated and simultaneously modified. Turner focused on the period of liminality, situated between the structure of the society at the beginning of the ritual and that affirmed or reshaped at the end. Practices concerned with liminality express ambiguity and paradox, consistent with the sociality that departs from that of everyday life during liminal times (Turner 1964, 1969). Turner called this time when social hierarchy is overturned in favour of egalitarian religiosity and the ideals of a shared identity *communitas* (Turner 1974).

Life then, is the balance between structure and antistructure, homogeneity and differentiation, equality and inequality, with these opposites mutually and necessarily constituting each other (Turner 1969:97). Ritual is a means for acting out social conflicts in a series of activities through which people experience the authority and flexibility of the social order and the passage from an old to new status in the reconstituted order. Rites of passage such as funerals act out or give form to conflicts and the dominant values holding the group together. Ritual dramatizes the real situation, and in the process gives rise to the possibility for transformation in a structure that otherwise resists change (C. Bell 1997:40).

Importantly for archaeologists, material culture and the use of space are central to this process of transformation. Items directly associated with the body and the form and placement of burial architecture are often directly implicated in this notion of transformation. In the contexts of rites of passage, material culture is often interpreted in symbolic terms, but they are not reflections of symbolic things; they are the embodiment of the sacred and the tools by which rituals can make things sacred (Garwood 2011:265). As outlined in Chapter 2, ritual movements in space, for example, are structured and structuring symbolic orchestrations that work to create socially experienced changes (C. Bell 1997:37). So too can the body be transformed through movement, such as funeral processions, which can serve to articulate the changing identities of the dead and the mourners. The use of space is implicated in these concepts of transformation,

particularly through the placement of the dead relative to the living and how this might change through time (Bradley 1990; Parker Pearson 2000). The liminal zone in its physical manifestations, such as cemeteries, is often marked off by physical boundaries that divide the sacred from the profane (Parker Pearson 1993:204). This might be placing cemeteries where an element of the landscape (such as a stream or marsh) or an aspect of topography might divide the domains of the living and the dead. In Chapter 7, for example, I outline how the wetland system at Edye Point partitions the cemetery into different sections, and in Chapter 10 I demonstrate that visibility is implicated in defining liminal spaces at Rocky Point. In both instances, physical aspects landscape are connected in separating not only the living and the dead, but different groups of the dead. As such, the landscape may form a kind of “eschatological map” of practical actions and relationships linking and separating the living and the dead (Parker Pearson 1993:204) or what has been called a mortuary landscape (e.g., Goldstein 2002; Mathews 2006b; Richards 2005; Stirling and Stone 2007). In this sense, there is no real boundary between ritual, space and material; they are linked together in creating things, feelings, and dispositions (Garwood 2011:266).

Rites of passage are not a reflection of the social order but are a primary means by which social differences are created and justified with reference to an ideal model of the cosmic order. A fundamental problem common to Processual mortuary analysis (e.g., Binford 1971; Goldstein 1980; Saxe 1970; Tainter 1978) is the assumption that funerary categories reflect living social personas, and that these identities are accurately represented in the course of funerary ritual (Parker Pearson 2000). Rather, social identities and inequalities naturalized in rites of passage construct powerful and often idealized images of what social personas should be like or will be like (Garwood 2011:266). The emphasis then should be not on whom the dead were but who the dead will be. Funerals are a propositional event in which the dead are constituted by the living, rebuilding the identity of the deceased into a new and idealized ancestral form (Parker Pearson 2000; Shanks and Tilley 1982; Williams 2001b). This identity produced through mortuary treatment was likely not a perfect and finished identity; rather it may have been provisional and subject to further work before the personhood of the dead could be fully realized and gain admission into the company of the ancestors (e.g., Strathern 1993). I argue in Chapter 10, for example, that this is particularly relevant in the context of Coast Salish ritualization, with

funerary petroforms serving, in part, as a provisional part of a protracted funerary process that was only concluded with a potlatch up to a year or more after death (Chapter 6).

This is illustrated in Kan's (1986, 1989) study of the Tlingit memorial potlatch, in which he observed that the community created and recreated the social order in the context of mortuary rituals, the basis of which was an encompassing ancestral ideology. By focusing on the characterization of the ritual as the "finishing of the body," Kan (1986) illustrated how it resembles other global rites of secondary treatment of the dead, applying a Hertzian theoretical model to the transformation of the deceased, the mourners and their affines. Tlingit funerals reconstituted the dead into a resource for the living, transforming death "from a threat to the social order into the major opportunity for strengthening and enhancing it" (Kan 1989:288). The Tlingit memorial potlatch emphasizes the relationships with the dead, how that death potentially affects the relationships within the community, and how the mortuary ritual directly addresses the communal tensions caused by that death. In Kan's discussion of social order and the conception of personhood, it was the aristocratic elite who "both dominated Tlingit ideas of what a person was and should be and were the ideal social persons" (Donald 1990:482).

The continued relevance of van Gennep and Hertz is the utility of their schemes for analyzing the sequence of transitions, the biological imperatives (corpses decay), and the culturally contingent ways that people symbolize the dead in meaningful ways inside and outside of the cemetery (Metcalf and Huntington 1991:112). It is their attention to the combined symbolic and social contexts of the corpse and those burying the dead that yields profound insights into funerary practices and how this articulates with both the stability and changing nature of power relationships.

## Section II: A History of Coast Salish Ritual Practice

This section is a thematic analysis of Coast Salish ritual practice over the past four thousand years. It tacks between a thematic summary of mortuary practices evident in the archaeological record of the Salish Sea (Chapter 4) and Coast Salish ethnohistoric ritual and funerary practices (Chapter 6). These ancient and more recent funerary practices are foundational to considering ethnohistoric Coast Salish social structure and relations of power (Chapter 5) and point to questions and analyses that may be posed to the Rocky Point archaeological dataset (Chapters 8, 9, and 10). These questions address the relationships of power as they may have existed during the Late Pacific period at Rocky Point (Chapter 11).

A fundamental problem in any archaeological work is selecting appropriate analogues (e.g., Binford 1967; Lyman and O'Brien 2001; Rackerby 1968; Stahl 1993; Wylie 1985, 1988). The analogical approach I take is an attempt to capture the logic of ritual practices through time. Viewing ritualization as culture-in-the-making (*sensu* Stahl 2004) is a process that considers the long-term history of local level practices evident in the spatial and material record at Rocky Point, and how they relate to the regional networks of ritual practice discussed in the existing literature. According to Stahl (2004:30), the challenge is to use these diverse sources of culture history—the archaeological record, oral histories, historical accounts, and ethnographies (both early historic and contemporary)—comparatively, tacking back and forth (*sensu* Wylie 1989) between present and past to understand change and continuity in the ritual practices at Rocky Point since the transitional Middle/Late Pacific period. The idea is to capture strands that link the past and the present without wholesale imposition of the ethnographic present onto the archaeological past.

Archaeology is a second line of evidence in the study of funerary ritual, both complimentary to existing ethnographic evidence, and offering new lines of inquiry. The existing ethnographies are remarkably silent, for example, on how cemeteries were structured, who was placed where, and how people moved within and between these sacred places. Furthermore, there is little ethnographic reference concerning funerary petroforms, although many Coast Salish people are aware these are *xexe*—powerful places to be avoided. Through archaeological means, it may be demonstrated that these silences in the ethnographic record are not an absence of ritually engaged spaces and materials (see Chapter 4) and that an absence of this information in the ethnographies may underscore reluctance in both past and present cultural experts to

discuss this information publically. Archaeology, while tuned to identifying patterns in the use of materials in space, does not reveal the specifics of this culturally sensitive information, yet underscores that potential complexities in practice in fact existed in past funerary ritual practice.

This approach is not a simple temporal projection of ritual practice from the present into an archaeological past—rather, I consider ritualization as a continuum along which stones and spaces are used both consistently over time, and how these were also employed in novel ways that remain grounded and legitimated by metaphors and engagements with those same materials and comparable spatial dispositions outside of the cemetery. This requires the recognition that funerary ritual at Rocky Point is a history of entangled bodies, practices, materials, and places through time, thus requiring an innovative effort to join ethnography and field archaeology. But rather than plastering over incompatibilities between archaeological sources, ethnographic, and contemporary practices, it is those very incompatibilities that we need to most closely interrogate (Wylie 1996:339-340).

Using these diverse sources, I use thematic analysis to identify, examine, and record patterns (or "themes") within these data (Guest, et al. 2012). This method emphasizes organization and rich description of the data, identifying implicit and explicit material, spatial, and ritual practices, as well as metaphorical equivalences between practices and spaces within and outside of the cemetery. A researcher's judgment is the key tool in determining which themes are more crucial, and eventually, themes need to provide an accurate understanding of the "big picture" (Braun and Clarke 2006:102).

The archaeological thematic analysis is presented in Chapter 4 and the ethnographic/ethnohistoric thematic analysis is presented in Chapter 6. These analyses are informed by the scaffolding of social theory in Chapter 2 and are brought together in the analysis of depositional practice (Chapter 8), the use of ritual spaces (Chapter 9), and the perceptual nature of cemeteries (Chapter 10).

## **Chapter 4: Four Thousand Years of Coast Salish Funerary Practice**

In this section I briefly consider both change and continuity in Straits Salish funerary ritual practice over the past 4,000 years. This section provides an archaeological and ethnographic context for the advent of funerary petroforms, situating this within the three major transitions in mortuary practice during this period. Prior to funerary petroforms, the dead were interred in fully subterranean midden inhumation burials. There are no indications that the practice of building funerary petroforms continued into the ethnographic period; rather the dead were interred in variations of surficial burial including wooden grave houses, scaffolds and canoes in trees.

Understanding changes in practice, or essentially people's habits and actions, provides an explanation for changes in the archaeological record. Pauketat states that "practices are always novel and creative, in some ways unlike those in other times or places" when understood within their historical context. One method to ascertain the historical influences on practices is to discern traditions or practices with a long temporal dimension (Pauketat 2001b). Traditions are the forms of practice most visible in the archaeological record. Tracking change in archaeologically defined traditions informs on changes in social structures, since tradition is a measure through which change can take place (Pauketat 2001b). Practice theory is well situated to interpret the proliferation of funerary petroforms, if one considers the transition from midden inhumation to funerary petroforms as a change in tradition. If so, then a changing in tradition implicates structural changes amongst the Coast Salish peoples. The two themes I focus on are the intersection between ritual and the changing relationships between the living and the dead and the use of space and material in the burial of the dead through time.

To discuss the temporal and geographic trends in mortuary practice, I use the culture history outlined in Table 2 and Figure 8. When considering broad temporal trends and drawing on cross-regional comparisons, I employ the general chronology offered by Ames and Maschner (Ames and Maschner 1999). There are, however, important but poorly understood local variations in the culture history of the southern northwest coast and, when discussing local-level culture history, I use the scheme offered by Clark (2000, 2010) which defines local variation in culture history through a quantitative analysis of traits evident in Middle to Late Pacific period sites on southern Vancouver Island.

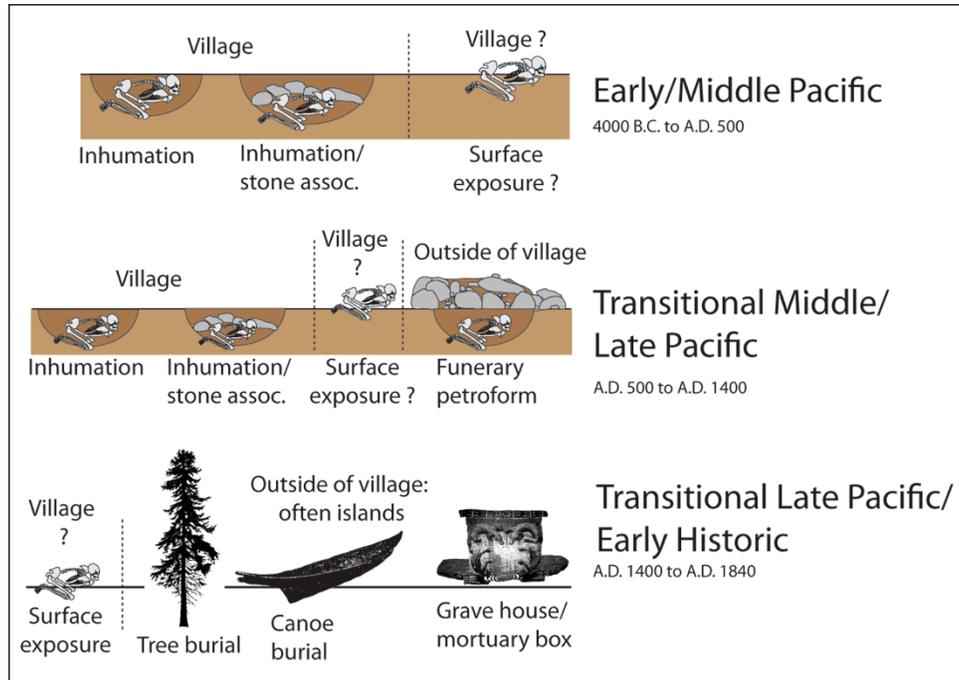
Table 2: Regional Chronology of the Salish Sea.

Radiocarbon years	Calibrated calendar date	Ames and Maschner periods	Regional phase	Southern Vancouver Island phase (Clark 2000)
500 B.P.	A.D. 1450	Late Pacific period A.D. 200/500-1775	Gulf of Georgia	
1000 B.P.	A.D. 1000		Marpole	Bowker Creek
1500 B.P.	A.D. 600			
2000 B.P.	A.D. 1	Middle Pacific period 1800 B.C. – A.D. 200/500	Locarno Beach	Transitional Locarno (Old Musqueam)
2500 B.P.	600 B.C.			Locarno Beach
3000 B.P.	1250 B.C.			
3500 B.P.	1850 B.C.			
4000 B.P.	2500 B.C.	Early Pacific period 4400-1800 B.C.	Charles	
4500 B.P.	3300 B.C.		Old Cordilleran	
5000 B.P.	3850 B.C.			
5500 B.P.	4300 B.C.			

### ***Funerary Ritual Antecedents: Surface Burials and Midden Inhumation***

When shell middens appear on the Northwest Coast, they contain burials (Ames and Maschner 1999:181). As illustrated in Figure 8, throughout the Early, Middle, and beginning of the Late Pacific periods, the dead were incorporated into village midden deposits. This is a practice that continued to about cal A.D. 1000–1200 (Ames and Maschner 1999:192), although a precise end-date for this practice is unknown and much smaller numbers of inhumations continue in the region into the Late Pacific period (Curtin 1999:60-61). Despite the longevity of the practice and the ubiquity of inhumation burials in shell midden matrices, it is unlikely that everyone was so buried (Ames and Maschner 1999:186). This implies that an unknown spectrum of burial practices with little or no archaeological visibility existed between the Early and Middle Pacific periods. This unknown kind of burial may include the surface exposure of the corpse, which was practiced during the ethnohistoric period (Chapter 6), and would leave little or no archaeological trace (Lyman and Fox 1997). Some have argued for surface disposal as early as the transitional Middle–Late Pacific periods (Burley 1980:29; 1989:52,56; Burley and Knusel 1989; Ham, et al. 1982) based on the untested assumption that isolated human elements found scattered in midden deposits are the disarticulated remains of surface or tree burials. Others suggest that such elements are the result of later midden burials impacting earlier inhumations (Curtin 1984; Cybulski, et al. 1992). Human remains exposed on the ground surface, and outside of midden, rockshelter, wet site, or other contexts with favourable preservation, would have little

or no archaeological visibility. Human bone, for example, will begin to mechanically break down in as few as six years of ground surface exposure (Behrensmeyer 1978), although the specific time is dependent on local environmental factors as much as time (Lyman and Fox 1989, 1997). Furthermore, if those bodies were placed in contexts where archaeologists might not ‘expect’ to find them (e.g., undifferentiated forest) then this may also further explain the large ‘missing’ demographic of Coast Salish dead.



**Figure 8: Posited temporal trends in the burial of the dead in the Salish Sea Region.**

The practice of surface exposure may have considerable antiquity and may even account for the bodily treatment of the majority of the Coast Salish dead; however, it is unlikely to leave much of an archaeological signature. In this sense, midden inhumation and the building of funerary petroforms may represent a small fraction of the number of people who died at Rocky Point. In other words, an emphasis on the transition from midden inhumation to funerary petroform practice may overlook 4,000 or more years of surface burial. By including surface exposure burials in Figure 8, I acknowledge that there were funerary practices throughout the past 4,000 years that leave no detectible traces and that such burials may constitute the majority of the Coast Salish dead (Cybulski 1994). This is a significant and largely unaddressed limitation of mortuary archaeology on the Northwest Coast. If surface burial was a common funerary practice beyond the ethnohistoric period, however, then the transition from inhumation to

above-ground disposition of the dead may not be such an abrupt transition, but rather a novel reconfiguring of existing practices (e.g., above ground/below ground, with stones/without stones). As I discuss shortly, bodily treatment of the corpse often seems to crosscut temporal trends in burial practice (e.g., cremation, tightly flexed bodies).

Drawing from archaeological data on midden inhumations, burial of the dead in village deposits followed a general sequence. After death, the corpse was dressed in their ornaments, such as brackets, charms, pendants, and labrets, and bent into a flexed position with knees to the chest and hands to face, or arms tightly flexed across the sides or front of the chest. This bodily treatment would have required a form of binding to keep the corpse in this position (Curtin 1999:43). The ethnographic practice was to use tule or cedar bark mats. The longevity of this practice may be evident at Tsawwassen, where a reddish-brown residue that may have been the remains of bark matting was observed in association with seven inhumation burials (Curtin 1999:43). Alternately, some were wrapped in beaded blankets, capes, or some other form of clothing. At the Bible Camp site near Sechelt, the number of beads numbered in the hundreds of thousands (Clark and Coupland 2013). Some people were also placed inside cedar boxes after being wrapped. Unlike in later periods, cremation was not practiced. The wrapped bodies were taken to a part of the village that may have been unused, or where midden was not actively accumulating at that time. A shallow depression was excavated, and sometimes the skeletal remains of earlier burials were encountered (Curtin 1999:40). No special practice appears to have been performed at such times. The body was placed in the depression, typically on its side but some burials at Pender Canal were placed in an upright and sitting position (Carlson 1990; Carlson and Hobler 1993). At Tsawwassen, men were often placed with the crown of their heads to the west and women with their heads to the east (Curtin 1999:48-49,58). While most midden inhumations are single burials, multiple burials occur. At Tsawwassen, for example, four burials contained two or three individuals. Curtin concluded that multiple burials were not temporally or spatially restricted and this mode of burial might relate to the circumstances of death-those who died together buried together-rather than to the social identity of the dead or locally variable funerary practices (Curtin 1999:48).

Burials were sometimes accompanied by red ochre placed in the depression, and rarely by quartz crystal (e.g., Curtin 1999:54; Hickock, et al. 2010). Dog skulls were included in some burials (Curtin 1999:54) which might relate to secret society practices, such as the *xən̓xani̓təl* or

“dog howlers” (Duff 1951). Stones were sometimes collected and placed on top or around the body (e.g., Burley 1989). Burial boxes consistently had stones placed on top of them, perhaps weighting down the lid. Little, if any, of the burial was left protruding from the burial pit when the soil was placed over the corpse, although a small mound of the excavated midden and perhaps a few stones may have been visible for a time after the burial. There are no indications that some other perishable structure was erected over the burial spot. After the burial, food and perhaps personal effects were burnt either in, beside, or on top of the grave.

Shell midden sites, consisting of shell, bones, and the accumulated debris of daily coastal life, are a ubiquitous feature of the Northwest Coast. Shell midden sites have not traditionally been considered cemeteries even though human remains are commonly found there. It is undeniable that people were buried amongst the accumulated material of daily life on the Northwest Coast. While the presence of human remains does not necessarily classify a place as a formal cemetery, the ubiquity of burials in middens is contrary to the idea of midden as simply a trash dump (Brück 1999; Carlson 1999; Hill 1995; McNiven 2013; McNiven and Wright 2008). By the Locarno Beach phase, the dead were buried, sometimes with grave inclusions, on the inland slope of accumulating shell midden deposits behind the row of plank houses arranged along the shore. This was a burial practice maintained during the subsequent Marpole phase on the lower Fraser River (Borden 1970: 99) and in the northern Salish Sea (Burley 1980:28). Closer to southern Vancouver Island, one of the most complete records of midden inhumation burial comes from the Pender Canal site (Figure 9) where 105 midden inhumations and considerable isolated and fragmented remains were excavated, although only a partial analysis has been completed. These burials, dating between 2700 and 1800 cal B.C. include some of the earliest midden inhumations in the region. The four earliest inhumations, two of which radiocarbon date to the Early Pacific period (3900–3870 cal B.C. and 2870–2430 cal B.C.), are from basal levels of what was likely a midden ridge on the landward side of a house (Carlson and Hobler 1993:38). By the Middle Pacific period (ca. 1730 cal B.C.), there is convincing early evidence for the ritual relationship with the ancestral dead in the funerary practice of ‘feeding of the dead.’ Ten burials were identified with antler spoons, each having zoomorphic designs on their handles (Ames and Maschner 1999:103; Carlson and Hobler 1993). Additional burials included large horseclam shell bowls set close to the hands of these burials, with fish and other fragmentary animal remains found near the mouth (Carlson 1999; Carlson and Hobler 1993). All burials associated with these

spoons and bowls were buried in an upright and sitting position rather than on their sides (Ames and Maschner 1999:186). Similar undated clamshell bowl associated burials were identified at the nearby Skull Islet, although the two burials there were on their sides (Mathews 2010b). Carlson suspects that the spoons and bowls were placed in the graves as part of ritual feasting at funerals, rather than simply status markers (Ames and Maschner 1999:186).

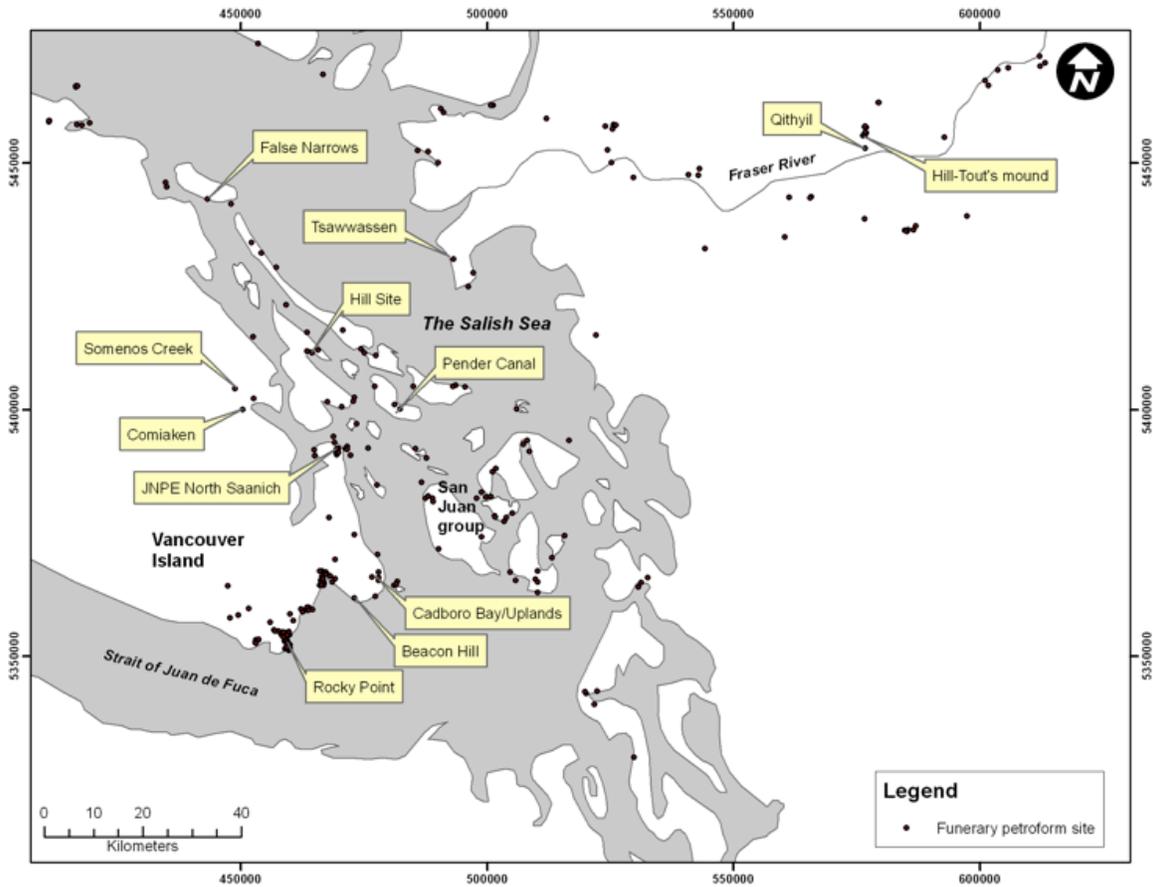


Figure 9: Mortuary sites discussed in the text, in relation to the distribution of known funerary petroform sites.

Between approximately 750 cal B.C.– cal A.D. 1000, a large central hearth area and smaller isolated hearths close to the inhumations suggest a change in the ways the dead were fed, transitioning from a literal feeding of the dead to a symbolic one, evident in the ethnographic record, in which food was burned near the dead and thus transformed by fire and smoke into food for the dead (Carlson 1999:44). This is compelling evidence for considerable antiquity and continuity in funerary ritual practice over the past 4,000 years. The change in the manner of ancestral feeding at Pender Canal, however, may also signify a significant change in ancestral ideology. Feeding the corporeal dead food at the moment of burial suggests that their eternal

needs were met and were therefore put to rest. Transforming food through fire speaks to the idea that the dead were similarly transformed; the dead were physically buried within the village but also simultaneously resided in a form and place beyond the world of the living. So while the physical remains were encapsulated within the village matrices of shell, soil and stone, the incorporeal dead were still accessible and present in some manner.

Also significant to determining the relationship between the living and the dead is the issue of the contemporaneity of occupation and burial. At Pender Canal, the majority of the burials occur between about 2700 and 1800 cal B.C. and there is a likely coeval occupation by the living and the dead at this site (Roy Carlson, personal communication, May 22, 2013). Cybulski (1992:167) asserts that there is little evidence to support a similar conclusion of contemporaneous use at the Greenville burial ground in the Nass River Valley. Whole villages, such as Greenville, the Boardwalk Site, and Prince Rupert may have been periodically abandoned and only then used as burial sites from neighbouring villages. Resettlement at some later date may account, in part, for the disturbed human remains in cemetery areas, a common feature in many midden sites as burials in resettled villages were either unknown to new people or forgotten by distant relatives (Cybulski, et al. 1992:168). The coeval use as mortuary space and domestic space has also been explored more locally at Somenos Creek Site (Brown 1996, 2003) and at the Tsawwassen Site (Curtin 1999:58) (Figure 9). Brown demonstrates that Somenos Creek functioned exclusively as a cemetery for at least 300 years during the Late Pacific period (Brown 2003:158-164). The Tsawwassen site also offers a convincing picture of the exclusivity of midden for burial during certain periods (Curtin 1999). During the Late Pacific occupation of the Tsawwassen site, burials occurred away from the actively used residential or resource-harvesting locations. The fact that the dead were removed from the village of the living and brought to ancestral places has significant interpretive implications for understanding the relationships engendered among the living through interactions with the dead. This concept is in line with a key feature of ethnographic Northwest Coast eschatology: the notion that there are separate villages for the living and the dead (Kan 1989:115) and that incursions by the ancestral dead into the village of the living can preface disaster.

At the Bible Camp site near Sechelt (Figure 9), several Early Pacific period (Charles) inhumation burials were placed in a small cemetery, possibly for the exclusive burial of the dead elite (Clark and Coupland 2013). Located away from any midden, and on a distinctive point of

land, these early inhumations are enigmatic in the rich funerary ritual evident in their burial. This includes an adult male buried with 360,000 stone and shell disc beads arranged in rows, perhaps sewn onto a blanket or garment. While the number of beads is unusual, the practice was not unheard of among human burials of the Early Pacific period (Cybulski 2011). In addition, this individual was buried with hematite and large projectile points. The body was flexed, facing east, and burning was evident over the head and torso. Nearby was an adult female, flexed, facing east, and buried with 7,500 beads and other personal adornments. In addition, three broken projectile points were arranged at the foot of burial pit and the broken tips placed at the knees. While destroying/transforming personal property was common in later Salish Sea burials through the use of fire, these projectile points appear to have been 'killed' by intentional breakage. Also excavated were two flexed adult males, placed together, buried with thousands of beads and ornaments comparable to the other two burials. Nearby was a large *in situ* glacial erratic, surrounded by many cobbles and boulders, including a distinctive tabular stone set on edge. The stones do not appear to have been covering a burial, but burials were found on either side of it. One of these burials was an infant, buried with hematite. On the opposite side was an 'invisible' burial, with no preserved skeletal remains, but with a defined burial pit and intact pockets of hematite, beads and a large biface. The top of the petroform was covered in clay and multiple burning episodes were evident.

### ***Material Antecedents: Stone and Soil as a Medium for the Dead***

While midden inhumation mortuary practice occurs over a long span of Coast Salish history around the Salish Sea, what is unclear is the range of midden inhumation practices both spatially and through time. Of particular interest to my research is the long-term use of stones in the burial of the dead. The use of stone-associated burials appears during the Early Pacific period. At the Bible Camp site, there was a stone petroform, a ritual focal point for repeated burning, and multiple burials nearby (Clark and Coupland 2013). At the Tsawwassen site, there are two major pulses of dated midden inhumation, one during the end of the Early Pacific period (transitional Charles/Locarno phases) and a second during the first half of the Late Pacific period (transitional Marpole/Late period). Throughout both of these episodes, stones are associated with the burial of some of the dead. While all 110 burials from both periods are shallow midden inhumations, about 13% are associated with stone constructions, including eight inhumation pits lined with stones, three with stones capping the pit, and two have stones both lining and capping

the pit (Curtin 1999:41). Occasionally after the grave was filled, a large boulder or rock slab was placed over the grave, or a boulder cairn was built (Curtin 1999:58). The use of stone also occurs elsewhere on the Northwest Coast, including Namu on the central coast (Curtin 1984) and the outer coast of Vancouver Island (e.g., Brolly 1992), although not to the extent evident around the Salish Sea.

It is clear that the advent of Late Pacific period funerary petroforms is grounded in a longer-term Coast Salish entanglement with the use of stone and the burial of the dead. Sites such as Somenos Creek, Tsawwassen and Pender Canal illustrate that inhumation burials associated with stone features are fairly common, have a wide geographic distribution throughout the Salish Sea area, and exhibit a range of variability and complexity that archaeologists have not fully assessed. They also have a broad temporal association and occur throughout the last 4,000 years (Curtin 1999:41). These stone associations range from small arrangements or alignments of stones in midden (e.g., Curtin 1999; Mathews and Dady 2002; Percy 1974) to a few larger boulders or slabs placed over the dead (e.g., Burley 1989; Mathews and McLay 2011; Wilson, et al. 2003). The pre-Late Pacific period use of stone in the burial of the dead also extended to rock crevices, caves, and rockshelters. At the False Narrows bluff site (Figure 9), for example, the dead were concealed within and beneath boulders along the base of a 3 km long inland complex of bluffs. A total of 49 burial features consisted largely of cremated remains<sup>10</sup> interred between narrow crevices in the bedrock and small cave-like recesses between and beneath fallen blocks of sandstone (Curtin 1991, 2002, 2005; Mathews 2002a). Curtin excavated five features, which were found to contain the remains of at least 147 people and an estimated 1000 people may be interred along the 3 km long bluff complex (Curtin 2002:116) with direct radiocarbon dates spanning the Middle Pacific period (Locarno and Marpole phases). The burials are essentially concealed within, behind, and under large slabs of exfoliated sandstone. While small midden inhumations with stone associations are present at Senewelets (Burley 1989) and contemporaneous with the crevice burials at False Narrows Bluff, the latter represents a novel use of stone in the burial of the dead. A similar practice may have occurred to the immediate north of Rocky Point. Although less well investigated, a similar complex of undated and only minimally

---

<sup>10</sup> 77.6% (n=6,229) fragments of human bone exhibited some degree of burning (Curtin 2002:98). Perhaps all of the bodies from the cave/crevice features were exposed to fire to some extent (Curtin 2002:113).

investigated crevice burials extends along the length of a 3.8 km long bluff complex running from Pedder Bay to Becher Bay (Anaya-Hernandez and Wilson 2006; Mathews 2004b).

### ***The Advent of Funerary Petroforms: Burial Cairns and Mounds***

Funerary petroforms occur throughout the world, and in North America the earliest appears at the Maritime Archaic site of L'Anse Amour in southern Labrador, where a 9 m long burial cairn, 1.6 m thick feature covered an ochre-stained central pit containing the remains of a young male. The burial dated to approximately 7,500 years old (Hood 1993; Tuck and McGhee 1975). Burial cairns and mounds occur widely throughout the world and are found in several places along the west coast of North America, including the Willamette Valley of western Oregon, the Columbia River Gorge (Ames and Maschner 1999:190), the San Francisco Bay area (e.g., Luby 2004; Milliken, et al. 2007), Cape Flattery (Reagan 1917), the outer coast of Vancouver Island (Brolly 1992) and the British Columbia Plateau (e.g., Schulting 1995). It is likely that the distribution of these kinds of burials has a wider distribution along the Pacific Coast than is currently recognized.

In the Salish Sea region, during the Late Pacific period, the distinctiveness of the individual dead becomes externalized in the cairn and mound, with the dead surfacing and moving outward from the ancestral place of the village to new spaces. Burial cairns and mounds appear during the transitional Middle/Late Pacific periods in the Salish Sea region, as midden inhumations began to wane and were finally abandoned and ethnographically observed surface exposure began (Ames and Maschner 1999; Curtin 1999; Lepofsky, et al. 2000; Oakes 2000; Oakes, et al. 2008; Thom 1995). This transition is one of the most dramatic shifts in mortuary ritual in the entire prehistory of the Northwest Coast. It likely signifies important social changes, but is still very poorly understood and only minimally investigated (Ames and Maschner 1999:192).

I have previously summarized the early history of burial cairn and mound work on southern Vancouver Island (Mathews 2006a, b), as Thom (1995) has more generally done for the region. Despite a short and intensive period of academic burial cairn research in Victoria in the last two decades of the nineteenth Century, there has been no other systematic research on these burials until my master's thesis work (Mathews 2006b). There is a substantial grey literature in which burial cairn work has been done in the area (e.g., Bryan 1963; Caldwell 1955; Condrashoff 1984; Dady 2003; Keddie 1984; Mathews 2002b, 2004b, 2011; Mathews and Dady 2002;

Mathews, et al. 2011; Sumpter 2001; Willows 2008; Wilson 1987). These sources, while worth synthesis and future analysis, consist largely of survey results and piecemeal excavation reports. There is little in the way of dated materials and analysis focuses on bioarchaeology rather than ritual practice. As such, I rely primarily on the results of published research on burial cairn and mound cemeteries in the region.

There are two contemporary well-investigated burial cairn and mound landscapes at opposite ends of the Salish Sea; Qithyil in the lower Fraser Valley and Rocky Point on the southern tip of Vancouver Island (Figure 9). I discuss research results at both of these sites, as well as early research of Harlan Smith and the Jesup Pacific Expedition (Smith 1900; Smith and Fowke 1901) centered on southern Vancouver Island, to provide context for the current work at Rocky Point.

### **The Qithyil Cemetery: Funerary Practice in the Fraser Valley**

Archaeological investigations at Qithyil (also known as the Scowlitz site) and surrounding areas were the first contemporary and systematic examination of burial cairns and mounds in the Strait of Georgia Region (Blake 2004; Blake, et al. 1993a, b; Brown and Lepofsky 1997; Lepofsky, et al. 2000; Lepofsky, et al. 1998; Lepofsky, et al. 1999; Lyons 2000; Matson 1994; Morrison and Blake 1995; Morrison and Myles 1992; Thom 1995). Oakes expanded the Qithyil study area to include an analysis of four cemeteries (Oakes 2000; Oakes, et al. 2008), identifying 367 burial cairns and mounds, with 198 of those at Qithyil. The Qithyil cemetery is centred on a terrace near the confluence of the Harrison and Fraser Rivers (Figure 9), a strategic location on a major trade and travel route linking the coast and the interior of southwestern BC (Lepofsky, et al. 2000:395). Qithyil is a village and burial site with 18 house depressions (Lepofsky, et al. 2000) and 198 burial cairns and mounds in a 10 km<sup>2</sup> area around the village (Oakes, et al. 2008). On the main residential terrace of the site, there are 42 visible mounds and cairns. The radiocarbon dates for Qithyil indicate that the place served as a possible year-round residential site during much of the Middle Pacific period (between about 1300 cal B.C. to cal A.D. 200). By the Late Pacific period the site was used as a burial cairn and mound cemetery for about 900 years (between cal A.D. 500–1400). Around cal A.D. 1000, the site saw some seasonal use for resource processing while continuing to be used as a cemetery (Lepofsky, et al. 2000:391). The site continued to be used as a cemetery well into the Historic period, although there is little community knowledge about these earlier burials.

Lepofsky et al. (2000) assume that “the relative social status of an individual in a mound or cairn at Qithyil is indicated by its location, size and elaboration, and number and value of offerings. That there is a wide range of these variables at the site suggests that there was at least an equivalent range in social status in the community” (Lepofsky, et al. 2000:393). Based on village size and duration, they argue that only a subset of people were buried in the Qithyil cemetery (Lepofsky, et al. 2000:412), specifically highest status individuals who could merit such visible monuments. The burial features within the Qithyil study area are grouped into 15 clusters spread over a low hill called Harrison Knob. Most of these features are small mounds about 3-5 m long and stone cairns about 1.5–3 m long (Lepofsky, et al. 2000:409). Using principle component analysis, Oakes identified four feature types based on feature shape and size (Table 3 below). There is a broad pyramidal distribution of types, with large numbers of very small and mostly “oblong dome” cairns and mounds accounting for 86% of all features, while large and very large mounds comprise just 4% of the overall number of funerary petroforms. Although a detailed analysis of the spatial distribution of these types has not been published to date, generally speaking, the burial features tend to be arranged in dispersed clusters of 3 to 30 features, with isolated features only rarely occurring (Lepofsky, et al. 2000; Oakes, et al. 2008). Based on in-field observations (without systematic visibility analysis), some features appear to be placed on visibly prominent locations, while many others are placed in such a way that they are hidden from view.

**Table 3: Typology of Burial Features in the vicinity of Qithyil (Oakes, et al. 2008).**

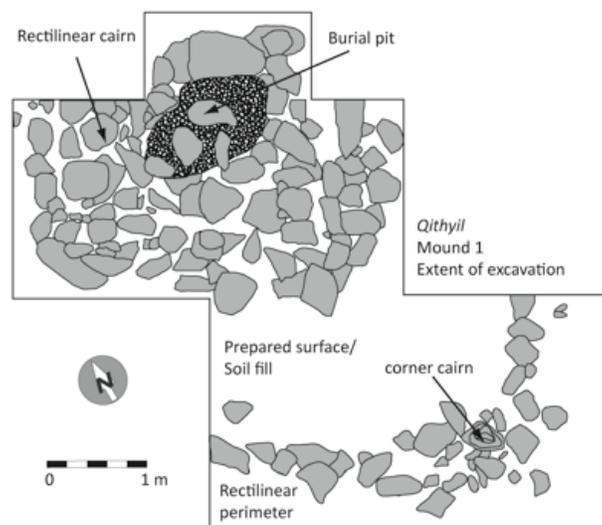
<b>Very Large</b> >12.0 m in length >120m <sup>3</sup> volume	Cluster 1 N=1	Very large conical earthen mounds. Currently represented by Qithyil, Mound 1.
<b>Large</b> 8-10 m in length Avg 70m <sup>3</sup> volume	Cluster 2 N=4	Large, tall conical earthen mounds.
	Cluster 3 N=9	Large, low mounds or smaller-dimension, tall features.
<b>Medium</b> 5-8 m in length Avg 13m <sup>3</sup> volume	Cluster 4 N=38	Medium sized conical and dome shaped mounds and cairns, and a few small but tall conical mounds.
<b>Small</b> <5 m in length Avg 3m <sup>3</sup> volume	Cluster 5 N=315	Small mounds and cairns, mainly oblong domes.

Excavation and mapping at four of these cemeteries demonstrate that burial features vary widely in size and type, with earthen mounds more common than cairns and small mounds more frequent than large ones (Lepofsky, et al. 2000; Oakes, et al. 2008). The burial features on the

main residential terrace at Qithyil range in size from 1.3 m to 12.5 m long and with volumes ranging from 1 m<sup>3</sup> to 166 m<sup>3</sup>. Most features are smaller than 5 m long and five mounds are greater than 9 m long (Lepofsky, et al. 2000:406). The most numerous features are oblong domes, but conical mounds and large flat-topped mounds and cairns are also present. Some cairns and mounds are marked by large rock slabs or boulders placed atop or at the ends. Although limited to seven radiocarbon dates, mound and cairn construction around Qithyil appears to have been practiced for a period of at least 1000 years, extending from cal A.D. 500 to just after cal A.D. 1400 (Oakes, et al. 2008). Based on the partial excavation of eight mortuary features around Qithyil, mounds and cairns appear to vary in the range and kind of internal features. While a few large mounds are distinctive in their size and construction, all features include some combination of internal structural features (cairns, stone alignments), ritual elements (special fill such as clay and layers of charcoal), or funerary inclusions. Smaller mounds often contain ritual elements not commonly noted in large features, including burnt fill, coloured and water worn cobbles, and crystal microliths. At the site, most of the burial features are on a ridge behind and above the house depressions.

Two of the larger mounds (Mounds 1 and 23) were excavated, as were two of the small mounds and cairns (Mounds 9 and 20). The two largest mounds “represent significant investments of labour and clearly were placed to maximize their impressiveness” (Ames and Maschner 1999:193). Mound 1 is very large, with an estimated volume of 164 m<sup>3</sup>. At its base, it measures about 12.5 m × 11.5 m and is almost 3 m high. It is somewhat isolated from the rest of the other burial features and appears to have been constructed in a single event. The feature was built by creating a level surface on the natural slope of the river terrace and then excavating a shallow oval-shaped burial pit in the centre. This square levelled area was covered with a thin layer of grey clay and a square boulder petroform that enclosed a central cairn. The outer square petroform was about 6.7 m on each side. The excavated portion has a smaller cairn in the corner (Figure 10). The entire feature was covered by 166 m<sup>3</sup> of earth, likely in one episode, and probably immediately after the corpse was placed in the cairn (Lepofsky, et al. 2000:407). The inner cairn was also square in outline, about 3.3 m on an end, 0.5 m high and constructed with approximately 200 stones. It covered a small burial pit containing the flexed skeletal remains of an adult male. Significantly, there were a large number of mortuary inclusions, including four abalone shell pendants, fragments of a copper ring, and approximately 7,000 cut and ground

dentalia shells. In addition, four perforated copper disks were found near the neck area. Similar copper disks have been found associated with burial cairns in Cadboro Bay (Smith and Fowke 1901), elsewhere in the upper Fraser Valley (e.g., Gray, et al. 2010; Hill-Tout 1933; Smith and Fowke 1901:61) and on the Plateau (Blake 2004). All of these items may represent distant trade connections with both the coast and interior (Blake 2004; Lepofsky, et al. 2000:406). A sample of human bone yielded a calibrated radiocarbon age of about cal A.D. 500 (Lepofsky, et al. 2000:400) although when corrected for the marine reservoir effect, the date is between cal A.D. 1005–1127 (Appendix 1). Mound 23 was part of a large cluster of cairns and mounds at the north end of the site on the residential terrace. It was 9 m × 10 m and 1.4 m high (with a volume of approximately 53 m<sup>3</sup>). It was built with an outer retaining wall of compacted village midden 1 m wide and 1 m high, enclosing a stone cairn covering a shallow burial pit. The ground beneath the feature was levelled and covered with yellow clay (Lepofsky, et al. 2000:407). No human remains were preserved and no grave inclusions were identified. It was dated to cal A.D. 770–900.



**Figure 10: Plan view of excavated portion of Qithyil Mound 1 (modified from Thom 1995) showing peripheral petroform, corner cairn, and internal cairn covering the burial pit.**

Two smaller features were excavated in addition to the two large ones. Mound 9 was 5 m long and a single test pit in it revealed no stone alignment but, like the other features, a thin layer of clay underlaid the feature. Mound 20 was a small stone cairn approximately 3.8 m long, with a 1 m thick arrangement of stones overlying a shallow burial pit containing seven infant deciduous teeth (Thom 1995). Lepofsky et al. caution that many other small stone features, many

consisting of a few boulders, exist throughout the site and may be mortuary features (Lepofsky, et al. 2000:408).

Considering these large burial mounds as in relation to depositional practice, both mounds had layers of charcoal and highly oxidized sediment indicating fires were burned on top of these features. In addition, layers of clay were located within the mound fill, as well as lining the footprint of the mounds (Lepofsky, et al. 2000:409). While the Qithyil authors focus on the visual end-product and energy expenditure invested in these features, the process of gathering and arranging stones in concentric petroforms, collecting large volumes of soil and punctuating the placement of this soil over the stone petroforms with hot and spectacular fires and layers of clay, suggests a protracted and highly ritualized funerary process. While there is some level of variability in how these features were put together, most entail the use of stone to construct a central stone cairn and sometimes a secondary peripheral petroform structure, after which stone and soil were moved and placed on top of the burial. This entailed the movement and orchestration of bodies, likely under the guidance of ritual experts (perhaps accounting for some of the consistency in form). There was ample material—both stone and soil—at Qithyil from which to make funerary petroforms. Stone was likely collected from talus slopes behind the residential terrace and perhaps from the river as well (Michael Blake, personal communication, June 21, 2013). It appears as though the initial construction of Mound 1 was supplemented by later layers of clay as thick as one meter. In summery, it appears stones and soil were being transported relatively short distances to make each burial at Qithyil and that for some of the larger features at least, caretaking and perhaps augmentation of some kind was also practiced over time.

As the social theory in Chapter 2 highlights, there may be a symbolic or metaphoric equivalence between the form and placement of grave and house. Structural comparisons between the houses and burial mounds at Qithyil remain unexplored, but similarities are worth briefly highlighting. Both the houses and burial mounds entailed a process of first levelling the ground surface and then applying a layer of clay to the footprint of each kind of structure. Also telling is the fact that, although Lepofsky et al. do not specifically state it, based upon their map of the main terrace (Lepofsky, et al. 2000:397) the largest eight burial features at Qithyil appear to have square footprints, despite otherwise having rounded or conical tops. This suggests that these features have a similar rectilinear perimeter wall evident in Mounds 1 and 23. These rectilinear

petroforms may be analogous to house walls. But while the house of the living contained many bodies of the corporate group, the walls of the burial mound contained just one house member. The perimeter outline of the Qithyl features was not included in Oakes' (Oakes, et al. 2008), Thom's (1995) or Lepofsky, et al.'s (2000:407) typologies but clearly may have interpretive significance. The use of midden material in two of the excavated burial features may also speak to the significance the place as formerly for the living and subsequently for the dead (Thom 1995:24). Although this represents a very small sample, it touches upon the potential importance of midden material and its association with ancestral places (Cybulski, et al. 1992), perhaps as a kind of bank of food for the perpetual feeding of the dead (Carlson 1999).

### **The Funerary Petroforms of Southern Vancouver Island**

In this section I create a regional synthesis of the funerary petroforms of southern Vancouver Island, beginning with the many early investigations of these burials during the last three decades of the nineteenth century. During this time, there was a brief but intensive amount of excavation conducted by local naturalists such as James Deans and the Natural History Society (e.g., Deans 1871a, b, 1872a, b, 1891a), visiting naturalists (e.g., Pinart 1876), visiting geologists (e.g., Richardson 1871, 1872, 1872-1873), anthropologists such as Franz Boas working for the British Association for the Advancement of Science (Cole 1999), the Chicago Field Museum (Cole 1999), and most notably the Jesup North Pacific Expedition of the American Museum of Natural History (Smith and Fowke 1901:59). I have published a history of this early work elsewhere (Mathews 2006a) and instead focus here on synthesizing this large amount of literature to address the following: the depositional practice that produced funerary petroforms; the bodily treatment of the corpse; and the use of space and material in the burial of the dead. Following the brief but prolific early investigations of funerary petroforms, there is a conspicuous absence of work on these burial types until my Master's thesis research a century later. I conclude this synthesis with a brief summary of my initial research at Rocky Point (Mathews 2006b).

Harlan Smith conducted the largest and most systematic early investigation of funerary petroforms on southern Vancouver Island under the guidance of Franz Boas, for the Jesup North Pacific Expedition (JNPE). In three field seasons between 1897-1899, Smith reported on the excavation of 93 funerary petroforms around greater Victoria, including 51 in North Saanich and 42 in Cadboro Bay (Smith and Fowke 1901). Most of these were features Smith excavated as part of the three field seasons of JNPE work, but he also incorporated results from some previous

and unpublished excavations conducted by their local field assistants O.C. Hastings and James Deans. The latter were prominent members of the Natural History Society and prolific excavators of burial cairns. While the ethics and legality of all this early work was shameful even by the standards of the day, some useful information pertinent to contemporary research can be salvaged from their work.

Smith offered some insightful observations about the distribution of burial cairns and mounds from which possibilities about regional differences in funerary practices might be inferred. He stated that while burial cairns and mounds were found throughout southwestern British Columbia and adjacent Washington state, the “most elaborate cairns, and the greatest variety, are found near Victoria” (Smith and Fowke 1901:59). Echoing Bancroft (1875), Smith observed that stone cairns are centered around Victoria while burial mounds such as those at Q̓ithyil are situated outside of this burial cairn core area (Smith and Fowke 1901:59). Hill-Tout (1930), Pickford (1947) and others more recently (e.g., Brown 1994; Clark 2010; Mathews 2006b; Thom 1995) have noted that in general terms, burial mounds tend to be equated with both Upriver and Island Halq̓eméylem peoples and Mitchell's (1971) “Central and Southern Gulf River Fishermen” culture type, while the practice of building burial cairns was centred around the Straits Salish ethnolinguistic area of Victoria. In the intervening area of the Downriver Halq̓eméylem on the lower reaches of the Fraser River delta, the picture is less clear. Interestingly however, at Point Roberts, Smith commented on the practice of inhumation burials associated with small stone features which he interprets primarily as groups of box burials covered with boulders (Smith and Fowke 1901:59,61), reminiscent of those more recently excavated at the nearby Tsawwassen site (Figure 9). The large numbers of funerary petroforms seen around Victoria and the adjoining Gulf Islands are not evident along the Fraser River delta. About 45 km upriver, Smith did excavate a large mound at Port Hammond on the lower Fraser River, which was 7 m long and 1.5 m high. In both this and another nearby mound, no internal stone structure was present (Smith and Fowke 1901:60).

Reading Smith, it is unclear what specifically constitutes a burial cairn or a mound. While Smith makes this typological distinction, he concludes that the transition between these kinds of burial features is gradual (1901:59). Furthermore, the classification is confounded the broad range of features he encountered, including for example, burials demarcated by a single stone (Smith and Fowke 1901:67). Despite defying easy classification, Smith observed that the practice

of building funerary petroforms followed identifiable patterns in their construction and placement (Smith and Fowke 1901). Synthesizing the descriptive data of Smith and others, I consider funerary petroforms as structured depositions centred on the idea of creating a space to contain and conceal the corpse. There is some variability in the treatment of the corpse at the moment of burial. The corpse was generally placed on its side in a flexed position, either in a shallow excavated pit or sometimes on the ground surface. It was common for the body to be burned, either on the spot or cremated elsewhere and brought to the burial location. This is a point to which I return shortly. In addition, there may have been ritual burning, perhaps of food for the dead, before the funerary petroform was built. At the Hall site on Salt Spring Island (Figure 9), for example, a large, hard mass of ash, charcoal and clay was found at the west edge of the burial depression for an unburned flexed burial beneath a stone cairn (Hall and Haggarty 1981:71). Red ochre, called *təmət*, is associated with some cairn burials (e.g., Hall and Haggarty 1981:71; Hill-Tout 1930) and non-perishable funerary inclusions were rare but when identified, consisted primarily of the same kind of copper discs found in Mound 1 at Q̄ithyil and elsewhere. Sometimes a small amount of quartz was included (Bancroft 1875). Both *təmət* and quartz crystal are also evident in earlier midden inhumations (e.g., Hickock, et al. 2010). It is possible that wooden boxes were sometimes used to contain the dead inside burial cairns, and some burial cairns at Cadboro Bay had fragments of wood (Bancroft 1875) which may be the remnants of burial boxes. The kinds of cairns with more definitive burial boxes, however, tend to be smaller (and possibly earlier) inhumation burials with a small number of stones on the lid (e.g., Curtin 1999; Hall and Haggarty 1981:73; Mitchell 1971; I. R. Wilson 1988). In addition, fragments of perishable material, likely matting, was found with some burial cairns at Cadboro Bay (Bancroft 1875) and Beacon Hill (Keddie 1984), suggesting some antiquity to the ethnographic practice of tightly wrapping the body into a foetal position using tule mats (e.g., Boas 1891:575).

Generally one body was placed inside each burial (Hill-Tout 1930:120; Smith and Fowke 1901), although two bodies are sometimes present, such as the remains of a newborn infant placed together with an adult female at the Hill site (e.g., Hall and Haggarty 1981:71). A rectangular central enclosure was constructed around the corpse using stones with at least one flat side, with the straight sides of the often-tabular stones facing inwards toward the body. This enclosure, presumably for protecting the body from contact with and the weight of the surrounding stones, was then sometimes capped by cover-stones, weighing as much as 450

kilograms (Smith and Fowke 1901:63). The largest of these cover stones was often placed over the head of the corpse (Smith and Fowke 1901:75). Often the flat sides of these cover stones were placed with the flat side down and towards the corpse (Smith and Fowke 1901:63, 68). Around this central enclosure, a peripheral structure was built, often of larger boulders, and the bounded space between enclosure and periphery was filled with boulders, smaller stones and soil. Some of the peripheral stones were set on edge, and often the flattest sides of the stones faced inwards. It may be interpretively significant that the flat surfaces of the stones that defined both the sides and top of the bodily enclosure and the peripheral structure were generally facing inwards. The outline of the features ranged from well-defined rectangular arrangements to irregular and loose constructions of stone and soil. In some instances, stones were collected from the beach (Hall and Haggarty 1981:71; Smith and Fowke 1901:66), but typically locally and immediately available stones were used, which dictated to some degree, the overall shape of the features (Smith and Fowke 1901:59).

In addition to burial cairns and mounds, other funerary petroforms were described by Smith. It was also common, for example, for burials to be built against *in situ* glacial erratics, with the large stone used to define part of the central enclosure for the corpse (Smith and Fowke 1901:55,69) and the body placed so that it was facing toward the largest stone (Smith and Fowke 1901:74). Small rectangular petroforms were also associated with funerary petroform sites (Smith and Fowke 1901:68). Smith was unclear what these petroforms might be, speculating that they might denote unfinished funerary petroforms or a site for ritual fires, although only a small amount of bone and no ash or charcoal was evident in them. Their small size (less than 1 m long) and composition (straight sides of the stone facing inwards) suggests they may be an internal enclosure for a burial. While they do not recognize the process as deflation, Smith reported that some features at Cadboro Bay consisted of small boulders covered by a thick layer of gravel and small cobbles. One feature was 2 m long and less than 10 cm high, yet covered a flexed burial (Smith and Fowke 1901:71). Similar features were recently observed in the Uplands of Oak Bay (Mathews and Kilburn 2013) (Figure 9). These features suggest that site formation issues can affect not only feature morphology, but also the correct identification of such deflated features. Lastly, Smith noted that some burials had concentrations of stones around them that were clearly not part of a funerary petroform. While he speculated that some might be petroforms associated

with or radiating from the burials, he concluded that “the ground is so strewn with boulders [sic] that lines and circles may be imagined in many directions” (Smith and Fowke 1901:68).

There are some differences in both the use of space and materials between the funerary petroform sites investigated by Smith at Cadboro Bay and those in North Saanich (Figure 9). According to Smith (1901:57), burial cairns and mounds around Victoria, such as those around Cadboro Bay, were built on well-drained slopes away from village sites and overlooking or near the sea, with gravelly soil and plentiful exposed stones with which to build the burials. The Cadboro Bay site extended from Oak Bay north to Cadboro Bay (Figure 9) and had “several hundred cairns” made from locally available stones (Mathews and Kilburn 2013; Smith and Fowke 1901:58). Unlike North Saanich, the Cadboro Bay site was largely inland and outside of the boundaries of village midden, although a few cairns were located very close to the village (e.g., Mathews 2002b). In North Saanich (Figure 9), while “Small cairns were found on every point of land” (Smith and Fowke 1901:57), many funerary petroforms were built on top of shell midden (Smith and Fowke 1901:63) in a practice reminiscent of Somenos Creek and Tsawwassen. In general, the funerary petroforms at the North Saanich sites were also smaller. Some mound-like features were also present, built from yellow clay, and similar to mounds in Upriver Halq'eméylem territory (Smith and Fowke 1901:66). Several of these mound-like features were clustered together.

At Cadboro Bay, mound-like features were also found, but consisted of substantial stone petroforms covered by a large mound of soil. These were “in external appearance, an earth mound” (Smith and Fowke 1901:73) but lacked the internal peripheral rectilinear petroform of the Qithyil site. However, like Mound 1 and 23 at Qithyil, they did have a large straight-sided cairn inside. The overall dimensions of one of these features was 5.5 m long and was ringed by a low trench from which sediment was excavated and used to cover the cairn. At Qithyil, the intervening space between the central cairn containing the corpse and the rectilinear perimeter petroform was filled with soil and clay. At Cadboro Bay, larger funerary petroforms had the same superstructure of internal cairn and straight-sided external petroform, but the intervening space was filled with cobbles, boulders and lesser amounts of soil (Figure 11). In other words, there may be region-wide practices in the building of the internal superstructure of these largest funerary petroforms, but local-level variability in the use of material to finish them. It is the external materials (Qithyil clay and Cadboro Bay stone) that create the overall visual impression

of the funerary petroform, despite comparable interior structures. This points to local level depositional practices couched within larger regional ritualizing practices.

While Smith does not state it, it was generally the larger features that had both well defined and straight-sided peripheries. It was the largest feature that he excavated in North Saanich (Figure 9), for example, that was both rectangular and unusually large (3.6 m long). Within this feature, inside a well-made central enclosure, two copper discs like those at Qithyil Mound 1 were found at the head of the flexed burial (Smith and Fowke 1901:65). While the types and proportions of materials used to build funerary petroforms differs in some ways between North Saanich and Cadboro Bay (and Qithyil for that matter), some interesting patterns emerge, including the repetitive use of distinctly rectilinear outlines for generally larger features.

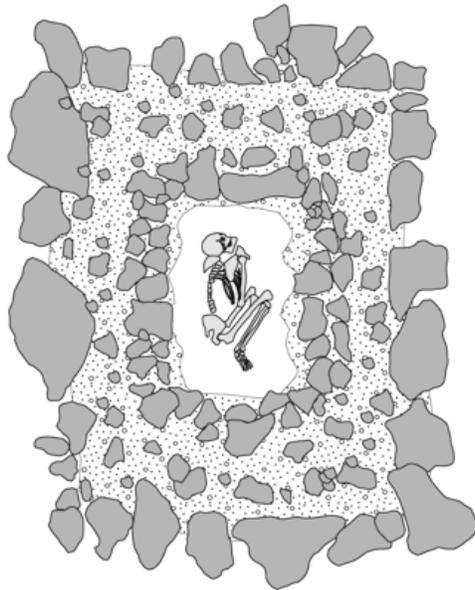


Figure 11: Excavated funerary petroform from the Cadboro Bay site (modified from Smith and Fowke 1901:72, Feature "No. 10") illustrating the two concentric rectilinear petroforms.

### The Rocky Point Funerary Landscape

In my earlier research at the Rocky Point site, I focused on the morphological and spatial attributes of burial features at Edye Point<sup>11</sup> (Mathews 2006b). A total of 333 funerary petroforms were recorded, making this one of the largest and most significant mortuary sites on the Northwest Coast. The burial features at the Rocky Point site occur in a variety of shapes and

---

<sup>11</sup> In my 2003 Masters thesis, I referred to this cemetery as the Rocky Point site. I now use its gazetted name *Edye Point* and refer to the entire study area as Rocky Point. This cemetery is provincially designated at DbRv-3.

sizes, ranging from circular to square to irregular features with poorly defined shapes. Unlike at Qithyil, there are no indications that the Edye Point cemetery was earlier used as a village site. The Yates Cemetery, however, had several possible pithouse features associated with it.

Funerary petroforms at Rocky Point are made with locally available cobble and boulder-sized glacial till, weathered bedrock, and soil. There is patterning in the construction of these features, and six types of cairns were identified using numerical analysis based upon of the physical attributes of the features. A heuristic spatial analysis was then implemented, indicating spatial patterning of funerary petroforms on the landscape. This resulted in the identification of several general rules or dispositions regarding where certain types of funerary petroforms were, and were not built.

Based on observations made during the fieldwork, there seemed to be a paradox in the way visibility was used in the placement of funerary petroforms at Edye Point. Contrary to ideas of monumentality, these burials were not visible from the adjacent waterway fronting the site. I proposed that the burials at Rocky Point were meant to be seen only in specific contexts, most likely as part of a funeral procession, which proceeded overland from the adjacent village and traversed set trails through the cemetery. This conclusion, however, was based solely on phenomenological observation.

### ***Fire: Cremation and Ritual Burning***

Fire is implicated in Coast Salish ritual as a medium of purification and transformation. For example, fire is used to purify a new spirit dancer's regalia before it is worn for the first time, and a shaman first gently warmed a recovered soul over a fire before returning it to the body of the person who lost it (Amoss 1978:56). Furthermore, fire and the hearth were a central focus in the collective activities of the living. Hearths were a social focal point and were fundamental to transforming raw food to cooked or smoked food that could be eaten, stored and exchanged. As such they were implicated in the foundation of social life (Kan 1989:112). Smoke and fire provided a means to transform material objects into non-corporeal forms, moving them from the tangible world of the living to the immaterial world of the dead (Kan 1989:112-113). As such, fire can be a principle way for the living to provide for the dead. As described above, at Pender Canal, between approximately 750 cal B.C.– cal A.D. 1000, a large central hearth area and smaller isolated hearths close to the inhumations suggest a change in the ways the dead were fed, transitioning from a literal feeding of the dead with horn spoons and horse clam shells, to a

symbolic one in which food was burned near the dead and thus transformed by fire and smoke into food for the dead (Carlson 1999:44). Hearths have also been found in close association with inhumation burials at other sites around the Salish Sea, including Beach Grove (Lawhead 1980), St. Mungo (Calvert 1970), and Little Qualicum River (Bernick 1983). At Tsawwassen, there is evidence of burning on top of several inhumation burials. In addition, there are unburned and articulated fish remains associated with several skeletons, as well as horse clam shell “bowls” like those at Pender Canal (Curtin 1999:56). This is interpreted as food or other offerings being burnt either beside or on top of the grave to feed the spirit of the dead. At the Early Pacific period Bible Camp Site, burning was evident on top of Burial 1, the largest of the bead burials, as well as on top of the central petroform surrounded by inhumation burials (Clark and Coupland 2013).

Cremation was selectively practiced throughout Northwest Coast, extending inland to the adjacent Plateau (e.g., Reagan 1917; Schulting 1995), and includes cremation pits on the Columbia Plateau (e.g., Garth 1952) and petroforms associated with cremations in the Yakima Valley of south central Washington State (Smith 1910). Cremation was central to the funerary ritual of ethnographic Northwest Coast groups such as the Tlingit (Kan 1989) but was not practiced by the ethnographic Coast Salish. Cremation seems absent from midden inhumations of the Early Pacific period (Ames and Maschner 1999:186) but burnt human remains, although rare, do appear in Middle and Late Pacific period midden inhumations, at sites on Roberts Peninsula around Tsawwassen (e.g., Arcas Associates 1988; Lawhead 1980; Thom 1992), in the Gulf Islands (e.g., Johnstone 1991; Mitchell 1971; Weeks 1985, 1986) and Vancouver Island (e.g., Arcas Consulting Archeologists Ltd. 1994; Brown 1996; Smith and Fowke 1901). Both secondary burials of burned and calcined bone, as well as primary *in situ* burning of inhumations are evident in these midden inhumation burials. Cremation appears in Middle and Late Pacific period rock crevice burials around Nanaimo and adjacent Gulf Islands (e.g., Curtin 2002; Rogers 2009). Cremation seems widespread on southern Vancouver Island during the Late Pacific period in association with funerary petroforms, such as those at Cadboro Bay (e.g., Deans 1871a; Pinart 1876; Smith and Fowke 1901). While it is unclear what proportion of burned human remains were intentionally burned, or were burned as a consequence of fires placed on top of or immediately adjacent to the midden and funerary petroform burials, it is clear that fire was prevalent in funerary ritual and closely associated with mortuary practice.

In a general sense, cremation is often associated with transforming the corpse and thus articulating the changing identities of the deceased and the mourners (Williams 2004, 2008). Among the Tlingit, cremation quickened the slow, natural process of decomposition and was therefore a means of minimizing the pollution of the corpse by consuming the perishable flesh and reducing the body to dry bones. This process freed the spiritual essence of the dead and provided the ancestor with warmth in the afterlife (Kan 1989:111-112). The presence of burnt human remains in funerary petroforms has been noted by Pickford (1947), Deans (1871a, 1892), and Smith and Fowke (1901). Excavating funerary petroforms at Cadboro Bay, Deans noted that many of the human remains evidenced some level of burning and that charcoal and ash were present not only within the burial pit, but elsewhere throughout the footprint of the petroform (Deans 1871a). Smith (1907) states that for burial cairns around southern Vancouver Island in general, "the skeletons [when found] are sometimes burned, but the evidences of fire in the cairns do not seem sufficient to conclude that the bodies were burned in the vaults."

In the San Juan Island group (Smith and Fowke 1901:61-63) there are funerary petroforms very similar to those at nearby Victoria. In all seven features excavated by Thacker (1898), the human remains were charred and covered with ash and charcoal. Although the burial stones showed no obvious signs of burning, the fact that the skeletons were still articulated suggests the remains were burned (but not fully cremated) at the place of burial before the funerary petroform was built or at least completed. Cremation is distinct from localized *in situ* burning on top of burials, which has also been identified throughout the Salish Sea (e.g., Brown 1996:36; Curtin 2002; Mitchell 1971). For example, at the north end of the Saanich Peninsula, remains at the Towner Bay defensive site appear to have been partially burned *in situ* (Willows, et al. 2012) and may relate to burning as part of the funerary ritual. Similarly, at North Saanich, Smith (1901:64-66) observed a skeleton within a burial cairn that was charred except for the head, which was covered by stones (Smith and Fowke 1901:66), suggesting that a localized fire was burned over the corpse. At the Somenos Creek site, a skeleton within a burial cairn (Individual 19) showed evidence of having been burned *in situ*, with oxidized soil lining the burial pit and overlaying the burial itself—the hottest part of the fire concentrated above the cranium. Incomplete combustion of the wood and oxidization of some of the overlying pit fill indicate that the burial pit was likely filled in before the fire died out (Brown 2003:160-161).

In her research into the burial mound complexes of the Fraser Valley, Nicole Oakes has identified Douglas-fir wood and bark charcoal in burial mounds at and around the Scowlitz site. Burning, indicated by charcoal, ash and oxidized sediments, is a common internal element of mounds in the Fraser Valley (Nicole Oakes, personal communication, November 11, 2010). In mounds tested to date, the burning appears not directly associated with the burial enclosure but instead forms fairly discrete layers within the mound fill, leading Oakes to suggest that ritual burning events may have been performed as part of mound construction. Similarly observations were made elsewhere in the Fraser River Valley, such as at Hatzic, where Hill-Tout observed a distinct and thick layer of charcoal at the interface between the central stone cairn and surrounding mound sediment (Hill-Tout, 1930:124).

Although not identified by the excavators as such, a possible cremation pit was excavated in Area E at Qithyil, on a large terrace covered with fire-cracked rock, at the back of the site near Mound 1. This is a place isolated from the main terrace and most other features at the site, except for large boulder alignments and two small stone cairns (Lepofsky, et al. 2000:399). Excavation of a depression there revealed an intensively used burning feature, with burned cobbles lining the walls and a great deal of wood charcoal and fragmentary calcined bone. Most of the bones are “from undetermined medium sized mammals” including a small number of identifiable human bone fragments. Other burning features on the main residential terrace have no identified human remains (2000:403). While Lepofsky et al. state that they have no explanation for the human bones (2000:399), it is possible this feature may have been used for the cremation of the dead. While no cremated human remains have been directly associated with Fraser Valley mounds (Nicole Oakes, personal communication, November 11, 2010), this may be a question of sample rather than of precontact funerary practice.

Definitive evidence of cremation in the Salish Sea comes from the False Narrows Bluff rock shelter on Gabriola Island (Curtin 1991, 2002, 2008; Mathews 2002a). This is a very large burial complex located inland from the contemporaneous village site Senewelets, with the burials located amongst fallen sandstone boulders at the base of a series of steep bluffs. Located along these bluffs are 49 burial features. Five of these excavated features were found to contain the remains of at least 147 people and as many as 1000 people are interred along this bluff complex (Curtin 2002:116). Mortuary use seems to have occurred over at least an 1800 year period spanning the end of the Middle Pacific and the beginning of the Early Pacific periods. At False

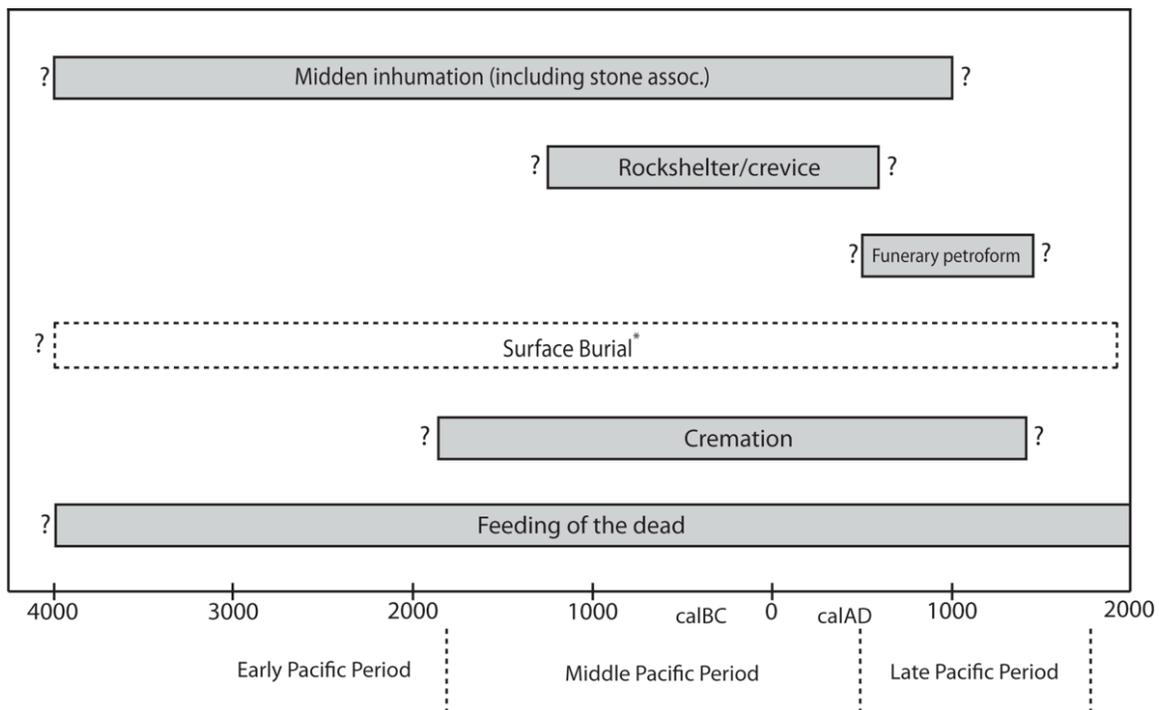
Narrows Bluff, cremated human bone is prevalent. Several of the features contain articulated skeletons, while most other features have cremated bone in which the bone appears cremated while still “green,” and were not interred at the same time (Curtin 2002). Possible cut-marks on some elements suggest disarticulation prior to cremation, and possibly defleshing (Curtin 2008:307).

Comparing the cremated remains at the bluff with those unburned remains from Senewelets, Curtin concludes that both places were used for burials for at least 2000 years. Biodistance analysis using both dental and skeletal discrete traits did not identify any variability between the two assemblages, and both assemblages contain individuals of both sexes and all age classes, suggesting demography was not a principle that determined who got buried where. Furthermore, the grave inclusions, interpreted as relative indicators of status or rank, suggest that all members of society were interred at False Narrows (Curtin 2002:116). The most significant difference between the people interred within the midden and those along the bluffs is the presence of specific pathologies and the prevalence of burning in the bluff population. The people at False Narrows Bluff primarily died from *peri mortem* trauma and treponemal disease, and Curtin (2002:116) suggests that it is these factors that determined who was cremated, and then buried in a boulder crevice hidden along the bluff. In other words, it may have been the manner or cause of death (violence and disease) that was a principle factor in determining if the corpse needed to be removed from the village and buried underneath and between large stone slabs. This is coupled with the fact that at least half and as many as all of burials in the crevices were exposed to fire to some extent (Curtin 2002:113). Faunal remains, primarily shellfish and fish, were also found with the cremated remains, suggesting food offerings. Small inland midden deposits were also situated along the base of the bluff (Mathews 2002a) and may similarly be related to a ritual feeding of the dead.

### ***Summation of Four Millennia of Coast Salish Funerary Practice***

There is 4,000 years of Coast Salish funerary ritual practices identified in the archaeological record of the Salish Sea (Figure 12). While the form of burial varies through time and space across the region, there are some compelling commonalities between practices both through time and across space. First is the concept of ritually feeding the dead, which is evident at Pender Canal around 3000 years ago in the form of a literal feeding of the dead with spoons and clamshells. A thousand years later this is altered into a more symbolic feeding through the

use of fire in which food and likely some belongings of the dead were burned at the graveside. Carlson also contends that there is circumstantial evidence for funerary feasting, perhaps in a form reminiscent of the ethnographic funerary potlatch, which suggests that the burial of the dead during the transitional Middle and Late Pacific periods was only part of a continuum of funerary practice that transcended the cemetery. It is also during the Middle and Late Pacific periods that fire is implicated in the transformation of the dead themselves through cremation. While not common in inhumations, it appears amongst boulder crevice burials around Gabriola Island and slightly later in funerary petroforms, particularly those centered on the southern tip of Vancouver Island. There are interesting parallels between the boulder crevice burials of Gabriola Island and funerary petroforms in that both practices involve the dead being removed from the villages of the living, often being transformed by fire or at least fire is implicated in the funerary practice, and both entail concealment within and underneath stone. Also, Middle Pacific period stone associations found in midden inhumations, such as those at Senewelets and Tsawwassen, speak of a long-term engagement between the burial of the dead and the use of stone to achieve a ritual purpose.



\* This may include surface exposure, gravehouses, canoe burials, tree burials, etc.

Figure 12: Coast Salish funerary and mortuary practices over the past 4,000 years.

There is a long history of the Coast Salish dead being removed from the world of the living. In the case of midden inhumations, the dead appear to have often been buried in places associated with past occupation and were occasionally places of future occupation. The significance of death rituals to the Coast Salish is made immediately visible through the fact that midden “cemeteries” were established soon after the Coast Salish settled into villages. These burial places were located close to but not inside the villages of the living, perhaps mirroring the “Village of the Dead” as it was ethnographically described (Chapter 5). With the advent of funerary petroforms, the dead were removed from the village of the living, and either brought to former village sites (such as those at North Saanich), or in the case of places like Cadboro Bay, new cemeteries were created in which the dead were removed from areas of past, present or future occupation. There is an inversion of the dead from below ground, surrounded and contained by the matrices of stone and soil, to above ground, and similarly contained, but placed in a more visible way and allowing for material and space to be used in new and novel ways. Village sites are places of long-term history. They comprise conspicuous, created landscapes that were likely associated through memory and the medium of songs and legends, with the deep history of its residents. Although linked with history, midden inhumations suggest a more generalized genealogical relationship with the dead. While the dead were kept close to the living, the burials themselves were largely unmarked. Anciently disturbed burials and scattered human remains ubiquitous in midden deposits suggest that the memory of specific burial locations, and by extension the identities of the dead, were not maintained over generations. There are no postmolds or other surficial indications of a burial. While it was common for features to have small arrangements of associated stones or a rock slab, these burials are more accurately thought of as stone-capped inhumations (Brown 2003) or small stone associations (Burley 1989; Curtin 1999) than the kinds of funerary petroforms that subsequently become ubiquitous during the Late Pacific period.

## **Chapter 5: An Ethnographic History of Coast Salish Ritual Practice**

This chapter is a thematic summary of ethnohistoric Coast Salish funerary and ritual practice. The schema of ritualization is specific to the cultural and historical contexts of its practice (Chapter 2). The historic and cultural contingencies of the Coast Salish peoples acknowledge the active nature of the spatial and material world—this is a world in which stones, ancestral spirits, animal guardians, humans, and the other agents converge to produce places that structure the social world of humans and their relations of power. Drawing on the theoretical model outlined in Chapter 2, the present chapter outlines the entanglements between the Coast Salish peoples and their ancestral dead, and how space, materials, depositional practices, and memory work engaged, and were engaged by, communities of ritual practice. In particular, I focus on the nature of the relationship between the living and the dead within the Coast Salish world, how these relationships were navigated and maintained, and the benefits that these relations may have imparted. These issues are underscored by tensions between public and private knowledge and space, the role of spirit power in acquiring power outside of the ritual environment, and the exigencies of ancestral presence in the affairs of their living kin. Of particular importance is the role of the ancestral dead and their burial monuments in defining connections between generations of ritual practice. In this analysis, particular emphasis is placed on the role of materials and space in ritualization, as these in turn can be identified in the archaeological record of ritual practice at Rocky Point.

### ***The Saltwater People of Rocky Point***

Rocky Point has a complex ethnographic history with many ethnolinguistic groups both bordering it, and moving into and out of the area throughout the Late Pacific period and historic periods. As introduced in Chapter 1, Rocky Point is situated at the southwestern margin of the Coast Salish ethnolinguistic group (Figure 13). The term *Coast Salish*, originating with anthropologists and linguists for the purpose of denoting a more widely distributed set of indigenous peoples who speak related languages (Harmon 2007)<sup>12</sup>, is a subgroup of the Salishan language family. The first peoples inhabiting what is now the southwest coast of British Columbia and northwest Washington State speak Coast Salish languages. The Coast Salish are further divided into the Straits Salish, as well as the Island Hul̓q̓m̓i̓num̓, Mainland Hal̓q̓em̓éylem̓, and

---

<sup>12</sup> A Coast Salish orthography is presented in Appendix 2.

Upriver Halqeméylem (Figure 13). Despite the linguistic diversity between and among the Halqeméylem/Hulqumínum and Straits Salish speaking peoples, and a political organization centred around relatively autonomous houses, the precontact peoples of the Salish Sea were linked together by inter-community marriage, as well as by robust economic and social activities and the exchange of goods and foods. In addition, information, ideas, and values were expressed frequently among these peoples, more so than they were outside of it (Suttles 1983:69). This may be exemplified, for example, by the building of funerary petroforms, which were centered on Straits Salish and Halqeméylem/Hulqumínum speaking peoples with very little overlap outside of Suttles' defined Central Coast Salish area (Figure 13).

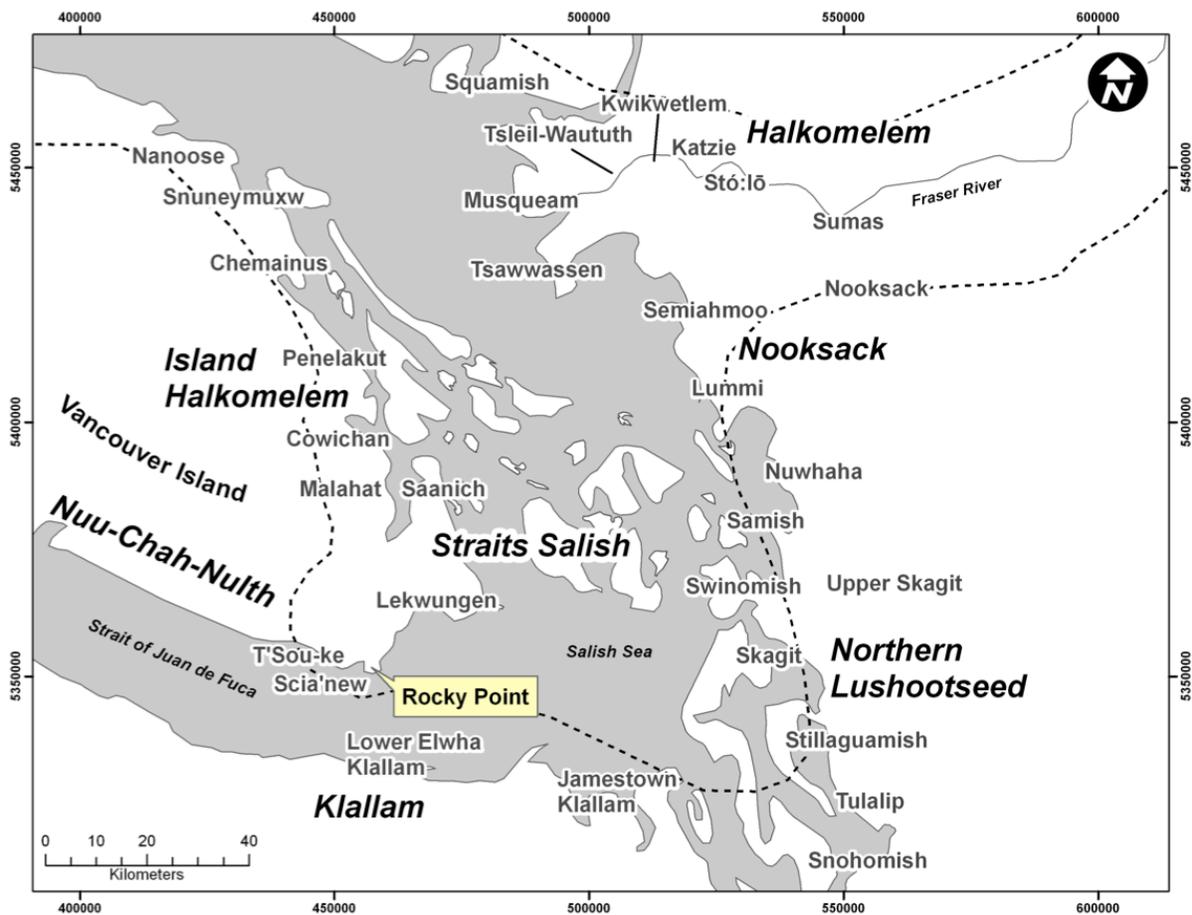


Figure 13: Ethnolinguistic groups around the Salish Sea. The dashed line denotes the known extent of funerary petroforms.<sup>13</sup>

<sup>13</sup> Funerary petroform distribution is compiled from data provided by the British Columbia Archaeology Branch and the Washington State Heritage Protection Office.

The Coast Salish people, however, are not a cultural or historic monolithic whole and there is a complex web of relationships between these peoples and their neighbours that defies easy classification. The Rocky Point peoples likely framed their identities in terms of social relationships and cultural affiliations with relations and allies, both close to home and throughout the wider region. They were likely multilingual speakers and members of interconnected families, houses, and alliances that reached beyond the house or the village, to include much larger cultural and spiritual places (sensu Roy 2010:146).

Rocky Point is situated at the westernmost periphery of the northern Straits Salish ethnolinguistic area (Figure 13), which extends east to the southern Gulf Islands, San Juan Islands, and the adjacent portion of the mainland north to Boundary Bay. This part of the Salish Sea is home to the northern Straits Salish dialects of T'sou-ke, Songhees (Lekwungen or Ləkʷəŋjínəŋ), Saanich (SENĆOŦEN), Samish (Siʔneməš), Lummi (Xwlemiʔchosen, xʷləmiʔčósən) and Semiahmoo (Tah-tu-lo). Although they are mutually intelligible and native speakers of the various Northern Straits dialects recognize similarities, they refer to the dialects as though they are different languages. There is no indigenous term to encompass them all. Northern Straits, along with Klallam, form the Straits Salish branch of the Central Coast Salish languages. Klallam is spoken by peoples along the Olympic Peninsula and by the Scia'new at Beecher Bay on southern Vancouver Island. Klallam and Northern Straits are very closely related, but not mutually intelligible (Montler 1986:5). Suttles (1951:6) extended the linguistic category of *Straits Salish* to the peoples who speak this group of dialects, recognizing that in addition to a shared language, they shared a common subsistence pattern that differentiated them from their neighbours; namely the use of saltwater channels (rather than freshwater rivers and estuaries) with an emphasis on sockeye salmon and reef netting<sup>14</sup>. Suttles recognized, however, that beyond linguistic differences, this was a problematic classification, as inter-group marriage among elites, gatherings such as potlatches and spirit dancing, and economic exchanges, extended beyond any one linguistic boundary. In essence “differences were in emphasis; the structure was the same within and with out the Straits area” (Suttles 1951:7).

In this dissertation, I use three levels of nomenclature to discuss the indigenous peoples of Rocky Point, southeast Vancouver Island, and the Salish Sea and Fraser River Valley. For reasons I outline below, I refer to the ancient peoples in the study area as the *Rocky Point Peoples*. I

---

<sup>14</sup> Reefnetting is a complex fishing technique unique to the Straits Salish discussed in more detail in Appendix 3.

follow Suttles and use the term *Straits Salish*, when talking about the ethnolinguistic grouping of peoples more generally around the southeastern tip of Vancouver Island, as well as parts of the southern Gulf Islands, the San Juan Islands, and the waters of the Salish Sea, the Strait of Juan de Fuca and Puget Sound. I use the term *Coast Salish* when speaking of the larger ethnolinguistic grouping of peoples around the Salish Sea and Fraser River Valley. Today, the Rocky Point study area is within the traditional territory of the Scia'new Nation, also known as the Beecher Bay First Nation (Figure 13)<sup>15</sup>.

The present day Scia'new community is a mix of Coast Salish speakers of T'sou-ke, Klallam, Lək̓ʷəŋínəŋ (Lekwungen), Hul'q'umi'num', SENĆOTEN (Saanich), Semiahmoo, as well as outer coast Nuu-Chah-Nulth languages such as Nitinaht (Chippis-Sawyer 2007). The cosmopolitan nature of the Scia'new Nation reflects the dynamic movement of people into and out of this area subsequent to European contact, which in itself was likely predicated on the multiple pre-European contact connections to this place, created and maintained through exogamous marriage and other alliances with neighbouring peoples. This, coupled with tragedies including epidemics associated with both indirect and direct European contact (Boyd 1994), as well as losing most of the remaining men of the community to sealing schooner accidents in 1895 and 1896 (Chippis-Sawyer 2007:208-209), have contributed to a complex present-day mosaic of peoples in this community. This plurality, however, also speaks to the fact that Rocky Point is situated at the southwestern extent of the Coast Salish ethnolinguistic area (Figure 13). It is both a periphery, but as I argue later in this dissertation (Chapter 11), a centre of funerary petroform ritualization.

As outlined in Appendix 3, the Rocky Point area was entangled in complex relationships between the *quqa'yəqəm*, *Chewhaytsum*, T'sou-ke, and Klallam and other ethnolinguistic groups. The villages and cemeteries around Rocky Point were likely an amalgam of intermarried, interrelated and allied groups living in close proximity and likely sharing and negotiating overlapping resources. It may be that each village, house, or family had their own places for the dead, sharing burial practices and forms, but perhaps also exercising their own variations of these practices. This complex ethnographic-period history suggests that Rocky Point may have long been a shared, contested and negotiated place, home to people drawn from many neighbouring places both near and far. I use the term *Rocky Point peoples* to reflect both this cosmopolitan nature and

---

<sup>15</sup> A detailed ethnohistoric summary of Rocky Point is presented in Appendix 3.

the uncertainty of attributing the villages and funerary petroforms to any single ethnolinguistic group.

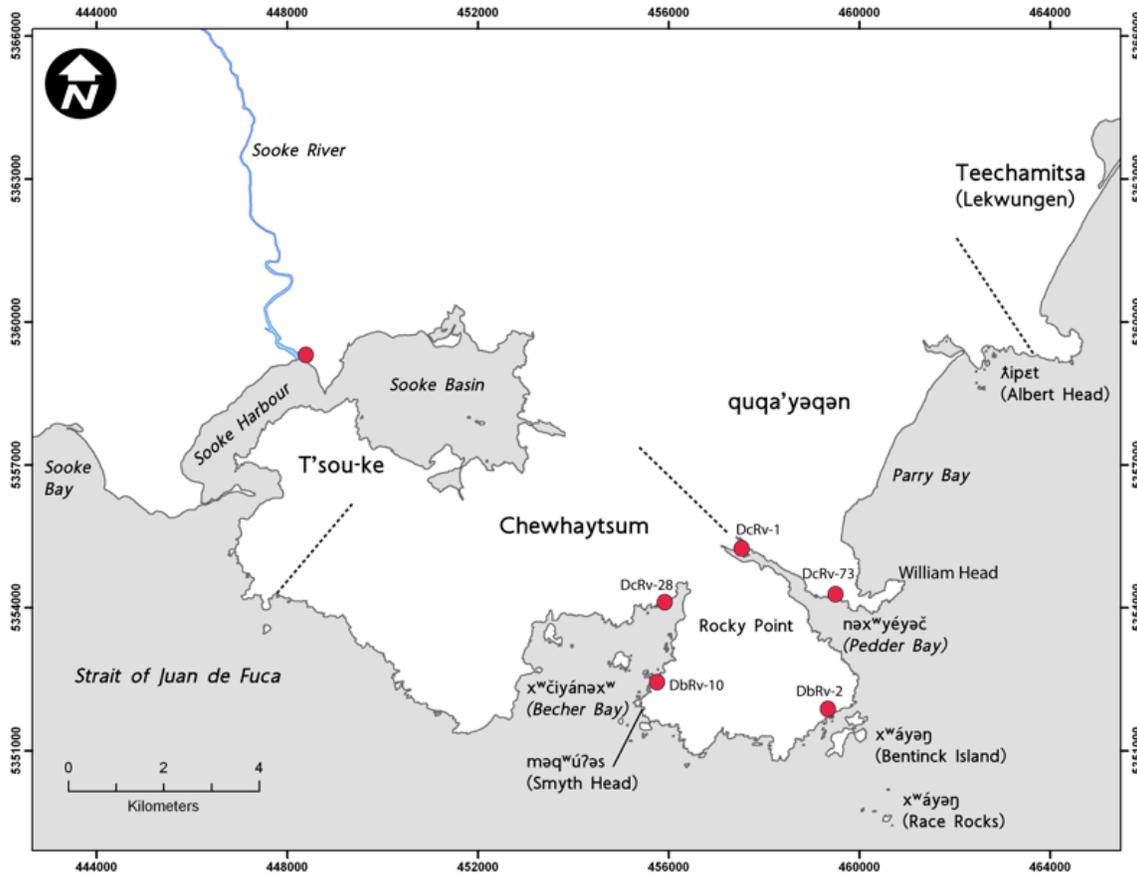


Figure 14: Location of ethnographic Straits Salish local groups and Klallam place-names. Major village sites are highlighted with red circles.

### ***The Long Term Continuity of Ritual Practice***

This section outlines the basis for using ethnographic and contemporary Coast Salish funerary practice as a historically and culturally contingent analogue for approaching the space and materiality of Late Pacific period funerary practice. I outline the chain of connection between the Coast Salish people and their ancestral dead and the longevity of the attendant funerary ritual.

The Coast Salish peoples have long emphasized the strong connection between the communities of the living and the dead, both through continuity of funerary practice and in transformation in burial rituals. Coast Salish perceptions of death and the dead do not necessarily conform to either Christian or Western ideas. Coast Salish ways of death are evident in the cosmology of the ethnographic and contemporary Coast Salish peoples (McKay 2002).

There is considerable longevity in core Coast Salish funerary practices—including veneration of ancestors and ritual feeding of the dead—that predate European contact by millennia and are actively practiced today. I argue that this longevity of practice is a valid basis for using ethnographic and contemporary Coast Salish funerary practice as a historically and culturally contingent analogue for approaching the space and materiality of Late period funerary practice. The crux is to link some continuity in practice between the present, the early ethnographic period and the ancient past.

The Coast Salish peoples have been innovative in their adoption of Christianity, weaving Christian ideas with traditional beliefs and practices to create a new synthesis (Amoss 1978, 1990; Barnett 1957; Spier 1935). For example, the Shaker Church is a uniquely indigenous institution which continues to offer a way for the Coast Salish peoples to incorporate the principal religious symbols of a dominant alien culture into their traditional understanding of the relationship between human beings and the supernatural (Amoss 1990). As such, it is about resistance and innovation more so than indoctrination. Much of the identity of the Coast Salish people is based in their religious practices, and funerary ritual and relationships with the ancestral dead are of paramount importance to their sense of self and place.

Clearly, this is not to say that Coast Salish burial practices were unaffected by smallpox, missionaries and colonial/assimilationist practices such as banning of the potlatch (McKay 2002). Around the Salish Sea, diseases predated direct contact with European colonists (Boyd 1994; Harris 1997). The social and religious structure of the Coast Salish was predicated on the social titles, names, songs, privileges and responsibilities of individuals and the rights to exercise these cultural practices. It was only through prescribed rituals, witnessed and verified by the community, that this was possible. It has been argued that population decimation, including the deaths of experienced ritual experts, may have overwhelmed this ritual system (McKay 2002). However, despite smallpox, missionization and other factors associated with the arrival of Europeans, many of the traditional aspects of belief and practice in funerary tradition of the Coast Salish persist. There has been a strong retention of traditional values, belief and ritual practices amongst contemporary Coast Salish peoples (e.g., Amoss 1972, 1978; Joseph 1994; Suttles 1951:481-484). A core of practitioners resisted colonial assimilation and the recent resurgence of spirit dancing represents a return to old ideas, values and meanings: “the western

rationalistic tradition had never been fully accepted by most Coast Salish people but had only impinged on their own world view and canons of evidence” (Amoss 1978:167).

The Coast Salish view life and death as cyclical. This underlies the sense of connection between ancestors and descendants and is at the root of the ethic of mutual respect and responsibility between the living and the dead (McKay 2002) emphasized through continuity of practice in their funerary rituals including long-term practices of burnings, ritual feeding of the dead, and wrapping of bodies in blankets (Chapter 5).

During the early historic period, the religious traditions of Christian missionaries were syncretized with traditional practices, and Shakerism arrived among the Straits Salish peoples of southern Vancouver Island sometime between 1885 and before 1900. Shakers rejected institutionalized ritual authority associated with traditional ritual practice, in particular, the power of shamans (Amoss 1990:634). Shaker founder John Slocum called for the rejection of the shamanic authority, yet ironically, Shakerism originated with the death and subsequent rebirth of Slocum. Spier (1935) and Suttles (1951) maintain that aspects of resurrection in prophet dancing, which was the basis for the Shaker Church, may not relate to Christian doctrines but to the shamanic tradition, intimately linked to the curing practice wherein shamans go to the land of the dead in pursuit of souls or spirits. In this sense, Slocum’s resurrection may have been referential to, and likely benefitted from, the traditional authority of shamanic odysseys between the worlds of the living and the dead. By discrediting shamanic authority, the syncretic nature of the Shakers eroded the exclusivity of ritual and facilitated a greater participation by the common person than may have previously been permitted. The lack of formal roles within the structure of Shaker ritual is likely a reaction against the well-defined and hierarchical nature of traditional Coast Salish ritualism. But while The Shaker Church sought to underscore the power of the shaman and make ritual more accessible, it continues to perpetuate the idea of a powerful ancestral dead and the requirements of the living to see to their needs.

Many traditional religious beliefs continue to persist and underlay many aspects of contemporary Salish thought and practice. Spirit dancing, a variant of the widespread guardian spirit complex (and therefore often at odds with the Shaker Church), continued, often in secret and despite colonial opposition. A revived version of the spirit dance is practiced widely today. In addition, the conferral of hereditary names continued, as did puberty rituals. In particular, memorials for the dead have persisted (Kew 1990:476), and ideals around the care of the dead

remain vital to the Coast Salish peoples today (Suttles 1951:472). Funerals are well attended and involve visitors from several villages. They are occasions for the repayment of obligations to the deceased and their family, or for making gifts to assist those in mourning. The mourning family hosts a funeral luncheon and pays non-family member for their services, such as grave digging, watching over the body, and serving as pallbearer. A long-term practice involves ritual service from outside the close kin in conducting a burning for the dead. Funerals have always been potlatch occasions, and values concerning social status and exchange continue to be expressed through the memorial potlatch system (Kew 1970; 1990: 476). A post-funeral feast is always hosted by the family, whereby donations of food and money are made by relatives to aid with the funeral expenses. These gifts are to be repaid, however, some with interest, at a later date (Suttles 1951: 482). Possessions of the dead are given away, although clothing is ritually returned to the dead through a burning, some time later, when the remaining funeral debts have been settled. Funerary potlatches, while incorporating some Christian elements, are still an institution in which Coast Salish traditional beliefs about the dead persist, as does the reliance on ritualists to attend the dead, their possessions and the relations between the ancestors and their living kin (Kew 1990:476).

### ***Ethnographic Knowledge of Funerary Petroforms***

Despite continuity in ritual practice, there is little memory of funerary petroforms recorded in the ethnographic literature. Pickford notes during his excavations at the Comiakén mound that informants had no knowledge of the mound nor did they recognize it as a burial site (Pickford 1947:250). According to Hill-Tout, the Stó:lō (Upriver Halqeméylem) people knew nothing about the burial mounds at Hatzic, and to him seemed indifferent to his excavating them. Hill-Tout, however, stated that the Stó:lō people referred to the burial mounds as “Ghost-heaps” and “not a single native could be induced to approach or have anything to do with them” (Hill-Tout 1930:121). Hill-Tout confused, I think, a perceived Stó:lō indifference with a quiet respect for and apprehension of these burials. This is congruent with what I have been told by Saanich elders who, as children, were told to avoid approaching or even looking at these piles of stones, although their parents did not explicitly say why.

### **Coast Salish Social Structure: Power, Knowledge, and History**

Power relationships in Coast Salish society are predicated upon ritualized practices, including funerals and funerary potlaches, through which ancestral experiences and histories are maintained and a continuous relationship between the ancestors and the living is sustained. Norms and behaviour are learned, influenced, and modified by the experiences of the living who practice within the social, spatial and material world of their predecessors and are in turn guided by an ancestral history which defines the way to act as proper members of society.

The social structure of Straits Salish society emphasized the importance of the local kin group, which operated within a regional social network and which was based on lineage and the management of resources (Suttles 1990:463-465). Suttles infers that in the Coast Salish scheme of social stratification, the upper class considerably outnumbered the lower class, giving Coast Salish stratification a form more analogous to an inverted pear than a pyramid, given a large upper class, a small middle class and a somewhat larger slave caste (Figure 15). Society was divided into three classes: the worthy people, or *siʔém'*, a term implying unblemished ancestry, good manners, extrahuman support and wealth; a lower class of *stéxəm* (“worthless people”); and slaves, often captives who were considered personal property (Figure 15). There was little room for movement upward from *stéxəm* to *siʔém'* and the division between slaves and the low class was not distinct (Donald 1997; Suttles 1951:302). The institution of chieftdomship seems to have developed after European contact (Suttles 1987:6). There appears, however, to have been some fluidity, with no formalized social ranking of individuals into series, like that of the Kwakwaka'wakw to the north, but Suttles suggests this may have contributed to a stronger class system among the Coast Salish (Suttles 1987:13).

The behaviour of the Straits Salish upper class is in accordance with a moral code anchored to the relationship between the living and the dead and the rights and duties, which exist between them. Morality cannot be understood apart from ancestral antecedents and the nature of the continuum between the living and the dead. While the dead do not sanction the living directly, traditional rights and duties are bestowed and defined by ancestral connections. The moral order is derived from ancestral knowledge and is brought into the experience of the living society through myth, narrative tales, symbolism, and ritual practice. Knowledge is continually stored, identified, and materialized in places.

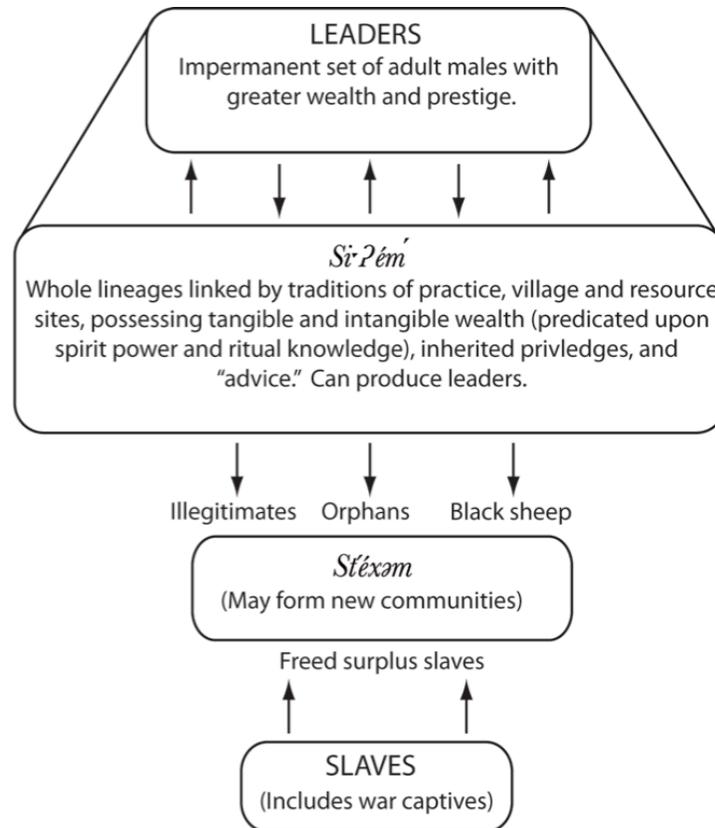


Figure 15: Coast Salish social stratification, after Suttles (1987:12).

The term *siʔém* is a multipurpose word reserved for the upper class, but used in the context of politely addressing someone, recognizing a leader of a house or potlatch. The plural was used to denote “high class people,” or people with “advice” who know proper behaviour and who know their history (Suttles 1951:302). Proper behaviour and inherited knowledge were the roots of their class privileges. The upper class family is one that can claim longevity to its ancestral place. Their “advice,” or *snəp*, encompassed knowledge of genealogies and traditions of practice demonstrating family greatness, gossip about other families revealing their inferiority, instructions on spirit questing, secret signals for indicating someone is of lower class descent, in addition to moral training (Suttles 1987:8). The attributes of the high class were primarily the social capital of a good hereditary name and rights, with no taint of slavery or low class ancestry, or disgraceful conduct. Wealth, while important, was simply a product of and proof for the possession of the intangible assets of immaculate ancestry, ritual knowledge, and the supernatural support of acquired spirit power. This is to the exclusion of the lower class, the *st'exám*, who were peoples thought to have “lost their history” or “had no advice” (Figure 15).

They were politely referred to in the diminutive as “younger sibling” or less politely as “poor people” or “nothing people” (Suttles 1987:6). People may have “lost their history” by being non-contributors to potlatches, being refugees due to conflict or warfare, or excluded on the grounds of social transgressions. The taint of slavery in the history of a family group also conferred a lower status. The most effective sanctions in Coast Salish society were social ones, primarily gossip. The threat of being considered low class or ostracized by family or community was the most effective means of social control (Amoss 1978).

There was a strong sense of corporate identity at the household level. Members of each household were descendants of a notable ancestor, and they shared inherited rights to resources, names, ritual activities, ceremonial performances, and paraphernalia. While all descendants of that house shared those inherited resources, in practice their management remained with those actually residing in the house and power tended to be concentrated in the hands of one household elite. But villages were not corporate; rather they existed of autonomous households, representing several kin and local groups. While members of different houses may have participated in mutually beneficial activities such as reef netting, ceremonial activities and mutual defence, this cooperation was not forced (although perhaps enticed). Villages were not homogenous, and there was considerable polyvocality, with segments of a village potentially speaking different languages, giving villages a cosmopolitan feel. There is little evidence for formal intervillage organization, although there may have been “patterns of affiliation based on common occupation of water systems; respect for particular regional leaders, use-rights, and resource procurement areas, and the common use of particular languages and dialects” (Miller 2007:16).

Leaders of various sorts emerged from the upper class on various occasions (Figure 15). Jenness argued a different model, stating that among the Saanich the ratio of nobility to commoners and slaves was more like 3:7:2. Jenness attributed the large upper class in the historic period as associated with the European cash economy that allowed someone of commoner status to earn more money working for Europeans than any upper class person could by traditional means (Jenness 1934:58). However, such an upstart would likely be ridiculed behind their back, and this process may be part the prevalent gossip concerning the taint of lower class history in one’s neighbours that Suttles observed so commonly. Suttles and Jenness agree that slaves were never particularly numerous, but were central to household production of food and materials.

Treated more like servants than a western notion of slave, this class of people in Straits Salish society were often trusted and esteemed, and efforts were made to make them content with this position, such as offering them a spouse. Jenness states that the infants of slaves were allowed to have their heads shaped like other Straits Salish infants (Jenness 1934:61). Cranial modification entails the deliberate shaping of the cranium, and has been used by archaeologists to infer status (e.g., Ames and Maschner 1999; Burley and Knusel 1989; Cybulski 1975; Mitchell 1971). For the Coast Salish, specifically, archaeologists have applied concepts of aesthetics, group or ethnic identity, and eliteness to cranial modification (Angelbeck and Grier 2012:557). This allowance of slave class cranial modification may be a more recent historic development, the regulation of such modification perhaps relaxed during the Late Pacific period, a culmination of redundancy and decline in the potency of the symbol through time (*sensu* Cannon 1989).

Good ancestry confers three main advantages: the rights to ceremonial objects, dances and rituals; access to a bank of prestigious family-owned and conferrable names; and the “instruction” or training that elders can impart to their kin. While this is the case today, it was likely even more so in the past: “it may have been virtually impossible for a person without good ancestry to achieve any significant degree of prestige under the old system” (Amoss 1978:148).

Suttles contends that there was a “myth of the lower class” that served to remind the majority of people how to behave and conduct themselves in a way befitting their high class (Suttles 1987:9). The perception may have been that there were more low class people than in fact existed, but the idea of a low class was necessary as a means of both social control and social levelling. The upper class was not a homogenous whole, there were definitely differences in status, although there was no formalized ranking and mobility upwards (and downwards) within this larger class was possible. The threat of being perceived of as low class regulated behaviour and I argue likely also served to level egregious power inequities. Gossip was remarkably effective at curbing deviancy or behaviour unbecoming a high-class person, such as overt aggrandizement, and may have been used to great effect as a social levelling mechanism.

In contemporary Coast Salish society, inequalities of power are resented and are levelled when they occur (Amoss 1978:148). Inequalities in prestige, however, are accepted, desired and institutionalized. Prestige is derived from being well known and respected throughout the wider Coast Salish community. To be well known, one must be wealthy, well thought of and well behaved. Good ancestry is a definite asset but does not assure a “good name” if manners and

wealth are lacking. Similarly, wealth does not confer prestige if one does not conduct one's self appropriately. The heads of households could provide or withhold help to other households, thereby controlling to some extent the affairs of other houses. The goal of every household, however, was to maintain the balance between wealth and expenditure, and while there was almost certainly some rivalry, the intention was to "keep one's good name and to keep up with one's neighbours, not to break them" (Suttles 1951:495).

There are tensions between the Coast Salish ideals of individual autonomy within a system of social inequality. Autonomy to the point of anarchy characterizes intragroup political action (Amoss 1978:146; Angelbeck and Grier 2012), and even leaders chosen for a specific task must scrupulously avoid any suggestion that they are telling people what to do. Leadership is not lacking; rather its efficacy depends upon the leader's skill in expressing the feelings of the group (Kew 1970:116-117). The upper class *siʔém'* worked at navigating this tension between individual power, both spiritual and economic, and the expectations of proper behaviour. "Autonomy and social inequality come into conflict because autonomy implies that a person's worth is independent of what other people think while differential rank depends entirely on the judgment of the group as expressed tangibly pressed out at potlatches" (Amoss 1978: 150). In this sense, others confer power through the societal recognition and rewarding of proper behaviour. Overt aggrandizement in this system would likely meet with levelling mechanisms, such as gossip, rumours and public disapproval. In other words, one needed the support of their kin and neighbours to achieve high status.

Kin solidarity was a principle that structured Coast Salish social and economic life. But bilateral kin ties allowed one to strategically emphasize or minimize their kin relations depending on the circumstances (Kew 1970). Political disagreements were and are common, and people emphasized kin ties with those on the same side of the question, while simultaneously de-emphasizing with those members of the opposing faction (Amoss 1978:147). People who work towards rising are very careful to maintain the appearance of proper behaviour and keep up their end of the exchanges of goods, cash and services. In their own words: "we don't want people talking about us" (Amoss 1978: 149).

### ***The House Group as a Community of Ritual Practice***

The Coast Salish house group is central to questions concerning power relationships and ritualization. Paraphrasing Miller (2007:18), the real political and social organization of the Coast

Salish was at the household level. As a House-based society<sup>16</sup>, each of these local kin groups, or “corporate groups” had its own shed-roofed longhouse, which was a repository for ancestral knowledge and privileges. The corporate group was based in the idiom of kinship at the same time as it implicitly excluded many potential kinfolk. These groups organized fundamental features of their members’ lives, affecting ritual practices and economic activities such as fishing. These corporate groups were the entities within which “advice” was shared and taught. Elders gathered goods for distribution at ancestral namings of group members and other important ritual events, and members were initiated during winter dances in the group longhouse (Miller 2007:18). Senior members taught or demonstrated important skills, such as basket weaving and storytelling, to junior members. “Magic” was kept private within the group, and group members attempted to restrict access to personal information concerning the wellbeing of the group. From this viewpoint, houses and villages can be thought of as being composed of competing families, whose members’ loyalties lay more with the families than with the political units that contain them.

The Coast Salish people express social relationships through the idiom of kinship. Those of high standing have long practiced exogamous which forged kinship over large areas with implications for use-rights to resources (Miller 2007:16). Bilateral descent further created a broad network of relatives (Amoss 1978:8). People were linked to two kindreds; their own consanguineal ones and those of their spouse (Amoss 1978:8). The affinal ties created by exogamy were important to the elite to create and maintain networks of economic, social and spiritual relationships (Amoss 1978:5).

The wedding was a ritual in which privileges were displayed and exchanged, forging a long term relationship between two families, thereby reciprocating food and wealth between them (Suttles 1951:289). There was a general preference for patrilocal residence with marriages to neighbouring communities both near and far. As such it was primarily women who moved into new communities with the result that most married upper class women in a village were from elsewhere (Suttles 1951:498). In one Samish village, Suttles analyzed the kinship composition and noted that the men who joined the group through marriage did so for strategic reasons, most likely the hope of attaining some independence with security (Suttles 1951:285).

---

<sup>16</sup> As discussed in Chapter 2, the term “house” refers to the architectural feature, whereas the capitalized “House” refers to the corporate group (and its associated tangible and intangible assets). Suttles (1974) uses the term “House group.”

Patrilocal residency is also significant because women's work in Straits Salish society, such as the tending of camas meadows and the production of baskets and blankets, was the primary source of wealth (Suttles 1951:492, 495) which was critical to the production and maintenance of status. Connections forged through marriage ties also meant that a diversity of local and regional ritual practices was brought together in every village. This suggests the possibility of people entertaining variants of rituals in accordance with those ritual practices of their extra-local spouses.

### ***Property, Knowledge, and the Ancestors***

Ritual is implicated in and inseparable from economic production, power, and the burial of the dead. Like Coast Salish notions of the world that lack a separation between the natural and the supernatural, ritual is inseparable from other social practices. Fundamental to ritualization and the production of power in Coast Salish ethnohistoric society is *Ćile ħm*, which refers to the categories of inherited privileges in Straits Salish society that were the basis of both personal and corporate group power. Suttles (1951:49-56) outlines the essential spiritual, social, economic and material assets of the Straits Salish peoples. First are the variable capabilities of supernatural interaction. Individuals are constituted by their corporeal body, a soul, a life, and a mind (Suttles 1951:52). The physical self embodied the social through dress, movement, bodily modification such as a flattened head, and long hair. The soul, life and mind were individual entities subject to influence with the supernatural. A person lacking the unification of these entities was not considered to be whole or healthy. Capability of supernatural interaction is critical in a world imbued with supernatural power and one in which food and other resources are a gift entrusted by the supernatural. Acquiring personal spirit power is arduous and involves suffering; at the same time, acquiring too much power can endanger society. Spirit powers can be earned directly from the supernatural. Such *Ćile ħm*, however, was an inherited and proprietary right of the family group, founded on the inheritance of such power and knowledge from ancestral kin (Suttles 1951:52). These immaterial possessions are not evenly accessible to everyone in society. Social distinctions between upper class and lower class, as well as differences between ritual specialists and lay people, dictates what immaterial assets are available to the individual (Suttles 1951:53). *Ćx'łe ħ* are the inherited and privileged performances that use an item, a song, a dance or some other activity. These *Ćx'łe ħ* performances are often done at crisis rites and are often

performed not by those who own the song, but by those hired by the owner to conduct the performance. The performer and witnesses of the performance are paid.

The intersection of ritual practice and power is founded at the scale of the longhouse: this includes the House as both a corporate, social, and economic entity, and house as a spatial and architectural feature. Second among the House assets are the social and material possessions associated with social organization. This includes the household; the great Coast Salish plank houses were simultaneously a material thing, a physical space, and a social entity. Material possessions that might end up in the archaeological record include wealth items, such as dentalia shells, and native copper ornaments. Wealth also included ceremonial items, such as costumes and masks, as well as food. Private property seems to have been a factor in the most productive of all Coast Salish activities, particularly when those activities that were intensive at specific places and at specific times (Suttles 1951:488). The privately owned camas and clam beds were the result of labour and maintenance, although Suttles noted that the investment of labour may have been largely the symbolic exercising of a privilege: “Taking rocks out of a camas or clam bed and putting them at the edges was done more to mark the beds than to improve them” (Suttles 1951:488). The supervising of labour, such as digging a camas bed, was done more to demonstrate ownership since the rights of a person to a bed may have lapsed if ownership was not demonstrated. The position of ownership must have been strongly supported by the inherited ritual knowledge to use these places correctly. Whether a reef net, a camas field, or a funerary petroform, the labour invested in making these things and the places they were used was done within a community of practice and under the supervision or tutelage of an expert, even if they merely supervised its construction while others did the labour.

The last category of possessions is the corpus of knowledge concerning the methods and techniques for acquiring and using resources from the land and ocean, the ways in which the supernatural inhabit these places, and the proper means and ways in which to interact with these forces. There is a bundling of intangible assets: names, histories, knowledge, prerogatives and so on that move together from individual to individual through time. In addition to *snəp̓*, or the “advice” given to children, knowledge of family history was an inherited familial birthright. While in theory this history was transmitted to all young people in a family, Suttles suspected that not all family members received the same information. There was a restricting the knowledge of

names of ancestors, which enabled those who knew to control their bestowal on their own descendants (Suttles 1951:395).

In the Coast Salish world, there is power in the name of a person or object. Adult names had a life of their own. Each house has its stock of names handed down through generations and guarded as inherited rights. Names were privileges and were the basis of status (Suttles 1951:493). These names, and their longevity, were inseparably linked to villages, households and places going back to time immemorial (Jenness 1934:55). People are chosen to “carry a name,” as though one is given to the name rather than the named given to the person. Such names are valuable family property and were used only on very formal occasions. It was forbidden to speak the names of the recent dead, or even a word that sounded like the name of the dead (Amoss 1978:17; Elmendorf 1960:394; Hill-Tout 1900:484). Names were valuable and enduring intangible property that, like material property such as land and heirloom objects, belonged first to the ancestors. Names are property that can be curated by living descendants and bestowed on future generations as a means of social reproduction. While physical bodies are impermanent, names and histories are attempts at the eternal, recognizing that unlike clans, family groups rise and fall. Names have a vital essence and history accrued by the part individuals that held that name in life, and in death become part of the historical trajectory of the name. Maintaining this corpus of family-owned intangible property was a major feature of Coast Salish sociopolitical organization in the past and continues today. The transferal of names is a rite-of-passage, which is officiated over and witnessed by invited guests. Taking an inherited name required capital, sponsorship and access to a bank of hereditary names. People earned nicknames, based on personal attributes or events in their life, but their inherited names were only used on formal occasions and could not be spoken in public without the conferral of gifts. These familial names were often those of well known and highly respected deceased members of a family or mythical ancestors. Some names were also constructed from the names of spirits (Suttles 1951:398-406). After a person’s death, the name was taboo for a period of time, but remained the property of their direct descendants to be given again in the future. Even wearing the mantle of a prestigious name, however, people were expected to wait their turn to speak, dance, sing and so forth.

### ***Production, Social Capital, and Ritualization***

Suttles produced the definitive work of Straits Salish economy (Suttles 1951), which I will not reproduce here. Rather I offer a brief synthesis, relevant to situating the production of

funerary petroforms within the Coast Salish economy, as it existed during the early historic period. This was an economy centered on maintaining social standing, social claims and social assets. Material goods were valued in so far as they serve this end. It was an economy based on reciprocity and redistribution, with reciprocity based primarily on the family group while redistribution was based on a network of intermarried houses both within villages and throughout the Salish Sea. The process of material production could be understood as the translation of physical labour and material products into social capital. A material product, in which labour was embodied, was exchanged for respect and credit. Considered this way, the material products of labour and controlling labour was not the aim of labour, but the means. Labour is exchanged for respect. The tangible objects that change hands at potlatches and other conspicuous displays are merely the indicators of the important goods: labour, ingenuity, talent and skill. These are exchanged for commensurate goods like prestige, reputation, esteem and so on (sensu P. J. Wilson 1988:81). Rather than producing consumers, Coast Salish economy was about social production and producing witnesses. For witnessing the display of an exhibitor's powers, the audience conferred reputation and esteem. The things produced under this kind of economy tend to stress aesthetic properties of whatever is being produced. Competition was based on the idea of being able to mobilize people to produce something that could be measured by both the process of organizing that labour and producing a more impressive visual or durable product, rather than the Western idea of producing more for less. It was not the material utility that mattered, but the sense of awe and spectacle the product presented and its representation as something of labour and capability. Monumental aesthetic achievements, such as longhouses, represent the investment of labour, talent, skill and artistic sense, as well as the spiritual capabilities of its creator or inhabitants (such as interior house posts depicting spirit powers) and the capacity to enlist ritual expertise in maintaining its purity. These concepts underscore the ideas of monumentality outlined in Chapter 2, and lead us to suspect that the production of funerary petroforms may have adhered to these same values and aesthetics of production and spectacle. These ideas are engaged in the analysis of funerary petroform visible presented in Chapter 10.

### ***Summary: Authority, Legitimacy, and Power in Coast Salish Society***

Issues of authority, legitimacy and social value permeate Coast Salish social relations. In this sense, everyone is looking for legitimization, but this is more than just seeking and solidifying

formal power. For the upper class in Coast Salish society, legitimization was about creating, repairing, and shoring up relationships of power, as well as about an extended moral sense. This took the form of seeking merit and assurances of their social worth. For the lower class, the desire was to feel as though they had the right to participate in social practices. They wanted recognition as a person of social consequence and value. There is a contradiction between egalitarian and hierarchical discourses based largely around claims to place, history, and knowledge. In this schema, the lower class lacks knowledge of their history, and are therefore less rooted or anchored to place. Theirs is a less private and less secure life, residing in the centre of the houses of higher-class relatives, or living peripherally in the village, relegated to houses at the edges of the village. This is in contrast to the more powerful and knowledgeable (often proprietary ritual knowledge) peoples. Those anchored to places, those who know their history, and it is an unblemished history of impeccable moral conduct and ancestry. The upper class remembers their ancestors.

Family group history is the basis of its power and prestige, but this history is differently understood not only between families, but also even within them. As such, history is a venue for contesting and negotiating power within and between families. Lacking any system of discrete ranking, one's high-class position was the sum total of the communities' perception and sense of a person, their family, and their ancestry. The knowledge of proper behaviour and one's heritage were inherited privileges fixed through ritual in life and affirmed in death through the funeral, thereby perpetuating the familial continuity of power and connection to place. But power could only be attained and maintained through the network of kin and the societal approval of one's conduct. Central to this was the relationship between ancestors and descendants and the supply of names and histories associated with them that could be conferred to present and future generations. Transferral of ancestral names to the living ensured family continuity in the absence of clans. Name transmission, fundamental to descent, remains a principle scheme of social reproduction among many Northwest Coast groups, to the point that ancestral names, rather than their temporary bearers, are the true members of the corporate group (Kan 1989:72).

The Coast Salish intermarried with so many of their surrounding neighbours that a person could find relatives nearly everywhere, and likely had a different name and title in each group (Jenness 1934:56). There was not an intra-village hierarchical and numbered ranking system as among some northern Northwest Coast groups. Among the Coast Salish, therefore,

status was a relative measure depending on which community one was in. Furthermore, unlike northern groups, Coast Salish social structure was based on families, not clans, and unlike clans, families are not immortal. Families follow cycles of birth, growth, and collapse. Families orbit around charismatic leaders, but they may splinter following the death of these leaders if no suitable candidates are available to take their place. Over time, the named families in a community will change. This means there is a constant and ongoing negotiation of power within and between houses, rather than a sense of house immortality.

There is an emphasis on proper and appropriate behaviour befitting one's status, the cultivation of a network of social and supernatural relationships, and the acquisition of spirit power and supernaturally derived abilities. One cannot hope to be a socially competent high class individual without these immaterial possessions. Many of these intangible assets are inherited, essential to membership into the upper class, and require wealth before inherited privileges can be used. In many ways, this might be confounding to archaeologists attempting to investigate questions of status, as the above indicates that the notions of status are largely immaterial. I argue, however, that this intangible property is derived, embodied, and materialized in the ritual practices of the Coast Salish, particularly in their funerary practice.

## ***Chapter 6: Death, The Ancestors, and Power in Ethnographic and Contemporary Coast Salish Society***

In this chapter, I present a thematic analysis of ethnographic Coast Salish funerary ritual practice. This analysis is informed and guided by the social theory presented in Chapters 2 and 3, and considers how material and space articulates with ritual practices in a way that is historically and culturally contingent with the Coast Salish ways of death. As a form of analogy building, this approach considers the underlying connections between the material and the spatial in Coast Salish ritual practice, and how these can then be used to critically evaluate and interpret the archaeological record at Rocky Point.

To contextualize this thematic analysis, I elaborate on six key themes: Coast Salish funerals as rites of passage; the active nature of the dead in Coast Salish society; the dichotomous nature of space (public/private, village/cemetery, house/grave); the role of ritual specialists; the nature and acquisition of spirit power as a homology of death and rebirth; and the metaphorical significance of stone as a medium appropriate for the burial of the dead.

### **The Coast Salish Funerals as a Rite of Passage**

Ritual is an effective venue for the Coast Salish conferral and recognition of social inequality. While archaeology considers the form of bodily disposal and interment as important, ethnographic accounts provide many references to the centrality of intangible assets and their connection with genealogy and the ancestors. Straits Salish funerary ritual is an active process of mediating the physical dissolution of the social person and, through the rite of passage, ensuring their reconstitution of the dead as an ancestor and creating a venue for commemoration and remembering. To the Coast Salish, these social dramas were concerned with assisting the deceased to reunite with relatives in the land of the dead, to provide them with the necessities of that trip, as well as to acknowledge other dead ancestors who may be present at the time of the funeral. The rites also were about protecting the living from the inherent danger of the dead by providing a means of respectfully but firmly removing and containing the dead and purifying the contagion left behind by death.

I articulate Coast Salish death rituals through the ideas of van Gennep (1960), Hertz (1960) and Turner (1986) as a way of thinking through ethnographic ritual practices as a historically and culturally contingent context for the building of funerary petroforms. To the Coast Salish, the dead were seen as a source of danger and pollution. The dead were situated

dangerously between the worlds of the living and the ancestors—neither one nor the other until the funerary ritual moved the dead from this world to the next.

Following Hertz’s ideas outlined in Chapter 3, the Coast Salish peoples practiced a “twice burial” with the building of funerary petroforms as the first burial aimed at dealing with the immediate concerns of the cadaver and with the purification of places and things associated with the corpse and the mourners. The funerary process was a protracted one, and was only concluded when subsequent burnings of food and perhaps a funerary potlatch were undertaken, weeks, months or even years later. The funerary potlatch, for the upper class, was an occasion for the transferral of names and other prerogatives held in trust by the deceased. At death, this property was returned, by ritual means, to the corporate estate of the house for redistribution to living descendants.

The first burial (e.g., the building of the funerary petroform) was the initial step of a larger social process in which the dead were transformed, by the living, from cadaver to revered ancestor. This idea of liminality and transformation—requiring ritual specialists, purification, separation, and a process of witnessing and validation—was something done during puberty rituals, spirit dance initiation, or burial of the dead. Just as the spirit dancer initiate or pubescent girl was isolated but still kept close by, cemeteries are liminal places that separated the Coast Salish dead while retaining proximity and the funeral a process in which the contaminating body was contained and the dangerous spirit transformed and expedited to the ancestral world.

In Coast Salish accounts of funerals and mourning, the process seems to affect all people in a community, with the degree and nature of mourning dictated by the closeness of kin affiliation with the deceased. I suspect, however, that the rituals described apply only to those of the upper class. While most people were among the upper class, the death of a lower class person may not have been the catalyst for a community-wide set of rites. Conversely, the death of the most high-standing peoples likely triggered the suspension of the entire community, and perhaps even neighbouring ones.

After burial, houses were cleansed and mourners were purified in the ocean fronting the village. This period of purification and mourning entailed people moving between and concentrating in places, often around fires and house doorways<sup>17</sup>. As such the cemetery was not

---

<sup>17</sup> Perhaps thought of as thresholds, marking boundaries between inside/outside, or in the case of fire, the threshold between the worlds of the living and the dead.

the only site for funerary ritual—ritualizing occurred in varying degrees of formality and intensity throughout the physical and social space of the community, perhaps for many days or weeks, or even months or years if people were making preparations for a large memorial potlatch. In this sense, memorializing the dead and ritualizing was likely a common occurrence in communities.

In the following discussion, I use a tripartite system of separation, liminality and reaggregation, concepts presented in Chapter 3, to discuss Coast Salish funerary ritual as a rite of passage (Figure 16).

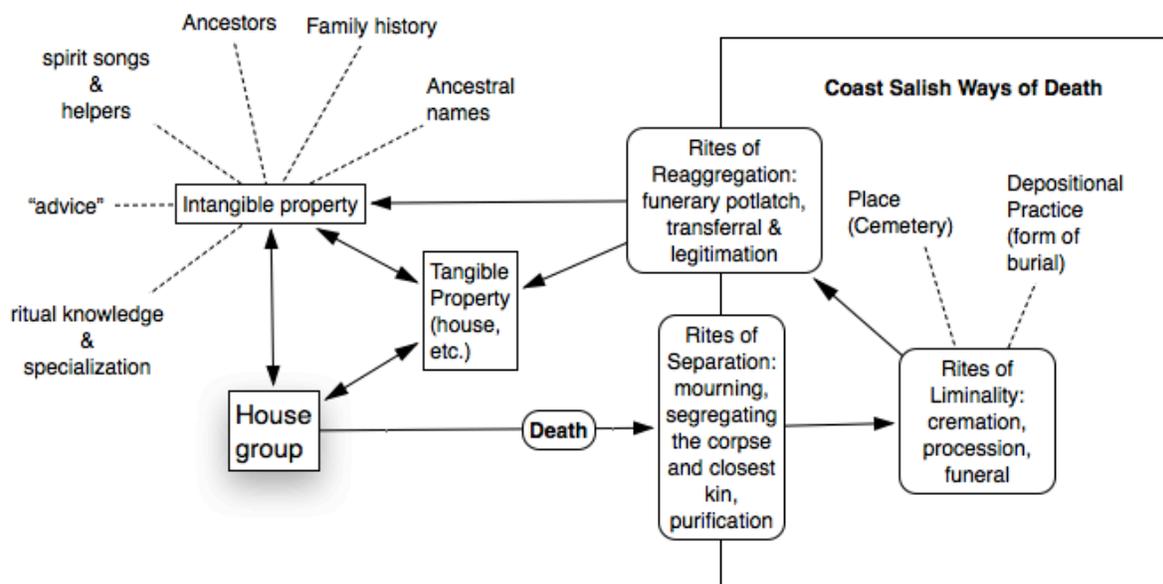


Figure 16: Coast Salish funerals as a rite of passage, illustrating the rites of separation, liminality, and aggregation. This demonstrates funerary ritual as a process of transforming corpse to ancestor and mourner to inheritor.

### Death as a Rite of Separation in Coast Salish Ritual Practice

At the time of death, the wailing and moaning of relatives could be heard throughout the village. This was a time of deference to ritual authority and paid undertakers, those individuals who had the necessary spirit power to protect themselves from the contamination of the dead. The latter were immediately hired to meet both the spiritual and physical needs of the dead. Between the time of the body’s last breath and the end of the first funeral (i.e., the permanent containment of the corpse), the lingering spirit was dangerous to the living, especially to the kin closest to the deceased. As part of the negation of the former social persona of the dead, this sense of danger extended to the corpse, and anything related to it (Amoss 1978:17). Everything associated with the burial of the dead was associated with contagion, including the people who

had the coffin, handled the corpse, and the house in which the person died. The surviving spouse was particularly in need of purification. The ghost had to be removed from the world of the living, and everyone and every thing associated with the corpse required purification (Jenness 1934:89). As a source of contamination the dead could drive away fish and game and the ghost could take the souls of the living with them. This danger was so great that only people with special spirit powers could handle the dead, purify everything that had come into contact with the dead person, and direct the ghost to its appropriate place (Suttles 1951:472-3). The corpse was quickly disengaged from the social world and was lifted feet first through an opening made in the wall, to insure that the living would not have to follow the path of the dead when passing through the doorway of the house. It also ensured that the ghost of the dead could not find the doorway and thus re-enter the house. The body was taken to a temporary shelter and kept for a time in a place that is symbolically outside of the conventional sociocultural order. This is where the ritualist watched over the dead, bathing and dressing the body and painting it with *təmət* (Barnett 1955:216; Boas 1891:575; Jenness 1934:92; Suttles 1951:474). The body was bent into a flexed position and wrapped in goat-wool blankets if the family could afford it. Matting was also used to wrap the body, and presumably cordage was used to maintain the flexed position, which may have been symbolically akin to an unborn baby (van Gennep 1960). The body was then placed in the newly made grave box or coffin: significantly, these were often cedar chests ordinarily used for blankets, a symbol of wealth.

The time before the funeral was marked by increasing ritual formality, particularly for those most closely related to the dead and those handling the corpse. Widows and widowers observed the most stringent mourning taboos and ritual purification. Much of funerary ritual revolved around them. The immediate family also followed a prescribed separation from the social world in which the normal daily routines were suspended while prohibitions were carefully followed, much of it related to food, eating and isolation (in the case of a spouse). Food taboos, especially for a spouse, were observed because of fear of contamination from contact with a ghost (Barnett 1955:219). Rites of separation were marked by purification of both the living and the dead. Ritual specialists “swept out” the house in which the person died, singing and reciting incantations while burning the seeds of *qəx̣min* (*Lomatium nudicaule*) like incense. They may have also beaten the walls with burning boughs of salal and Oregon grape while people drummed or kept time beating sticks (Barnett 1955; Jenness 1934:8; Suttles 1951:476; 1990). *qəx̣min* was

burned in the house fire for several evenings to drive out the ghost (Jenness 1934:92). The close relatives of the deceased required additional ritual purification, such as stepping over the body of their deceased spouse, bathing and scrubbing in ponds, and rubbing themselves with certain stones (likely smooth black rocks like those used during adolescent rites of passage). Seeds of a plant were also chewed (Jenness 1934:90); this was almost certainly *q'əxmin*.

### **Coast Salish Funerals as a Rite of Liminality**

There were five broad categories of people involved in the burial of the dead. These included the dead (present in both incorporeal and corporeal forms), immediate kin, the rest of the people in the community (and possibly neighbouring communities), ritual specialists who handled and attended to the corpse, and ritual experts who attended to and directed the spirit of the recently deceased to the world of the dead. The time between the preparation and subsequent burial of the corpse is where the particularly liminal aspects of Straits Salish funerary ritual happened. Delaying burial (and mourning) was avoided, as this was a time of peril for those closest to the dead. During mourning, the living mourners and the deceased constituted a special group, and they were both situated together between the worlds of the living and the dead. The nature and duration of mourning depended upon the closeness of their kin relationship to the dead person. Widows and widowers belonged to this special world for the longest time and could only leave it through the appropriate rituals, which lifted the regulations and prohibitions of mourning, thereby reintegrating them back into the life of society.

Coast Salish funerary practice followed a prescribed sequence, facilitated by ritual specialists. Prior to the funeral, mourners laid blankets and other goods on the coffin. Some of these were considered gifts, others strictly loans, and still others repayments of loans previously made by the deceased (Barnett 1955:217). People were subsequently invited “to witness” the funeral and were presented with gifts to do so. Most Straits Salish people otherwise avoided funerals for fear of ghosts (Jenness 1934:92). Every winter village had a cemetery, or *šməlq'wəla* (Montler 1991:34) and relatives of the deceased carried the coffin with cedar ropes from the village to the cemetery (Barnett 1955:217; Jenness 1934:92), followed by a procession of witnesses. A ritualist led this procession. Among the Halq'eméylem, ritualists chanted the prayer “You are from a woman’s womb. Return now to your home” as the procession moved towards the cemetery (Jenness 1934: unnumbered appendix). This entailed walking overland to the nearby cemetery or crossing by canoe to offshore islets (Suttles 1951:474).

Coast Salish funerary ritual emphasized incorporation of the dead into the world of the ancestors and this was assigned the greatest importance. The methods of bodily disposal varied considerably through time, place and individual circumstances. During the ethnohistoric period, there was an emphasis on spatially removing the dead from the living. Since the 19th century, small mortuary houses or sheds were often built for high-status families, characterized by elaborately carved posts, as well as wooden monuments, such as statues or images of the deceased or their spirit guardians (Jenness 1934:90). Jenness' Saanich informants insisted this was a post-European practice (Jenness 1934:90). The "coffin," likely a cedar box, was set on four upright posts, placed in a family grave house on a small islet, on bare rock, on tree limbs, or placed in a canoe either on the ground or up in a tree in no particular orientation (Jenness 1934:90; Suttles 1951:473-475). Among the Lekwungen, wealthy and high-class individuals were placed in canoes. These upper class canoe burials held others of the same family, with each corpse laid out and the canoe raised off the ground by means of a scaffold (Barnett 1955:217; Boas 1891:575). While the upper class received a highly ritualized burial, and their dead were apparently grouped together in both canoes and gravehouses, the common people and slaves were buried individually and with much less ceremony (Jenness 1934:unnumbered appendix), wrapped in mats, placed in boxes and left in trees (Boas 1891:575; Elmendorf 1960:453). Infants were often interred in baskets. People of special categories, like shamans or twins, are also given particular kinds of burials, although the form of these burials is unrecorded. While most of these mortuary practices seem to involve primary burials, the Nooksack practiced a variation of this involving secondary burial, in which the body was first wrapped in matting and secured in the branches of a tree. It was left until the flesh decayed from the bones, during which time the family of the dead were under special restrictions designed to protect them from the ghost, which was believed to linger around the people it loved. After the bones were clean, the undertakers took the bones down and rewrapped them, placing them in the family coffin, usually a cedar box, often kept in a tree or on a platform far away from the houses of the living. The bones of the dead were believed to remain powerful and dangerous (Amoss 1978; Fetzer 1950). This is reminiscent of the Tlingit, who viewed flesh as polluting and the bones as clean and purified (Kan 1989). Unlike the funerary petroforms that preceded ethnographic burial practices, none of the subsequent mortuary practices left material traces with much longevity. Canoe burials, for example, were repositories for dead family members, but only until the canoe rotted (Jenness 1934:90).

It was during the dangerous liminal and transitional period of handling the corpse and interring it, that the Coast Salish, as well as other Northwest Coast groups, approached mourning as a process concerned with limiting the exposure of the living to the dead. The larger funerary process, including both the treatment of the corpse and the ritualized feasting afterwards, was a process of redefining the dead as a revered ancestor. The ritualist performed a burning of food and some prized possessions beside the coffin— with the exception of his or her spirit dance costume — in order to convey them to the deceased (Amoss 1978; Jenness 1934:92; Kew 1990:479; Suttles 1951:476). This was a different event from a larger burning, which was conducted at some point after the funeral (Jenness 1934:92).

One of Jenness' cultural experts said that he was made to jump over the body of his dead wife four times, so that the ghost of his dead wife would not follow him home from the cemetery and bring harm to a future wife and perhaps as a way to "strengthen his soul" (Jenness 1934:75). The witnesses were then sent away from the cemetery to be ritually cleansed by rubbing with yew branches and bathing in the ocean (Jenness 1934:93). A sense of *communitas* was produced as the entire village participated in ritually purifying bathing in the ocean, moving in and out of the water four times in unison. After this, the ends of their hair were cut and the ends burned (Suttles 1951:476). Sometimes a spouse faced isolation in the woods before resuming his or her regular life activities, and some food taboos were observed for a year after the death (Suttles 1951:476). Food taboos seem integral to Straits Salish ways of death and the spouse of the deceased was not allowed to eat facing people, since facing children while eating would draw away their souls and kill them (Jenness 1934:91). At the conclusion of the funeral, the undertaker was subject to hunting and fishing prohibitions, as well as ritual purification (Barnett 1955:219).

### **Feeding the Dead: Funerary Potlatches as a Rite of Reaggregation**

The cemetery was only one of the focal points for ritualized activities associated with funerals. Leaving the cemetery was a first step towards returning to the social world. Following this was a period of the reification of the social persona attained by the transformed dead and surviving descendants. Once the body was successfully buried, this was an occasion for the transferal of rights and privileges of the dead to the living. This was not a seamless process without negotiation, however, and there was always the possibility of irreparable schism.

The living have a responsibility toward the dead. This is epitomized in the "feeding the dead" ritual, when food was burned for the ghost of a recently deceased person and at the same

time for any other ghosts who might be about (Amoss 1978:75; Kew 1970; Suttles 1951:477). This feast, also called “a burning,” was always well attended, both by the living and the dead (Duff 1952:117). This practice was done so that the dead “might not go faint or empty-handed to the Land of the Departed” (Hill-Tout 1902:105). The dead demand food, their possessions and proper respect from the living; vigilance must be maintained against other less reasonable demands. In particular, the dead are often lonely, so ritual protections must be placed around the grieving, particularly children and spouses, who are most vulnerable to soul loss (Amoss 1978:74; Duff 1951).

While the practice of burning for the dead has considerable antiquity among the Coast Salish (e.g., Carlson and Hobler 1993), it was also practiced by the Tlingit (Swanton 1908:413), Tsimshian (Garfield 1939:240), Haida (Swanton 1905:34-35), Bella Coola (McIlwraith 1948:109-110), Klallam (Gunther 1927:296) and Squamish (Hill-Tout 1900:478). Burnings are public ceremonies that were sometimes held four or eight days after the funeral, in which case it was a minor event primarily for the relatives. Larger burnings could also be done several months after the funeral or at a time when food that the dead might like became available, such as after the fall salmon fishery (Boas 1891:575; Jenness 1934:94). They are also periodically held thereafter either as a formal memorial or because some upset or trouble has been traced to the unsatisfied ghosts of the dead, to insure the safety of the living when the dead are disturbed and the ancestors are upset (Boyd 2009; Mapes 2009). In this instance, a ritual specialist would bring food to the cemetery and burn it to satisfy the hunger of the dead while calling out the names of the dead he wished to feed. Through flame and smoke, the property and food that is burned, becomes accessible to the dead (Amoss 1978:76; Kew 1970). Ritualists presided over this ritual burning for the dead, which was called *yak'w'ε'em* (Suttles 1951:477), the prefix *yak'w'* meaning “to hire” (Montler 1991:68). Burnings were done at dusk, that liminal time when the ghosts were entering the world of the living. The family of the deceased took a considerable amount of food to the graveyard, where the ritualist burned some of it, calling out the names of the dead. Ritualists first burned salmon, the cracking sound of which “called the ghosts” (Jenness 1934:94; Suttles 1951:477). Food was then burned for the recently deceased and then more was added for the entire village dead. The remaining food was given to the person officiating; to burn it all would have been dangerous to the family of the recently deceased. Similarly, children and ill

people were prohibited from participating, as they were susceptible to ghosts (Suttles 1951:477-8).

The act of burning, as it is presently practiced (Figure 17), allows the goods to move from the worldly plane to the spiritual one. McKay (2009) cites Stó:lō expert Helen Joe, who often conducts these burnings. She explains:

A burning itself is a way of providing for our people who have passed on. It is a belief ... [that] we take care of one another. It is kind of understood that once the people get to the spirit world there are different things they do—but they don't have means to feed and clothe themselves. They don't have the material means, but because they are used to these things, they still need them. So, it is our job here on the earth to set the table and call them... When everything is ready we have the fire. Once it goes into the fire and you see the smoke going up from the fire, that means that a part of that food and anything else that goes into the fire, once you see the smoke going up that means the spiritual part goes to the spirit world so the spirits there can partake in the meal... It is like any other meal with your family.



**Figure 17: Burning food for the dead continues to this day. The material remains of recent “burnings” (left), and the depositional practice of “sweeping up” after each burning and depositing the broken and burned materials adjacent to a historic cemetery (right). Tsawout Reserve, April 2014.**

Helen Joe continues to explain that if the dead are “not hungry,” the spiritual food is shared with others in the spirit world that do not have anyone to take care of them or have been forgotten by their descendants. The Stó:lō also believe that the dead are able to communicate directly with the living and request additional goods and food to be burned (McKay 2009). Betty Charlie related the story of an ancestor who was cold and requested another blanket be burned for her use in the spirit world. Burnings thus provide spiritual sustenance for the dead and are seen as acts of common courtesy acknowledging the responsibility that the living have towards

those in the spiritual realm. Burnings, as public ceremonies, are also a venue in which ritual specialists can impart knowledge and warnings from the dead, conveying it from the dead themselves or from their behaviour (Amoss 1978:95).

Burnings were also associated with taking an ancestral name (Amoss 1978:92-95) This was conducted in the public space of the big house; however, it was important for a space to be kept open between the officiating medium and the people bringing food for the dead-this space was to protect the living from the danger of approaching too closely to the dead, who are gathered close around the fire.

Funerals were potlatch occasions for the upper class. Funerary potlatches prolonged the period of ritualizing, where the power of the cemetery and the dead continued to infiltrate the social world of the living. Funerary potlatches gave full expression to the cultural theme of social inequality in the validation of status through the process of distributing wealth. While the rites of separation had a sense of *communitas* and a relaxing of social hierarchies, potlatches were the occasion when social inequalities resumed. It was still a time for the social to be influenced by the sacred and the potlatch was a celebration and reification of the social persona attained by the transformation of the dead and the surviving descendants. Like many peoples around the world, the Coast Salish accomplished this by feasting (Hayden 2009).

After the burial, a funerary potlatch was hosted to announced to witnesses the transformation of the dead relative to revered ancestor, and the transformation of living survivors to inheritors of the assets of the estate of the deceased (Barnett 1955:220). Only if the family was wealthy enough would they have a true potlatch, one through which they could feed guests, pay “workers,” and have goods left over for general distribution (Duff 1952: 87). Usually, the potlatch had to be delayed to a time when the family had accumulated enough to repay debts incurred during the funeral. Because burying the dead in a way befitting their position was an expensive undertaking, the post-funeral feast was an occasion for the family of the deceased to pay funeral debts (*q̓alīsə̓ ʔnəq*). Funeral workers were paid and others were paid to witness this. Relatives of the deceased gathered for a feast, bringing food to the home of the mourning family. The family of the deceased then invited other members of the community to eat with them, although the immediate family was subject to food taboos and likely did not participate fully (Suttles 1951:475). The event was sometimes used for other functions as well, such as bestowing ancestral

names (Suttles 1951:479). This practice rejoined the chain broken by death. But it was also “work” which emphasized differences in status among the living (Amoss 1978:12).

Relationships with dead kin were at the core of the potlatch among the Coast Salish (Wike 1967:101). The dead were thought to be present at potlatches. Among the Cowichan, for example, the dead presided at the potlatch as an effigy of rolled blankets and clothing (Curtis 1913:72, 520). Similarly, the dead were believed to be present and active participants at Songhees memorial potlatches (Wike 1967:101). The potlatch was simultaneously an opportunity to meet the needs of the dead, but also to raise or maintain prestige of the living through the distribution of property. While the very wealthiest may have hosted potlatches more than once in their life, the funerary potlatch was used to validate the change in status associated with passing status from a person’s parent to himself or herself. It is an occasion in which traditional names, status or hereditary privileges are claimed through speeches, dances and the distribution of property to those invited (Cole and Chaikin 1990:5). The property distribution in memorial potlatches had a dual spiritual function (Wike 1967:101). First, the potlatch host could access the ancestral support of powerful dead kin, support that was needed to maintain and conduct the responsibilities of household leader. And second, that property redistribution helped insure that the current titleholder could join the ancestral dead as a powerful leader. This connection between the potlatch and duties to the dead implicated the ancestors and their support in the periodic redistribution of wealth within and between communities throughout the Salish Sea (Amoss 1978:12).

There were occasions in which the material remains of the dead, or their belongings, were evoked by the living—all of which prolonged the funerary process, sometimes over years. These were also opportunities to honour the well being of the dead and to renew contact between the living and the dead. This was also likely related to a reassertion of social hierarchy, as the undertaking was expensive. If the living relatives could afford it, they made further occasions to remind others of their dead ancestor, such as rewrapping their bones, displaying their clothing, or singing their songs. All of these events required witnesses and the remuneration of their presence to advance familial prestige (Suttles 1951:473). For example, at some point after the death of a spirit dancer, such as during a potlatch, their family would publicly display their dance costume and sing their spirit song. The dead spirit dancer’s song could be sung by a living relative, as they stood on a pile of wealth about to be given away at a potlatch. This was largely

an act of remembrance, as the singer was not believed to be possessed by that spirit and the public was free to sing along (Suttles 1951:480). The spirit-dance costume, or the drum of the deceased, was ritually burned at this time (Kew 1990:479). During the historic period, mementos of the dead were sometimes displayed publicly, usually at a winter spirit dance. An effigy of the deceased was displayed, usually from the top of a pile of goods that were to be given away. The effigy often included genuine relics of the deceased like hair or fingernails, or more recently, photographs (Suttles 1951:479). Prior to this, an effigy was made of goat-wool blankets. The effigy was seated in a chair and wrapped in blankets. After witnesses were paid, the blankets and chair were also given away. It is possible that prior to European contact that a corpse, or human remains, were carried about on a bentwood box. The effigy and chair were post contact substitutions (Suttles 1951:479-480). Reburial of the dead occurred whenever the family believed that the blankets in which the deceased had been wrapped needed to be replaced. This was an expensive proposition and was only done by those that could afford it. A specialist, presumably the same person who officiated as the gravedigger, was hired to do this work. This meant exhuming the coffin, lifting the bones out, putting them in a new coffin and burying the new coffin. Again, this was an occasion for a feast and the payment of witnesses (Suttles 1951:479). This, and the other funerary practices of the Coast Salish peoples, speaks to the centrality of the ancestors and the lengths to which the living will go to ensure the comfort and well being of their dead.

As with death, life crises in Coast Salish society necessitate involvement of ritual specialists in order to ensure the proper purification and protection of all involved. Birth, puberty, and the coming out of a new spirit dancer were all life crises that demanded a similar process of isolation, purification, and reintegration overseen by ritual experts who were implicit in the social transformations of peoples. These transformations were often based on the acquisition of inherited or earned power, titles, names, and privileges and required the payment of witnesses, who were essential to validating the proceedings. All Coast Salish people experienced life crises of birth, puberty, and death, and the associated ritualizing of these events required wealth (Suttles 1951:493). Other rites of passage, such as taking an inherited name, were only available to those with the inherited privileges and wealth necessary to conduct this transformation.

Authority *always* has a “sacred” component (Verdery 1999:37, emphasis in original). Relationships with the ancestors and the supernatural were not only individual experiences but

are also practiced in public ceremonies. These ceremonies, such as funerals, provided a forum for the public presentation of individual spirit power and for confirming the status of the people acting as hosts. So while these public ceremonies were about individual and household assertions of power and ancestral relationships, they were also events that emphasized social cohesiveness and the persistence of tradition (Amoss 1978:87).

### ***Ancestral Presence: The Coast Salish Relationship with their Dead***

The powerful Coast Salish person was partnered with supernatural counterparts: the ancestral dead and a spirit power (Amoss 1978:121). It was the dead, not guardian spirits, however, who were the supernatural foundation for the social order among the Coast Salish (Wike 1967). The ancestral dead bore greater responsibility for monitoring relationships between the living, whereas guardian spirits were a personal possession kept largely out of the public sphere. The incorporeal dead were supernatural actors who could interact with and influence the affairs of the living, especially those of kin. As a critical source of assistance to their living descendants and Coast Salish peoples, ancestors were venerated to ensure the continued well being and positive disposition of the dead towards the living. This practice cultivated kinship values, promoted the continuity of the family lineage and the recording of genealogies, and was the basis for inherited position and power (Wike 1967:98).

Coast Salish peoples continue to have a complex social relationship with ghosts. A certain amount of interaction between the living and the dead is being is necessary in order to “keep the world right” (McKay 2009:124). Contact with the ancestors was not uncommon and death was seen as a continuum along which personal relationships could be extended. The spirits of the dead came to visit, were honoured, fed and spoken to; as such, they retained their agency and continued to exist as real beings (Joseph 1994). Among family, both living and dead, intangible components of Straits Salish personhood endure. These include names, titles, and prerogatives that are the collective property of the house. A name carried its own history and as the name was inherited, the bearer was seen as only temporarily holding it to be subsumed into the name and its trajectory through time. This bank of names, which were restricted house resources, linked the living with the ancestors and created continuity across generations, with the names and personae of the dead living on in their descendants. But it was not just the name, but the ancestral presence itself that lived on, existing variously and seemingly simultaneously as incorporeal ghosts

at the periphery of the living, in a shadowy spirit world separate from the living, and reincarnated amongst the living.

The Coast Salish ghost was the embodiment of liminality itself: ambiguous, dangerous, and existing at the threshold of the living. It was a constant reminder of the need to maintain the connections between the living and the dead, to maintain connection with the past. The dead were not a resource to be wielded or “bossed around” (Amoss 1978). Rather, the living had a custodial responsibility towards the dead. The relationship between the ancestors and their living kin was typically well meaning, but the dead could also be ambivalent or capricious.

The ancestral dead were inherently dangerous, particularly for the weak or ill prepared, and rhetoric of danger pervaded the possibility of ghostly encounters. From the moment a person died, regardless of how “beloved a man had been during his lifetime...he became an object of deep fear, because his shade or ghost was credited with power to inflict paralysis on any one with whom it came into contact” (Jeness 1934:89). There was a deep and pervasive fear of encountering ghosts, as the belief that physical contact with them caused partial paralysis (Jeness 1934:89,110). Cautionary tales of such encounters remain common to this day. Neglect or violation was believed to bring about punishment, and disturbing the burial place and skeletal remains of the dead invited disaster and death for the living (e.g., Boyd 2009; McKay 2009; McLay, et al. 2004). The living carefully and respectfully acknowledged the omnipresent dead, yet great care was taken to keep the ancestors at a respectful distance. The dead wanted to be acknowledged and included yet their supernatural and liminal nature made them inadvertently dangerous to the living. They were simultaneously helpful and harmful depending on the vulnerabilities of the living. According to McKay's (2009:124) informant, the elder Helen Joe: “that energy is so strong...we have to understand that the spiritual strength and the spiritual part of our people is so much greater than the human being and we have to be careful.” The dead are not evil or malicious but are simply more powerful than the living and proper precautions must be made in any potential interaction with them (McKay 2009:129). Awareness of the dead pervaded everyday practice.

For example, hunters who were about to carry a deer carcass home scattered blood about the kill site to throw ghosts off the scent of the hunter returning home with food for the living (Suttles 1951:100). Any human gathering attracts the dead, especially when food is involved. The dead congregate outside houses where feasts are being held, and it is generally believed to be

unwise to eat outside in the afternoon (the dead emerge in the late afternoon and maintain a diurnal schedule) or during funerals (Amoss 1978:74).

According to McKay's (2002) interpretation of Stó:lō eschatology, it is the dead who sealed themselves away from the nuisances of the living, rather than a fear of the dead by the living which defined the boundary between these two worlds. The dead want to avoid the living, with their mundane concerns and chaotic desires, and therefore instigate the division between the living and the dead. Upon death, one's outlook is expanded beyond that held during life. The dead are not evil or malicious but are simply more powerful than the living.

### ***Personhood and the Ancestral Dead***

The dead carry their recent life experiences into the ancestral world, where in turn that knowledge and experience becomes timeless and unquestionable. The Coast Salish person was comprised of several different corporeal and incorporeal aspects: the physical body, a soul, and a shadow or reflection. Some also had spirit power reside within them. As noted above, corporeal remains of the dead (*spəlq<sup>wiθəɹ</sup>*) were a source of danger and pollution. The actual materiality of human bone was dangerous, and bone taken from a cemetery, for example, was implicated in shamanic magic to cause harm or death (Suttles 1951:347).

Both the soul and the shadow resembled the bodily form. At death, the body and the shadow perished and presumably the spirit power was released. It was the soul, which gave rise to thought and consciousness. The Lekwungen differentiated between *nsal'i'* (soul) and *spəlkw'e'čə* (ghost) (Duff 1951), and it may be that *nsal'i'* became *spəlkw'e'čə* at death. Among the Nooksack, it is the soul that becomes the ghost (Amoss 1978:73). There is some ambiguity in Coast Salish eschatology concerning the ultimate fate of the *nsal'i'* or *spəlkw'e'čə* (Jenness 1934:108) but two possibilities, which are not mutually exclusive, seem evident in the literature.

First is the idea that at death, the *spəlkw'e'čə* lingered near the grave and wandered by night until it could be reborn, appearing in the same likeness as their former body. In effect, each family may have had its own stock of reincarnating souls and names, a process of group continuity integral to personhood, identity, and power. The Straits Salish word for great grandparent is the same as for great grandchild (Montler 1991:29) which speaks to the underlying sense of intergenerational connection of respect and responsibility between the living and the dead (McKay 2009:124-5).

The other concept involved the *spəlkwəʔə* travelling to the shadowy land, or ghost world; a spiritual place that mirrored the world of the living. While these concepts might seem, on the surface, to be contradictory, in our western understanding of the afterlife, when we die, we are “variously understood to go directly to Heaven, await the Day of Judgement, rot in the ground, become ghosts, journey to another place, fall asleep and meet up with friends and relatives who have died before us” (Tarlow 1999:103). While these different states of existence might seem ambiguous or contradictory, it may have been possible for the Coast Salish dead to simultaneously exist in a multitude of places, including being reincarnated, existing in an afterlife in an ancestral place, and lingering at the threshold and peripheries of the living (Amoss 1978:19). According to one of Duff’s Lekwungen informants, some ghosts may “just keep travelling” (Duff 1952:116).

According to Stó:lō elder Betty Charlie, the dead have the same capacity for reason as the living; a comparison can be made between the dead to those that are sleeping (McKay 2009:130). When a person died, their spirit left their body and journeyed to join their ancestors in the “Land of the Dead” or the “Ghost Land” (Duff 1952:116). This was a world of supernatural powers dangerous to the living, yet mirroring that world, perhaps in an idealized form. They lived in houses and villages and participated in the same activities, much as they did in life. The ghost land was a place accessed by a journey, such as a canoe, walking a long trail (e.g., Hill-Tout 1904:122) or through a hole in the earth resulting from a ghost stamping its foot (Stern 1934:122). This was a trip akin to those expressed in the Coast Salish rites of liminality, in which the dead were transformed from corpse to ancestor, often via both a physical journey of the body to the cemetery and a spiritual one to the land of the dead. This may speak to the symbolic significance of burials in canoes and funeral processions from the village to the cemetery.

Differences in dispositions towards the familial dead and the communal dead speak to larger social tensions amongst the Coast Salish. While one’s ancestors were the basis of the intangible rights and assets that underlie much of the house and class distinctions, there was general anxiety and fear of disembodied souls. These are entities that were inherently dangerous because of their liminal position between the worlds of the living and the dead (Hertz 1960). Death is a breach of the bodily boundary and becomes a public matter as the power previously contained by the individual is unbounded at death. While the ghost and the spirit power formerly

contained by the body were typically not malevolent, the power that inhered in both were dangerous to those without the capability protect themselves from it-particularly the mourning, the sick, and the very young. Asymmetries in power among the living were maintained or amplified among the ancestors in the land of the dead. While there was a sense that the dead, as a collective, were both powerful and dangerous, the idea that social and power categories were maintained in death suggests that the ancestors of some were more knowledgeable, powerful or capable than those of others. As such, they were presumably more dangerous to the living that lacked the capability to handle such an encounter. While power, songs and names were transferred to the living, thereby bestowing power and status to the individual, there was also a general rhetoric of caring and respect for the dead that was a communal concern. Funerals were events that attempted to mitigate or manage this disembodied ancestral presence.

### ***Power from the Ancestors***

*čəleŋəm* is the same word for ancestor, tradition and speeches (Montler 1991:30). The Coast Salish class system and the concept of inherited position were predicated on the unbroken chain of relationships between the living and the dead, which was to be safeguarded. Physical and ritual contact with the dead insured personal success among the living (Wike 1967:97) and the powerful people in Coast Salish society were those with close relationships to both ancestral and spirit power. These individuals were conduits for profitable interactions with the supernatural, which were of benefit to others in the house and the village. They had the inherited ritual knowledge combined with personal capability and motivation to successfully negotiate these flows of energy. In other words, both inheritance and personal qualities determined who could safely access the power of the ancestral world.

While the living derived power from the dead, the nature of continuity between the living and the dead was also structured by the belief that the rewards and the status rankings among the living were maintained or intensified in the land of the dead (Wike 1967:97). This suggests that the relationship between the living and the dead was eternally repetitive, an endless cycle of power flowing across the thin divide of death. There may have been a sense of timelessness in both the relationships between the living and the dead, and the power that this relationship bestows on both predecessors and successors.

Experiencing the dead was often a condition of superior personal power and depending on the context of the encounter, ghosts could be benign, helpful or malevolent. A person with

the inherited power and knowledge to protect him or herself could acquire a ghostly companion. Ghosts were never far from the houses of the living and although incorporeal, were substantial enough that they could be seized. By waiting at twilight, when the dead came out, the aspirant could grasp and ghost and hold on (Amoss 1978:18). Upon waking after the inevitable unconsciousness this connection caused, the ghost would then revisit the person and talk with them. One could also lie down in a cemetery with the body of a dead person, but this was fraught with danger as the corpse was the ultimate source of spiritual pollution.

The ancestral dead are implicated in power relations among the living (Gordon 1997). Ghosts did not give power as such; they provided access to knowledge available to the dead. Ghosts could transmit knowledge across social, spatial and temporal boundaries (M. M. Bell 1997; Buse and Stott 1999), and a person with ghostly connections was privy to the secrets of fellow villagers since ghosts could freely read the minds, feelings and intentions of the living (Amoss 1978:16-18,73-74). Ghosts also presumably had some knowledge of the future, since they knew who was about to die. Relationships with the dead could sometimes confer special abilities among the living. For example, the dead could be called upon to assist in curing cases of illness when the loss of the soul was suspected; ghosts were known to steal souls and the ghost partner could retrieve the soul from other ghosts. The ancestors could also be called upon to influence events, which entailed first calling dead parents, then dead grandparents, to stand beside the living. This kind of power could be used to paralyze an enemy so they would be powerless against the warrior; numb an elk so it could not run away from the hunter; attract the attention of a potential wife; or something more innocuous such as deaden the feet of a rival in a footrace or hold onto and slow a rival canoe during a race (Amoss 1978:16). Some Coast Salish informants said that ghosts could teach their living kin songs that were especially supernaturally charged (Amoss 1978:77; Suttles 1951:356).

Power conferred by the dead to one of their living kin was not without responsibility to the larger community of the living. Ancestral power demanded that a person behave properly towards kin and neighbours, because only with the help of other people could they enjoy good relations with ghosts and guardian spirits. In order to host a potlatch to comfort the dead and justify the right to bear illustrious names or pass them to children, it was the host's living kin who helped make this possible. Failure to honour the memory of one's immediate ancestors would bring the hungry and offended ghosts perilously close to the living (Amoss 1978:19). A person

who was lax in their obligations to his guardian spirit or who invited the retaliation of ghosts by a neglect of their legitimate demands was no asset to the community in which they lived. They would be subject to social sanctions, ranging from criticism to ostracism. A person who was careful to fulfill their obligations to spirits and ghosts would be regarded with social approval. While relations with the supernatural were individual, private and secret, because they determined each person's success in his role as a productive member of society, and invited disaster to all the living if offended, they were also of grave social concern (Amoss 1978:20).

### ***The Ghosts of Place***

Exploring the Coast Salish sense of the dead is more than just defining how ghosts operate within their worldview, but to understand how the meaning of ghosts and the power of the places associated with them relate to the social significance of a specific geographic location and the history that constitutes it. Significantly, ghosts can be implicated in laying claim to place and to the past and legitimating rights to place by demarking who does, or does not, belong there (Boyd 2009:705).

Ghosts characterize the experience of place, anchoring history and memory to space. Interaction with the dead enables the families and communities of the living to commemorate their ancestral dead and connect themselves to the past and to place. The dead inhabit places, and their dwelling gives a sense of social aliveness to a place (M. M. Bell 1997:815). This is more than just memory of place; their presence imbues place with a live quality that expresses the social experience of the physical world. Just as stones and trees may be considered as ancestors or the spirits of specific things, ghosts are spirits of particular spaces. In this way, space is given social meaning, thereby becoming place (M. M. Bell 1997:820). The dead embody the ghostly landscape and inhabit that place, which requires that the living maintain a respectful engagement with that place... "we experience objects and places socially; we experience them as we do people. Through ghosts, we re-encounter the aura of social life in the aura of place" (M. M. Bell 1997:821).

Coast Salish ancestral presence speaks to historical precedents of ownership of valuable house property through continuity with the past. Where there are disputes over property, we find ghosts, or where we find ghosts, there are bound to be anxieties about property (Buse and Stott 1999:9). Place is the manifestation of the prestige and status of the house and confers advantages to individuals and households. The individual is a temporary vessel in which ties to the past are

made through the bestowal of a name and the house is a locus for named individuals who together produce and reproduce ideas of history and place through the curation of group material and immaterial property.

### ***Spatial Dispositions of the Living and the Dead***

The Coast Salish classified space in two forms: the ethereal space of the ancestors and the supernatural; and the physical space of the living. The division between these spaces was permeable and easily crossed by the dead and could occasionally be traversed by the living if they had the proper training and knowledge. It is during ritual events, such as funerals and burnings that ancestors, the living and the supernatural agents could meet in a single place. Typically this coalescence happened either at the cemetery or the longhouse. These were places where the powerful agents of the Straits Salish world converged through ritual action. The living, the ancestors and the supernatural world merged in these ritualized places and times for the transferal and display of knowledge and power. Funerals and longhouse-based rituals, such as spirit dancing, were rites of passage central to structuring social changes and distinguishing status groups with clearly marked boundaries (van Gennep 1960). These ritualized spaces and events constituted the social identities and roles of the living and reaffirmed the timeless power of the ancestors.

In Chapter 2, I outlined that a recursive relationship can exist between domestic architecture and funerary monuments. There may be parallels between the use of space in both the cemetery and the settlement and relative monument locations may be analogous to house locations in a village. As such, considering spatial principles evident within ethnographic Coast Salish houses and settlements, as well as those of burials within the cemetery, may serve as a useful entry point to construct analogues for understanding the spatial organization of precontact cemeteries such as those at Rocky Point.

Longhouses were the major possession of Northwest Coast corporate groups and served them in many ways. They were the physical and spatial centre of the family group, its architecture and location a focal point of group identity, memory and a statement of social position. The longhouse was also a theatre and stage for social and spiritual rituals; they were shelter from the weather; the walls provided protection from enemies and privacy from prying neighbours; and they were centres of food production and storage (e.g., Ames and Maschner 1999:147-148; Barnett 1938, 1955; Boas 1888, 1890b; Drucker 1951, 1955; Gahr 2006; Mauger

1978; Suttles 1974, 1991). In the upper Fraser Valley, people also lived in pithouses—consisting of partly subterranean dwellings—between the Early and Late Pacific periods (e.g., Lepofsky, et al. 2009). There, houses of the living existed both below and above ground, perhaps a spatial precedent for the permeable movement of the dead from inhumation to mound and cairn.

There is a recursive connection between architecture and social structure in the house-based Coast Salish society. Space and material are relational to the social group and their place in the world. It is by reference to the house and its place on the landscape, that kinship, economics, and politics come to mutually constitute each other. For example, Marshall (2006:41-42) outlines the changing nature of space in Northwest Coast settlements between the Early and Late Pacific periods. Settlements become more formalized during the Early Pacific period (4400-1800 cal B.C.), in that materials were used in ways to explicitly delineate spatial boundaries and places. By the Middle Pacific period, linear villages appeared, with settlement demarcated into formal rows of closely spaced houses, typically facing the shoreline of a beach or river. Suttles cites this kind of village structure as evidence for the reality of Coast Salish social classes (Suttles 1987:5). In some villages, for example, there were upper class sections in the centre of the village and lower class sections at the edges (Barnett 1955:19,30). This was particularly evident at a Skagit village on Whidbey Island, where a log palisade fortification enclosed a longhouse at Snakelum Point. The house was divided into three segments, each with its own named group of high-class people. Outside the stockade, and thus unprotected from enemy incursions, were “camps” of low-class people who were prohibited inside the stockade (Suttles 1987:5).

Northwest Coast communities developed long-lived ties to particular places (Ames and Maschner 1999:160), with neighbours living in close proximity to one another. These were close-living groups increasingly separated by social and material boundaries, with space demarcated along family group lines and likely by class distinctions. By the Late Pacific period, linear villages of longhouses were typically grouped together as part of a village, and were generally aligned in one or two rows facing the water (Gahr 2006). Coast Salish houses were built in an array of sizes, with width less variable than length. While northern Northwest Coast villages appear to have been more spatially divided and houses more discretely internally divided, Coast Salish villages were not internally ranked but were divided along class lines. The households of the lower class sometimes at one end or one side of the village or perhaps even slightly removed from the village, in a more exposed location while the houses of the higher ranking were in the centre. Other

lower class villages were set apart from high-class ones, relegated to a serf-like vassalage to the socially and economically dominant village (Barnett 1955:19,30; Gunther 1927: 183-184; Suttles 1987:5). Open conflict may have occasionally occurred between the upper and lower classes.

Houses were rectangular or square in shape and varied in size; width was rarely wider than 15 m but length could exceed 200 m (Ames and Maschner 1999:163; Gahr 2006). Internal architecture of houses often included low walls, as well as boxes or benches, all of which served to delineate different nuclear family living areas. Family compartments within Lekwungen houses were divided by walls of hanging bulrush mats, with a fire near one of the front corners of each compartment (Boas 1890b:12). However, it was often difficult to distinguish a dividing line in the interior of a house between two families, other than perhaps matting partitions in the sleeping quarters. Among Coast Salish groups such as the Katzie (Jenness 1955:7), Lekwungen (Boas 1890b:564) and Lummi (Stern 1934:34), the rafter support posts marked social sub-units (Mauger 1991). Low status spaces lacked these architectural cues because they were in the middle of the house, and as such were almost certainly liminal spaces whose boundary and ownership were more difficult to define. It is likely that a greater degree of order prevailed when the house was used for ceremonial purposes (Jenness 1934:37). The upright posts of Coast Salish houses were sometimes carved with likenesses of their spirit powers, such as was observed by Boas in a Lekwungen house in Victoria (Boas 1890b:12). These figures were always kept covered and were only revealed during ritual events.

While little information is available on the spatial syntax of Salishan houses, Hill-Tout reports that among the Lekwungen, classes were ranked when it came to seating and grouping public gatherings (Hill-Tout 1907b:307-308). Such spatial distinctions suggest that Straits Salish longhouses were internally arranged this way. Among the Nuu-Chuh-Nulth on the outer coast of Vancouver Island, houses were internally arranged in relation to rank, with the several families that inhabited the longhouse allocated space based on their social status. The owner of the house (and head of the family group) occupied the right rear corner (standing inside the house facing the door; (Drucker 1951). The next in rank, usually a brother or other close kin, occupied the opposite corner. Corners to the right and left of the door were similarly places of honour, occupied by other important branches of the lineage; if the group was a large one, the two central places along each side were assigned to other branches of the family (Drucker 1951:71). With low walls between discrete family compartments, the head of the house could easily

monitor each family (Gray 2008) through sight and sound. While there is power in direct surveillance, individuals who recognize that they are under surveillance discipline themselves, embody this power relation, and become the principle of their own subjection (Foucault 1991). In effect, the commoners and slaves in a Coast Salish longhouse, in the absence of substantive privacy, monitored their own activities. The high status individuals, with their backs against a wall in the corners of the longhouse, were not subjected to this kind of observation. Occupying the corners of the house allowed the elites to monitor others, who in turn policed themselves under this constant watch (Gray 2008).

### ***The Space and Place of the Coast Salish Cemetery***

There is very little information available on the use of space in Coast Salish ethnographic cemeteries. While accounts stress the power and significance of the dead, as well as the form of the burial itself, the way space and landscape was used in the burial of the dead is conspicuously absent. Every ethnographic Straits Salish winter village had a community cemetery (Jenness 1955:85). Individual families may have had their own cemeteries or a “group of families had their own burial place, which was carefully chosen in a conspicuous place, at some distance from the village, because they considered graveyards uncanny places to pass at night” (Hill-Tout 1907a:205). Family burial places were often situated on small near-shore rocky islets (Jenness 1934:205). But we know little of the spatial patterning of the dead within cemeteries. It seems likely, however, that young children were buried away from the main cemetery, or along its periphery, since a mother who buried a child close to older graves could not conceive more children (Hill-Tout 1907a:205).

Among the Saanich, the community cemetery received the remains of persons of every age, sex, and status, including slaves and enemies; the latter two were wrapped in mats, not blankets, and placed on the ground (Jenness 1955:85). If an individual died a long way from home, every effort was made to bring the individual back to his or her home village cemetery. If this was not possible at the time of death, the bones might later be collected and brought home (Jenness 1955:95). Cemeteries were implicated in the display of status, and a venue for the assertion of prestige. For example, warriors, such as the famous Saanich warrior *Kwalarhunzit*, took the heads of their fallen enemies home as trophies, and mounted them on poles near the graveyard to avoid being disturbed by the ghost (Jenness 1934:68).

There is ambivalence in the Coast Salish spatial relationship to their dead. Cemeteries close to villages kept the dead in proximity to the living—aiding of reverence, remembrance, or facilitating access to the power held by the dead. Yet despite their proximity, strict customary laws of avoidance separate the living and the dead (McLay, et al. 2004). The living are forbidden to visit cemeteries and other burial places, or otherwise come into contact with the dead. Only those who own the hereditary rights and traditional ritual knowledge to deal with the dead in Coast Salish communities may visit cemeteries, physically handle the remains of the dead and funerary artifacts, or attempt to care for and appease the spirits of deceased family members through ritual practice (McLay, et al. 2004).

### ***Houses and Villages for the Living and the Dead***

Space is inseparable from people themselves. The spatial principles of village layout and internal house structure imply that the spatial dispositions of habitus defined the relationships between the worlds of the living and the dead (Warner 1965:361). Like the house, cemeteries and other burial sites represent perhaps some of the best means in which to look at social process. It is through building houses and burying the dead that space becomes place. Just as the house simultaneously embodies unity but also hierarchy and division, burial sites of house-based societies such as the Straits Salish were figured through a similar tension between a veneration of kinship underlain by inequalities in power, wealth and status.

The grave is a site where, through ritual, the living and the dead interact. The dead were a vital asset to any House, yet the gravesite was a place where the living worked to contain the supernatural power of the dead. Within the house, during ritual occasions, the house became a nexus for a similar intersection between the living and the supernatural, where ancestral power was displayed and manifest through inherited songs, dance, incantations, spirit powers, and so forth. The grave retained its liminality at all times, and was an inherently a dangerous place. In the house, the liminality of spirit power could be contained by covering carved house posts and putting paraphernalia in boxes. Both the grave and the longhouse, through the power of ritual, were conduits to the supernatural.

Some social significance of houses, as monumental architecture, may be analogous to monumental burials. Arguably, it is worth considering ‘house raising’ to ‘mound raising.’ Houses were built for longevity (Gahr 2006), which is a principle that informs monumentality (e.g., Barrett 1990; Holtorf 1997). Houses involved significant investment of labour and expertise. In

order to raise a house, one house group had to be able to call upon help from other house groups-and likely pay them through feasting and reciprocal agreements. The ability to build a house was a measure of a group's social and economic connections both within the village and further afield. This may also hold true for monumental burials, particularly the largest mounds, such as those at Qithyil. Houses were perennially maintained and maintenance obligations transmitted across generations for the house to survive (Gahr 2006). As outlined in Chapter 3, it is possible that later layers of sediment augmented Mound 1 at Qithyil, suggesting a ritual practice of maintenance. Among the Lekwungen, cemeteries were apparently 'set in order' in the early autumn, when people returned to their winter villages (Jenness 1934:8).

Houses were localities of history and memory, places of group continuity, identity and commitment to place and the physicality of the house (Gahr 2006; Marshall 2006). The social organization of the Coast Salish was structured by, in no small measure, the commitments of a group of people who shared a common identity, history and connection to place centered on the house (Gahr 2006:76). Social structure was predicated upon the transferal of the rights and obligations of the plank house, as a physical and social entity, through time and in a way that did not split property or house membership (Gahr 2006). This was accomplished in the hierarchical scheme of one person acting as a custodian of the house estate. The position of controlling the house was one in which considerable control over other aspects of life, such as food production, ritual, and so forth (Anderson and Sassaman 1996). These elites were stewards of the history and social position of the house; they maintained its social and economic ties. Building houses, as monumental architecture, promoted group solidarity and was a major opportunity for a house group to create and reciprocate the social ties necessary to be a successful House in the Salish Sea. While there were certainly aspects of aggrandizement and promotion of the rights and privileges of the elite, this was also an opportunity for group solidarity simultaneously building as they did relationships in which most people felt invested and from which they directly benefitted.

### ***The Tension Between Public and Private Space***

The spatial grammar of house/village and burial/cemetery may have existed in a recursive and mutually constituting relationship, with the use of space in the cemetery as an embodied and habituated version of the spatial syntax among the living. While this may speak to principles of social structure, it may also highlight dispositions and embodied practices that

resonate between the ritual practices of the house and the cemetery; principally the tension between public and private space.

There are concentric levels of privacy in the Coast Salish conception of space, ranging in scale from the village, to the house, to the individual body. Coast Salish houses were contained and private, differentiated and set apart from those of their neighbours by walls and doorways. Tension was maintained between public and private space; the public world was shut off by walls that defined the interior of the house as private space in relation to those outside the house group. Yet to those within the house group, the low walls and mats that defined separate areas limited privacy within the house. But while living under the gaze of other house members, there is also an internal and private world for individuals who possess secretive and personal spirit power. Yet this power could not be too secretive, lest it cause fear or concern amongst neighbours. Furthermore, in order to hint at or intimate the kind of power one possessed, it was necessary for that power to 'hide in plain sight.' Just enough of the power was revealed, during ritual events such as spirit dancing, for example, that people had a sense of this individual power. It is this interplay of public and private within and between houses and social bodies that power resides.

There was probably very little privacy in the Straits Salish house. Privacy, however, is a theme that pervades Coast Salish worldview and the house is no different. With privacy, neighbours have the opportunity to evade the attention of one another, yet privacy may have also been equated with concealment, conspiracy or surprise. Certainly concealment of certain things was important-spirit powers and associated practices were private, as were powerful things such as paraphernalia and even architectural features such as house posts like that above, which remained concealed except during ritually charged moments. But this sense of privacy was the basis for the potency of power.

### ***Ritual Specialists in the Coast Salish Ways of Death***

The role of ritual specialists in funerary practices is well documented in Coast Salish ethnographies since a number of ritual experts served as informants (Jenness 1955). Most communities had professional ritualists specializing in funerary rites (Jenness 1934:91). The expertise of the ritual specialist, however, was one that extended beyond any one household or village. Today a network of experienced ritual specialists attends funerals and other ceremonial events throughout the region (Amoss 1978:118). Ritual practice and practitioners were important

in forming regional systems (Miller 1999), and there may well be antiquity to this ceremonial circuit, with well-known ritualists, witnesses, and professional orators attending funerals of the upper class. The ritual specialists in Coast Salish society, were not, however, an organized group (Suttles 1951:497) and rituals, including funerals, varied from family to family and specialist to specialist. The ideas behind them, however, remained essentially uniform (Jenness 1934:89, 92). It was likely that a funeral conducted at one end of the Coast Salish ethnolinguistic region was familiar in many ways to one conducted at the opposite end, but with variations that also reflected both individual and local practices.

Coast Salish ritual specialists were people with a hereditary and privileged understanding of supernatural forces. Presumably, it was high-class members of society that served in many of the ritualist roles. Ritual specialization in Coast Salish society depended upon restricted ritual knowledge inherited and learned from family (Jenness 1934:92; Suttles 1951:383,475,491). This knowledge was supplemented by spirit power, which came directly from nature in a vision (Suttles 1951:491). While some spirit power was hereditary, one still required courage and conviction to attain that power through the spirit quest. Training and knowledge of good places to acquire certain spirit power gave the high class an advantage (Suttles 1987:8).

In recent times, many different people may filled the role of bathing and dressing the body, keeping a wake, making the coffin, digging the grave, acting as pallbearers, conducting the funeral and attending to the ritual needs of widows and widowers (Suttles 1951:481). It is possible that in precontact times these many roles were filled by a smaller number of ritualists. At least three classes of ritual specialists, however, were implicated in both the burial and maintenance of the dead, including gravediggers, shamans, and mediums (Suttles 1951:331-357). All received payments for their services (Jenness 1934: unnumbered appendix). Payment for the services of ritual specialists to attend to the needs of the deceased served to honour the dead and reaffirm the surviving family's claim to the prestige of their deceased relative (Suttles 1951:473).

Hereditary undertakers, or 'gravediggers' were the people who cleaned and dressed the corpse and carried it feet-first to the cemetery. The gravediggers were persons with the hereditary right and responsibilities to bury the dead, possessing the inherited ritual knowledge and spells necessary to safely conduct their work, and protected by spirit powers that specifically safeguarded those whose work was closest to the corpse. This work was highly ritualized and prescribed. Digging a grave, for example, required that the gravediggers address spells to the

earth and the tools. Digging proceeded with the two diggers first facing away from one another and digging outward, working across the length of the grave, then working back towards each other (Suttles 1951:482).

There were ritual specialists, called *palk<sup>w</sup>e'čē'ēlč*, who worked like mediums, with the power to hear, see and converse with the dead (Amoss 1978:94; Suttles 1951:355). The title *θi'θa* appears to have been a general term for ritualists among the Saanich (Barnett 1955:222; Jenness 1934; Wike 1941:116), although Suttles' Strait Salish informants did not recognize the term (Suttles 1951:391). These are highly respected people, often with a stately presence (Amoss 1978:94). The ritual abilities of the *palk<sup>w</sup>e'čē'ēlč* were often acquired during a life crisis, the source often being a ghost (Suttles 1951:355). There are few people who can qualify as mediums, but this hereditary and respected position is not without its hardships. When someone was about to die, for example, a ghost (*spalk<sup>w</sup>e'čə*) often visits the *palk<sup>w</sup>e'čē'ēlč* to inform him or her. As one of Amoss' informants put it: "You never sleep. They're always talking to you" (Amoss 1978:76).

The *palk<sup>w</sup>e'čē'ēlč* were capable of close contact and direct communication with the dead. It was the *palk<sup>w</sup>e'čē'ēlč* who called the dead by name during burnings. As a benefit of this close relationship, the *palk<sup>w</sup>e'čē'ēlč* had access to the supernatural knowledge of the dead. A tension existed between being recognized and respected as someone with acquired spirit power and ritual knowledge, and using that power for the benefit of the community. Often the use of these powers were also a witnessed event, generating prestige for the user, as well as financial remuneration, as non-repayable payments (Amoss 1978:17,154). But equivocal with the acknowledgement of one's spirit power was the apprehension of the village that that power could also cause harm, either accidentally or purposefully.

The principle ability of the shaman was to see and hold onto souls and powers. Shamans primarily treated illnesses whose root cause was a loss of soul or power, as well as those caused by the intrusion of an object, disease, power, or ghost. Ghosts were particularly implicated in the loss of a soul (Suttles 1951:342). Curing was done in the home of the afflicted, and always with spectators who beat time to the shaman's song and witnessed the curing and the doctor's good intentions. Doctors often worked together to retrieve souls, which were stolen by ghosts, monsters and shaman powers. Shamans acquired their power from many sources, including animals, insects, stones, ghosts and a variety of monsters (Suttles 1951:339). The power of a shaman was always with the individual; Amoss uses the analogy of an invisible cloak or aura. This power was

omnipresent and if a person with weak spirit power or soul passed too close to a shaman, their power or soul might be attracted away and stick onto the shaman (Amoss 1978:14). There was an emphasis on the loss of soul and spirit power, by even being momentarily weak in the proximity of a very strong spirit dancer, medium or shaman. Soul loss through encounters with the living or the powerful dead was a real concern for all in society (Amoss 1978:85). Minimizing exposure to spirit power, even that which is not malevolent, was generally a good idea, as spirit power was inherently dangerous, particularly to those who did not have the power themselves to resist it. Losing one's soul, or spirit power, as well as picking up an unwanted spirit, caused "Indian sickness."

Within the larger picture of Coast Salish cosmology, shamanism is implicated in the liminal space, the place between the worlds of the natural and the supernatural and the living and the dead. There is an ethnographic and contemporary fear of sorcery and shamans as well as accusations of the malevolent use of spirit power among the Coast Salish. Amoss argues, however, that this is indicative of increasing social tensions and a result of social disorganization subsequent to European settlement (Amoss 1978). She asserts that prior to contact, there were likely social structures in place to mediate the malevolent use of spirit power and that such power was often used for the benefit of the community.

It could be that the role of the *palk'wé'čé'élč* may have eclipsed that of the shaman, with the historic advent of the prophet dance and subsequent Shaker Church and the expansion of the spirit dance, both of which truncated the role of the shaman in Coast Salish society. In particular, the role of the Medium crossed over into the realm of the Shaman when there was trouble with the dead. Like the shaman, the medium was able to pursue the dead to return lost souls (Amoss 1978:76). It may be, however, that this role distinction was more acute prior to European contact, as it seems that *palk'wé'čé'élč* performed many of the same functions of the shaman. Amoss argues that the medium is now "the major link between the ghost belief system and the guardian spirit complex" (Amoss 1978:77). "Indian sickness," caused by supernatural entities, including the unwanted onset of spirit vision, soul loss, attacks by malignant shamans and very rarely, the effects of an ill-intentioned ghost. When ghost theft was indicated, two mediums worked in tandem, with the first distracting the offending ghost with food and the second medium snatching the soul away, to warm it by the fire before putting it back on its owner (Amoss 1978:84).

### ***Spirit Power and the Narrative of Death and Rebirth***

The physical world of the Coast Salish was imbued with spirit power; natural objects were regarded as living beings (Suttles 1951:327). To be a successful social and economic person, a person needed to establish lines of communication with the nonhuman realm. All special abilities—whether of craftspeople, hunters, or shamans—are understood to be the direct result of spirit power (Suttles 1951:53). As outlined earlier, this often involved assistance from the ancestral dead. But a partnership with a spirit helper was also critical to one's success (Amoss 1978:12). Power was obtained either intentionally or unintentionally in a dream or a vision. Questing was undertaken by adolescents, who ritually bathed and purified themselves, and who were isolated while fasting. Some places were known to have particular powers, but this was restricted family knowledge. Death can often precipitate *sia'wən* (spirit power) among the living. Among the Nooksack, a person may come to spirit power through sorrow while grieving for the death of a loved one. While there are other ways of coming into this power, mourners are in a susceptible state and uncontrollable grief can lead to *sia'wən* possession. It is believed that *sia'wən* “takes pity on” mourners (Amoss 1978:54). Death and rebirth of the ancestor presages a similar death and rebirth amongst their closest kin and both are transformed and restated in the relations of power.

The narrative of death and rebirth are central to Coast Salish ritual practice. The social transformation of the spirit initiation is analogous to the other great harnessing of spirit power, the funeral. The treatment of the spiritual initiates parallels the treatment of the corpse in many ways. The passage from the human world to the supernatural one was ritually dangerous and entailed ritual observances, including cleaning off the smell of the living and of the house, and isolation in desolate places which protected the seeker from the contamination of contact with other humans (Amoss 1978:12-3). Obtaining spirit power was a major rite of passage in the life of an individual. It is a liminal time steeped in the inherent danger of spirit power and aimed at harnessing that power. In the same way that the funeral is centered on the transformation of the dead, the spirit initiate is similarly transformed from one status to the next. In spirit dancing, spirit illness is attributed to someone who has spirit power that must be tamed. The initiate is possessed of a wild untamed power, which can—and likely will—destroy them; it can only be cured through initiation into spirit dancing. The sufferer of spirit illness is *q'aq'əy*, “dying sick” with *sia'wən* (spirit power). Spirit initiation begins with a rite of separation. The candidate is secluded and is symbolically slain so that his former life is temporarily lost. To live, the initiate

must submit to a ritualized death as part of the ordeal of initiation; the individual is symbolically clubbed to death, to be resurrected or “stood up again” and reborn as a “baby.” The initiates are suspended in a dangerous liminal place, their supernatural danger derives from their marginal position between the categories of spirit dancer and non-dancer, much like the recently dead are “betwixt and between” the categories of corpse and ancestor (Turner 1964). Spirit dancers enter the transitional or liminal period when they don their dancing costume, transforming into a dancer. The dancer is neither fully human nor fully nonhuman (Amoss 1978:59). The new dancer is especially susceptible to ritual dangers, and his spirit may lift off him or her, with dire consequences. This liminal period lasts the duration of the dance season, usually between November and April. During this time, the initiate learns to control his or her new powers. Attended to and protected by “babysitters,” the secluded initiate is invested with regalia once they have “found their song” (Amoss 1978). The initiates learn to “make a home” for their spirit. Rites of reaggregation begin with the initiates being reintroduced to the public on the fourth day of their initiation (a parallel to the four days of the funeral). The headdress of the initiate, consisting of long thick woollen strands that shield both spectator and initiate is called *sáyiws*, the suffix *-yiw* meaning “having contact with the supernatural” (Jilek and Jilek-Aall 1982:131). The Musqueam term for this headdress is *sxa'yus*, a variant of *skayu*, or “inhabitant of the land of the dead” (Haeberlin 1918:254).

Tension inheres between acquiring and simultaneously containing power during the spiritual initiation process. During the last night of a new spirit dancer’s initiation, the *x<sup>w</sup>qalačən* performance occurs during the dangerous liminal period in which the initiate was about to awake from unconsciousness. Fires were put out and spectators were warned not to laugh. During a visual spectacle of flashing lights and whistles, the pitch-impregnated central fires were dramatically relit; a container of water was brought out, containing feathers that were thought to be “piercing rocks” floating on the surface. The next morning, water from these containers was poured over the initiate (Suttles 1951:415-418). This performance was used to tame the power of the initiate (Suttles 1951:417). The acquisition of spirit power was central to the transformation of the initiate, but this power was so powerful it needed to be handled carefully. Initiates managed this, in part, by using symbolic piercing stones to purify their bodies. Metaphorically, this tension between gaining and wielding power on an individual level, while societally restricting that power for the benefit of the individual and those around him or her, was critical. When the unprepared

came too close to the initiate prior to *x<sup>w</sup>qələ čən*, they risked getting ‘twisted up’ and dying (Suttles 1951:416).

The spirit power stays with a person year round, while their *sia’wən* song lies dormant in spring and summer, only to awaken again in the winter during the ceremonial season (Suttles 1951: 359). People generally hesitate to offend a person thought to have strong spirit power. It is important that the human partner not lose control of their *sia’wən* as his spirit power may take action without the knowledge of its host. This reaction usually outweighs the perceived offence. As such, a person with spirit power must control their angry feelings and keep *sia’wən* close, lest the power exact revenge on its own. This power can also be used to exert influence and correct offending behaviour, but must not be used to hurt the living (Amoss 1978). The relationship between dancer and *sia’wən* cannot be dissolved and must be maintained: a person who does not dance enough may face social disapproval from the living in the form of nagging and gossip, but more substantively as spiritual retribution from his *sia’wən* in the form of sickness. A *sia’wən* may also just leave its negligent host or cause its owner to die (Amoss 1978:63). Well-controlled *sia’wən* can also be used to help family and community, for example by watching over children or guiding a friend safely home (Amoss 1978; Wike 1941). This may be a sort of levelling process; those with power must not be offended, at the same time as the powerful have a simultaneous responsibility to control their anger if offended. There is this latent supernatural agency, entangled in relations of power that exists within any and all human interactions. The basis of this power is varying degrees of control over the supernatural. Being the bearer of powerful *sia’wən* bestows privilege, but simultaneously presents a perpetual challenge expressed in the rhetoric of a taxing responsibility.

### ***The Private and Public World of Sia’wən***

As I have noted, there is considerable variation in Coast Salish ceremonial ideology and practice (Amoss 1978:47), much of which might be explained by social networks orbiting around a particular ritual specialist whose ideas are infused throughout the social network. Yet despite this interconnectedness, uniformity is uncommon. Amoss explains that there is a general lack of pressure for uniformity but also the positive value placed on keeping one’s special ritual knowledge private. The value placed on individual spirit contact likely contributed to such variation (Amoss 1978:48) and it is likely that there was leeway for innovation and improvisation. The ritual knowledge of both practice and ideology was often discussed within one family and

only transmitted as necessary to legitimate heirs as valuable family property (Amoss 1978; Suttles 1958).

In order for private ritual knowledge to be a source of power, its potency must garner recognition. There is a tension between retaining the exclusivity of knowledge while intimating its potency. According to Duff's Lekwungen informant Jimmy Fraser, when people hear your song, they can glean its power (Duff 1951). Whereas the visions and powers one receives are private and known only to the person who possess them, music, manner of dancing and dance regalia communicate what kind of *sia'wən* song the person has received (Suttles 1951:357). Among the Lekwungen, revealing one's power when singing was called *ntxayən* (Duff 1951). When a singer called for their power, it became apparent to those listening what that power might be. Duff's Lekwungen informant Jimmy Fraser gives the example of a Saanich man with Wolf power when he sang, all the wolves in the village's vicinity answered back, revealing the man's power (Duff 1951). Though people may have the same power, all songs are different. Yet one person singing his wolf song tended to make another's "come up," exciting dancers with the same power (Duff 1951). Jimmy Fraser's example highlights the tension between keeping personal power secret, while revealing something of that power to those around you, giving some sense of the power you might possess. The tension between private and public, personal and shared, was palpable and underscored much of Coast Salish ritual practice.

### ***The Metaphorical Mineral World of the Coast Salish***

The materials used in funerary ritual are inextricably and metaphorically linked to social, and economic, practices and engagements with those same materials outside of the cemetery. The choice of metaphor "will doubtless be related to the whole complex of culturally determined themes" (Goody 1962:43). The significances of these materials will also have a historical basis (Pader 1982:41). While archaeologists have explored the role of material as metaphor (e.g., Brück 2004; Lakoff and Johnson 2003; Tilley 1999), material metaphors are devices not just for expressing, but also for understanding and creating understanding. Ritual does not just re-create codes that were simultaneously also expressed in mythic, spatial, and other practices (Boivin 2009:277). In other words, material things are not representations of the real, they have the power to direct and impact our lives, as embodied persons (Boivin 2008; Meskell 2008; Nielsen 2008). For example, in Bloch's ethnographic work among the Zafimaniry of Madagascar, he examined the role of material culture in ritual practice, particularly the wooden carvings that

cover traditional Zafimaniry houses (Bloch 1992, 1995b). These carvings do not represent anything, and instead served to "make the wood beautiful" or to "honour the wood" (Bloch 1995b:214). Bloch realized that while knowledge can be articulated in language, much of it is actually anchored in practice and material experience (Bloch 1992:132).

The focus, then, is not on meaning but process. In other words, what does material do for the ritual process? To extend the example, what might make stone an appropriate material to use in the burial of the dead? To answer this question, we would need to consider the role of stone outside the cemetery in economy and cosmology. Access to ethnographic evidence from which a historically and culturally contingent relationship with stone could be derived would greatly support understanding this material in the burial context. The physicality of stone as it is experienced both inside and outside of the cemetery, makes it an appropriate material with which to bury their dead. Objects can be invested bundles of qualities (Kopytoff 1986). Stones for example, can be invested with ideas of permanence, heaviness, and anchoring. Qualities bundled together for any object can shift their relative salience, value and utility across contexts, so that the many stones used to build a burial monument might be understood as a biography of individual stones, each contributing their own sense of permanence and weightiness to produce a new form yet conveying the qualities of the things used to build it. It is this and other qualities of stone as a material that might cue people to incorporate stone in the burial of the dead, when anchoring the dead is what is required, or when using stone in the burial of the dead becomes associated with need to anchor the dead. These attributes of the material world may have implications for considering the aesthetics of depositional practice (Pollard 2001).

Minerals are implicated in the funerary practices of Coast Salish peoples. Hematite, or *tamət*, is a red pigment used in the burial of the dead and in protecting the living from the dead (e.g., Boas 1890a). Quartz crystal was used in the burial of the dead, perhaps specifically with shamans (e.g., Hickock, et al. 2010) or other people with powerful *sia'wəm*. As outlined in Chapter 3, stones have been used in the burial of the Coast Salish dead since at least the Early Pacific period, a practice that reaches its zenith during the Late Pacific period with the advent of funerary petroforms. The Coast Salish people also engaged with stones, minerals and soil as a physical medium encountered in their daily life, whether through clearing camas fields, anchoring reef nets, digging defensive trenches or other actions. But these physical engagements were not simple movements of minerals; stones have a specific materiality that entangled the

Coast Salish in relationships that transcends traditional archaeological categorizations of stones and other materials as “neutral” or “natural” things.

Congruent with Ingold’s perspective on ‘things’ as opposed to ‘objects’ (Ingold 2007), stones in the Coast Salish world are deeply entangled with the economic, social, cosmological, mythical, spiritual, and philosophical aspects of life. While in Enlightenment thought objects and subjects are separable (Fowler 2004; Ingold 2007), for the Coast Salish this is not the case and in these understandings of the world, stone, soil, animal, plant and human are not taxonomically separated. In this way of understanding, there is considerable permeability between categories of personhood (Fowler 2004) and materials such as stone, which are not inert, but animate, sentient, and engaged with the living (sensu Cruikshank 2005).

In the section that follows, I outline the metaphorical significances of stone. This provides context for Chapter 8 where I outline why, in Coast Salish epistemology; use of stone in funerary ritual represents a novel application of a familiar material with new and powerful effect. Stones are solid metaphors, figuring prominently in ideas of purification, transformation, concealment and anchoring. Many of these relate to stones used in rites of passage in contexts other than funerals.

### ***Stone as a Metaphor for Purification and Transformation***

Stones were used in the ritual purification process of both boys seeking spirit power and girls undergoing menstrual seclusion. In both rites of passage, a smooth black stone was rubbed on the body after ritual purification by bathing and rubbing with yew boughs, or alternatively blackberry bushes if the initiate sought shamanic power (Jenness 1934:74, 76, 77-8). Both initiates expectorated on a large black stone as well. This is similar to the ritual prescriptions of purification followed by a mourning spouse in the four days after the death of his or her partner (Jenness 1934:91). A mourning spouse rubbed eyes four times with a water-worn stone taken from running water and then threw it away, praying that the surviving spouse might not become blinded (Hill-Tout 1907a:208)

So too is stone implicated in the transformation of ancestors--progenitors who were transformed and anchored in places of power. Stones are recognized as potentially animate, powerful and sacred. Some stones are believed to contain mythic or other beings that were turned to stone, retaining their power and sentience (Thom 2005:131-140). These boulders, situated across the landscape, anchor stories inscribed in landscape, language, discourse and

identity. Coast Salish experiences of transformation provide a link between people and the powerful ancestors who dwell in the land. Transformed ancestors have a practical and real importance in the lives of Coast Salish people, since the spirit inhabitants of the land contribute to human well being equally and on the same footing, as do human ancestors, providing food, guidance and security (Thom 2005:131-140).

This is exemplified by Stone T'xwelátse, an ancestor of the Stó:lō who was transformed as a lesson for his descendants about how to live properly (Campbell 2010). This anthropomorphic stone contains the soul of a transformed man who was turned to stone by Xexá:ls (the Transformers), who travelled through the land in the distant past making the world right. Stone T'xwelátse forms part of a broader landscape transformed by Xexá:ls and using the supernatural powers they possessed, Xexá:ls physically transformed people encountered at particular locations into stones, mountains, and other forms. Xexá:ls transformed the living souls of these people, who ever since have remained embodied in their altered forms, just as T'xwelátse's soul remains alive and embodied in stone. These transformations surround the Stó:lō as the living, ancestral landscape of the Stó:lō world (Stó:lō Nation 2012).

The Lekwungen expert Jimmy Fraser stated that, amongst the Straits Salish, there were “no totem poles down here. All Stones... We use that. Just us” (Duff 1951). Whereas other Northwest Coast peoples used monumental totem poles to recount familial stories and narratives, clan lineages, or notable events, the large transformer stones of the Salish Sea were powerful sites, rich with history. On the southern tip of Vancouver Island, two transformer stones are known. “Yicksack” was a sandstone boulder set on top of a glacial erratic near the shore of Cadboro Bay, fronting the immense Cadboro Bay burial cairn complex (Deans 1891b). Yicksack was petitioned with songs, dances and a coating of fish oil to bring about favourable weather for fishing. Similarly, there is a transformer stone named qeysca:m, which Musqueam expert James Point recounted, may have variously moved between families through marriage, gifting cycles, and athletic gaming within a secret society (Roy 2010:3-4). The Tsleil-Waututh may have also gifted qeysca:m to their Musqueam neighbours, in payment and gratitude for assistance conducting burials during a small pox epidemic (Roy 2010:4). As a supernatural being, qeysca:m had the ability to change the weather, which petitioners requested by painting her face different colours. Like Yicksack, painting qeysca:m's face with fish oil and red paint brought good weather, whereas black paint brought bad weather (Roy 2010:4). Sa'siyəmaʔ, meaning



the spatiotemporal constitution of the world through accumulating stones produces the sense of continuous or recurrent spatial occupation. As such it emerges in and from recurrent ritual activities, thus conveying the connection of people with their ancestors (Munn 1992:98).

Arrangements of stones are also implicated in the ritual containment of contamination. Rings of stones on mountaintops around the Salish Sea were sites for the transformative process of rites of passage, such as female puberty and *sia'wəm* quest rituals. These were isolated places, close to ponds, where adolescents were ritually purified by rubbing themselves with boughs of yew. These petroforms ranged from circular to rectangular outlines up to 12 m in diameter, with stones placed in a single line. The used and contaminated boughs were contained within and beneath the stone rings (Jenness 1934:80). Such stone rings have been identified in the interior of Salt Spring Island (Jenness 1934:80), as well as high on mountaintops around Sechelt (Acheson and Riley 1976; Hill-Tout 1904).

Perhaps one of the most significant Coast Salish economic interactions with stones comes from reef netting. This uniquely Straits Salish fishing technique entailed the use of large beach rocks, each of which took two to four men to lift (Boas 1890b:16; Stein 2000:33; Suttles 1951:167). These stones were used as anchors for the larger reef net apparatus, with each anchor setting requiring about 10 to 12 stones. At the conclusion of fishing, the nets were cut away from the stone, producing, in effect, piles of stones among the routes of migrating salmon. These reef net anchor spots were reused, so it is clear these settings were well-known places and may have been visible amongst the shallow reefs from the ocean surface, since clear water was a prerequisite for an anchor location (Stein 2000:33). Reef netting was a cooperative effort orchestrated by a “captain,” a person invested with the hereditary knowledge and rights (Suttles 1951:168). The practice of reef netting seems analogous in many ways to the building of a funerary petroform: both are an orchestrated and communal event requiring the careful selection and transportation of appropriate stones brought to a specific, family-owned place. Metaphorically, the act of building a funerary petroform may have been equated with anchoring a reef net. In this sense, the dead were being anchored in place.

Crevice in bedrock were used as places to contain powerful things. For example, as part of the First Salmon ceremony, after *sx'w'a'yəq'w* (the first salmon) was caught, the Becher Bay Klallam placed its bones in a rock crevice. The people were purified and the bones were “fed” with burning *qəx'min* (*Lomatium nudicaule* seeds) or *təmət* (hematite) was placed inside the fish (Duff

1951; Jenness 1934; Suttles 1951:173-175). Other Straits Salish groups also placed the salmon offal into a crevice (Suttles 1951:176). The first salmon ceremony was a homology of death, burial and resurrection: the ritual parallels the burial of the dead in several ways. While a funeral works toward repairing the social fabric torn by the death of the individual, it is also central to creating ancestors but also resurrecting the names, prerogatives, and other resources of the deceased so that they might be visited upon the living again. The first salmon ceremony honours the salmon, which “just like a person” is considered an ancestor. This ritual worked towards creating an accord in which the salmon continues to appear year after year. Both are cyclical—a movement between death, burial and resurrection. Interesting similarities in the use of stone, as a way to contain the body of the salmon, and *qə̀x̣min* and *təmət* used as agents of purification characterize the liminal state of the ritual process.

### **Summation**

The Coast Salish have a strong sense of purity, impurity, and death, which is the ultimate corruption of the boundary between purity and impurity. As such, it threatens the well being of peoples and places. This disposition structures and is structured by the funerary ritual itself, and is reinforced by practices such as the immediate removal of the dead from the living, the binding and containing of the corpse, the burning of belongings, not speaking the names of the dead, and so forth. Funerary practices attempt to ameliorate this danger, protect and purify the living, see to the needs of the dead, and conclusively relocate the deceased in the land of the dead. The threat of impurity likely relates to the social position and role of the deceased. The non-corporeal aspects of a person were an asset largely inherited and integral to a person’s successes, identity and capabilities, and death was a breakdown of the body that contained these essences. The release of a person’s *spəlkʷeʔə* and spirit power at death posed a dire risk to the living. Those with greater supernatural power—a product of opportunities and knowledge afforded by one’s class—may have posed a greater risk to the public than the death of a lower class person.

The Coast Salish spatial and material metaphors of the cemetery play their part separating the living and dead, transforming the dead from living relative to revered ancestor, and anchoring the dead in place and time. Cemeteries are an ongoing process of place and history making. Locating the dead in this way helps to maintain their reality to those who wish to continue relations with them. Cemeteries contribute, materially and spatially, to the maintenance of meanings and feelings associated with the dead, expanding these relations into immortal

relationships between the worlds of the living and the dead. This vital connection between the living and the dead is necessary to maintain the prerogatives and knowledge of past generations in the present and transmit it into the future.

There is a tension in Coast Salish society between the individual and the community, between what was known and unknown. Relations between people are distinguished by the principle that what is not concealed may be known and what is not revealed must not be known (Amoss 1978:160). Life in a longhouse would have provided very little, if any, physical privacy. People likely did not have much individual time or space:

There was very little privacy in the life of the Coast Salish Indian; even the room he occupied in the big house was not closed off from public view. He spoke and acted as a member of a group that observed his every movement, and he sought the approval and backing of the group on every notable occasion.” (Jenness 1934:95)

The dichotomy between public and private was expressed in the individualism of Coast Salish spiritual life. Space was created by the concept of the individual spirit helper, the presence and type of which might be intimated, but never revealed. No one, including immediate family, ever really knows an individual’s power, but the song and dance, as expressions or manifestations of that power provide relative insight into an individual’s spiritual potency. Even in the individuality of the spirit guardian complex, however, one could not acquire a guardian spirit, sing, or dance, without the support of their kin and the larger ritual network. In this sense, ritualization was simultaneously communal and individual.

The Coast Salish person was constituted by different essential components, some of which persisted after death. They were multiply constituted and aspects of this identity transcended death, so that ancestors could continue acting as powerful agents. The way in which the Coast Salish peoples understood personhood allowed for the creation and maintenance of connections between the living and dead members of society. The transcendence of death, reflected for example in the bank of recycled corporate names, bound together people through life and death, providing a foundation for the creation of a shared social memory and of identities (c.f. Meskell 2001). But this identity was not individual; it was a form of property that people stepped into when they assumed a historic and auspicious name, and in their lifetime they contributed to the historic trajectory of the name. The aristocratic Coast Salish life was, then, centered on producing and reproducing a history founded in an ancestral past. While the intangible property of names provides some insight into the historic process of identity and power through time, what

remains to be explored is how the tangible world of material and space was used to similarly create connections to place and produce history. Place and history were foundational to relations of power.

## Section III: Ritual Depositional Practices at Rocky Point

### Chapter 7: Landscapes, Cemeteries, and Funerary Petroforms at Rocky Point

Situated at the southwestern extent of the Coast Salish ethnolinguistic area, Rocky Point is the southernmost tip of Vancouver Island. It has the greatest density and largest number of recorded funerary petroforms in the region and is one of the largest funerary complexes on the Northwest Coast of North America. In my Master's thesis, I approached the classification of one large funerary petroform cemetery at Rocky Point, designated DbRv-3, which in that manuscript I referred to as the Rocky Point site. I now use the name Edge Point for this cemetery and refer to the entire landform, of which Edge Point is a part, as the Rocky Point funerary landscape (Figure 18).

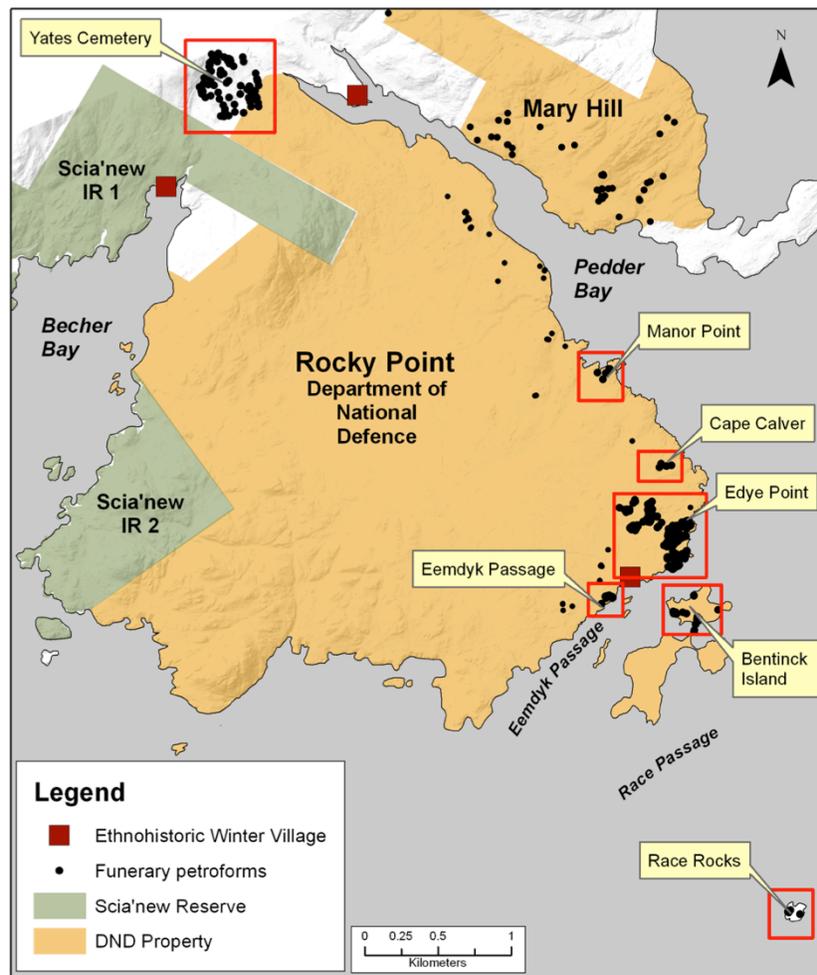


Figure 18: Overview map of the Rocky Point study area showing areas surveyed, distribution of funerary petroforms, village midden, and cemeteries selected for detailed feature recording.

Additional survey and recording undertaken during my doctoral research extended the Rocky Point funerary landscape to include a 4.5 km long section of coastline, in which 553 funerary petroforms were recorded in a 3.8 km<sup>2</sup> area. These burials are distributed within and between seven cemeteries, although the majority of the features are located within the Edye Point and Yates Cemeteries, two cemeteries associated with nearby villages (Figure 18). A detailed outline of the methods used to identify and record funerary petroforms is presented in Appendix 3.

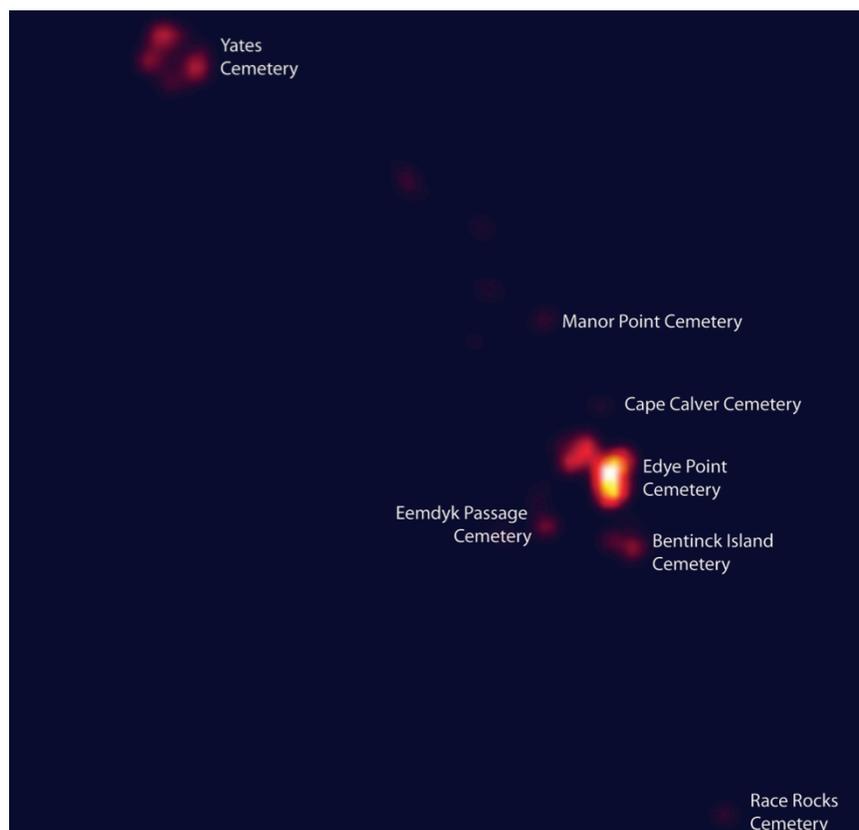
The ethnographic synthesis suggests that there were specific cemeteries for different families, houses, or other communities of ritual practice. Placing the dead together, perhaps in contrast to other communities of practice, suggests that there may have been different cemeteries, or at least clusters of funerary petroforms. I recognize that Rocky Point was a landscape consisting of places that were, through time, enmeshed in a multitude of practices—burying the dead being only one such practice. There are ethnographic and contemporary funerary practices, however, that clearly demarcate places for the living and the dead, and as such, we must consider ritually bounded spaces at Rocky Point. Furthermore, this was a ritually dynamic landscape, with the building of funerary petroforms working in relationality to earlier burials, physical aspects of the landscape, and likely other cultural or social aspects.

Defining boundaries of archaeological sites is problematic and a large literature surrounds this issue (Butzer 1982; Dunnell 1992). I explore the nature of funerary petroform clustering at multiple scales in Chapter 9. In defining cemeteries, however, I consider two principle variables in the differentiation of funerary space from more quotidian space. First are natural boundaries between funerary petroforms—such as Eemdyk Passage, a narrow passage of ocean separating Edye Point from Bentinck Island<sup>18</sup>. I also consider concentrations of funerary petroforms in the defining of cemeteries. Visualized as ‘hotspots’ using kernel density analysis (Appendix 4) allows us to consider the geographic incidence of ritual deposition as a smooth and continuous surface, thus looking for focal points of action as well as considering the landscape as a continuum of burial practice. Kernel density analysis (KDE), as a heuristic method of visualizing the

---

<sup>18</sup> As I discuss in the beginning of Chapter 9, the distribution of funerary petroform types suggests that closely neighbouring cemeteries, such as Edye Point and Bentinck Island, share more of the same types and sizes of funerary petroform types in common than do cemeteries further away, thus blurring the lines between some of these neighbouring cemeteries. In other words, there is a continuum of shared practices demarcated by geographic features. Even over relatively short distances, some of these practices take on novel forms.

distribution of funerary petroforms (Figure 19), highlights the Yates and Edye Point cemeteries as two focal points of ritual action at Rocky Point (recognizing there may be different localities within these cemeteries). There are also clear absences of funerary petroforms between the various other concentrations of funerary petroforms, and as I discuss in Chapter 10, this absence may have been very significant to the Rocky Point peoples.



**Figure 19: Kernel density map of funerary petroform distribution at Rocky Point, illustrating funerary petroform density without imposed site boundaries or landscape attributes.**

The funerary petroforms were not excavated during the course of this research, rather, detailed information concerning the kinds, amounts, sizes, and proportions of stones and sediment were recorded and form one major line of data. Precise spatial data was also collected, both for funerary petroforms, as well as for the natural environment. This includes micro topographical features such as bedrock exposures, and hydrological features such as wetlands.

In Chapter 1, I defined the appropriateness of the Rocky Point data for a mixed methods qualitative and quantitative analysis of funerary petroform construction and placement. In this chapter, I briefly outline the physical landscape of Rocky Point and summarize the setting of each of the seven cemeteries in this study. I then outline the site transformation processes in effect

at Rocky Point. These cultural and natural processes are the transformational agents effecting changes in the form and visibility of the original ritualized depositional products, and thus producing the archaeological context of funerary petroforms as they were observed and recorded in this study (*sensu* Schiffer 1976). Recognizing these site formation processes was important during the field component in differentiating funerary petroforms from natural or historic concentrations of stones, and in determining which funerary petroforms were intact enough for inclusion in the morphological and spatial analysis.

### ***The Rocky Point Environment***

The Rocky Point funerary landscape is a transitional landscape in several ways. Located on the southern-most point of Vancouver Island, it is a distinctive and rocky peninsula situated between the protected inner waterways of Victoria and the more exposed outer coast of Vancouver Island. This inner-outer coastal transition produces distinct ecological and climatic conditions on the east and west sides of the Rocky Point landmass. There is also a significant geological transition between the two halves of the landform. This east-west transition in geology, climate and ecosystem occurs in the vicinity of Christopher Point. The project area is situated in the eastern half of Rocky Point, which is dominated by a cool Mediterranean climate. Summers are dry, often to the point of drought, and winters are wet and rarely very cold. West of Christopher Point, the landscape is more exposed to the Strait of Juan de Fuca, with prevailing southeasterly and southwesterly gales blowing frequently in the fall and winter. This results in a transitional cooler and wetter climate westward along the coast, with fog prevalent west from Race Rocks (Mondor 1976).

Terrain along the north and west sides of Rocky Point is varied, with large steep-sided hills, gullies, bluffs, and numerous bedrock exposures. Flats of exposed glacial till, low bedrock, and networks of shallow wetlands characterize much of the eastern side of Rocky Point. Aside from shallow wetlands and seasonally saturated areas, there are few water features at Rocky Point. Small streams used to run by the villages at Edye Point and Pedder Bay, likely originating as artesian springs and seeps. A mosaic of protected bays with shingle beaches, rocky shoreline, tide pools, islands, islets, reefs and kelp forest fronts the shore.

Rocky Point is a very productive ecosystem and the Rocky Point peoples were well supplied with food year round. Near shore fish species such as rockfish and sculpin were available and anadromous salmon pass close to shore. Nearby Smyth Head (Figure 18) was a major and

well-known reef-netting locality for the Straits Salish peoples (Easton 1985; Moore and Mason 2011). Along the east shore of Rocky Point, the ubiquitous barking of northern and California sea lions echoes from their rookeries at Race Rocks. Seals breed among the islets and bask on the rocks. Fronting two winter village sites, at the head of Pedder Bay and at Edye Point, are intertidal mudflats where crabs, urchin, butter clam, and other bivalve molluscs are relatively common (Mondor 1976). Blue camas, wild onion, and other important plant foods are common along this shoreline, as are mammals such as the Columbian blacktail deer, river otter, mink, short-tailed weasel and raccoon. Larger predators such as the cougar and the American black bear are also present.

While natural processes shaped Rocky Point, it was also a landscape long modified and managed by its Coast Salish inhabitants. Although situated within the Coastal Douglas Fir biogeoclimatic zone (Nuszdorfer, et al. 1991) much of the eastern side of Rocky Point was short-grass savannah prior to European contact. There is evidence of post-European contact successional growth of the forest canopy in certain places on the eastern side of Rocky Point, (Gedalof, et al. 2006), indicating precontact land management practices involving the controlled use of fire (Beckwith 2004; Smith 2007; Weiser 2006). Like elsewhere in Coast Salish territory, the prescribed use of fire at Rocky Point resulted in a patchwork of familial owned fields of blue camas, berry patches, and other woody shrubs that promoted deer grazing were tended (Suttles 1951). This was a landscape that likely had an open and cultivated feel, augmented by small numbers of veteran Douglas-fir trees, and some Garry oak, arbutus, and shore pine. This graded into parkland farther away from the shore. In spring, Rocky Point would have been blooming with blue camas, the principle root food of the Coast Salish (Beckwith 2004), as well as Indian Consumption Plant, the seeds of which were burned during the First Salmon Ceremony and used as incense around cemeteries and villages (Chapter 7). As a result of Euro-Canadian fire suppression, there is presently conifer encroachment at Rocky Point into these older indigenous open areas (Gedalof, et al. 2006).

### ***Building Funerary Petroforms at Rocky Point***

The Rocky Point people modified not just their ecosystem, but also elements of the terrain. Building funerary petroforms required the movement and repositioning of large amounts of stone and soil. Three basic materials were used in the building of funerary petroforms: angular dark-coloured bedrock; rounded and subrounded light-coloured till; and soil. Low, undulating

moss-covered bedrock of dark greenish grey basalt and gabbro of the Metchosin Igneous Complex are ubiquitous and front much of the shoreline, occurring also in small outcrops and knolls throughout the study area (Massey 1986; Yorath, et al. 1999). The bedrock is overlain by thin veneers of poorly sorted glaciofluvial sediments and reworked till, consisting largely of rounded and subrounded light-coloured granodiorite. Common on the ground surface, granodiorite till generally ranges in size from cobbles to boulders less than a metre in diameter. Larger granodiorite erratics are also common, but are often only partially exposed. They are often incorporated into funerary petroforms, the stone and soil arranged on one side of these large boulders. Some erratics are large, distinctive and located close to the shoreline. Some of these may have been ancestors—transformed in myth time into stone (Chapter 6). Soil at Rocky Point is typically dry, thin, and dense with pea gravel. The till flats and bedrock knolls are often bisected by low-lying areas of water-saturated silt and loam overlying gravel and sand (Huntley 1995).

Some of the largest stones at Rocky Point that were clearly moved weigh between 7-10 metric tonnes apiece. Stones may have been moved by hand, perhaps with ropes made of cedar with the used to assist. Based on what we know about Coast Salish technology, it was likely digging sticks and baskets that were used to excavate and move sediment. A shallow trench rings some funerary petroforms, particularly those built predominately with sediment, indicating this material was probably excavated during the building of the feature. At Rocky Point stone was plentiful enough that it could be collected from immediately around the desired burial spot. At Qithyil (Chapter 4), stone and soil were transported from nearby talus exposures and river shores (Dana Lepofsky and Michael Blake, personal communication, June 9, 2013). At North Saanich some stones were collected from the intertidal zone (Smith and Fowke 1901). However, soil was less available at Rocky Point compared to Fraser Valley sites such as Qithyil, which had dense deposits of silt and clay and generally less stone.

### ***The Rocky Point Study Area***

This dissertation entails the quantitative analysis of funerary petroform morphological data from seven recorded funerary petroform cemeteries at Rocky Point, including a total of 515 funerary petroforms. The cemeteries between Race Rocks and Manor Point are contiguous, with most funerary petroforms between these places recorded and included in the analysis. The Yates Cemetery, however, is 3.2 km away from Manor Point and three small funerary petroform

cemeteries (DcRv-50, DcRv-88, and DbRv-45/47) are situated between them (Figure 18). Field time did not allow for the full recording of these three cemeteries and their additional 22 funerary petroforms.

The size and extent of this landscape was selected to define spatial boundaries and delimitations for the purposes of analysis, because it forms the space within, between, and adjacent to two of the largest remaining funerary petroform cemeteries in the region. This landscape is more than just an array of related features, but by extension, an array of related activities. This is a socially constructed space in which comparable ritual practices—the building of funerary petroforms—can be considered between two neighbouring villages. This focuses the scale of analysis on the mesoscale relations of power within and between two cemeteries at the local and lived scale of ritual practice. This scale of analysis considers the lived human experience at Rocky Point, recognizing that it was recursively entangled with large-scale and long-term histories of practice. This approach, while specific to Rocky Point, contributes to a deeper understanding of ritual practices in the region, particularly at the other large funerary petroform landscape at Qithyil. While I do not have the space to contextualize the Rocky Point results with this regional data (this will form a separate publication), the methods and results of this dissertation are applicable to other sites.

I initially surveyed the entire 1,106 ha of Rocky Point (Mathews 2004b), as well as the 183 ha neighbouring Mary Hill property (Mathews 2004a) as part of a cultural resource management inventory for the Department of National Defence (Figure 18). During the course of the current research program, I resurveyed a total of 382 ha of the eastern side of Rocky Point using a more intensive survey strategy to identify funerary petroforms. Appendix 3 outlines the survey and data recording methodology I used in the current study.

The Rocky Point study area encompasses most of the eastern edge of Rocky Point, as well as a large private property to the immediate north, and Race Rocks to the south (Figure 18). Table 4 summarizes the distribution of funerary petroforms between the seven cemeteries in the Rocky Point study area. The Rocky Point funerary landscape comprises 515 recorded funerary petroforms, mostly distributed within two large, and presumably at least partially contemporaneous, cemeteries known as Yates (n=111) and Edye Point (n=333). The majority of the funerary petroforms at Rocky Point are intact, meaning natural or cultural site formation processes have not significantly disturbed them and the major features of the burial are

discernable. I outline these processes later in this chapter. The criteria for determining feature intactness, as well as the criteria for discerning funerary petroforms from natural or cultural features, is included in Appendix 3.

**Table 4: Summary of Funerary Petroforms in the Rocky Point Study Area, from north to south.**

<b>Cemetery</b>	<b>Total Funerary Petroforms</b>	<b>Intact Funerary Petroforms</b>	<b>Approximate Area (ha)</b>
<b>Yates</b>	111	97	10.05
<b>Manor Point</b>	7	5	0.28
<b>Cape Calver</b>	5	4	0.43
<b>Edye Point</b>	333	265	5.05
<b>Bentinck Island</b>	36	30	4.77
<b>Eemdyk Passage</b>	17	13	0.38
<b>Race Rocks</b>	6	6	1.1
<b>Totals</b>	<b>515</b>	<b>420</b>	<b>22.06</b>

The north end of this distribution of funerary petroforms is slightly inland from a winter village site at the head of Pedder Bay. Here, the Yates Cemetery has the second most burials in the study area, including some of the largest funerary petroforms in the region. Located adjacent to a major village site at the south end of the study area is the Edye Point cemetery, the largest funerary petroform cemetery in the Salish Sea. Directly opposite Edye Point is Bentinck Island, the third largest site in the study area. This site consists of a small but concentrated cluster of 36 funerary petroforms. A small cemetery is situated farther offshore on Greater Race Rocks, a windswept and barren rocky islet surrounded by treacherous ocean currents, has a small number of petroforms (n=6). Small numbers of funerary petroforms occur in several other small cemeteries between these villages. These include sites at Manor Point, Cape Calver, and the north shore of Eemdyk Passage (Figure 18 and Table 4).

As outlined in Chapter 1, morphological analysis of funerary petroforms includes all intact features from these seven sites (n=420). The spatial analysis focuses on the two largest sites: the Edye Point and Yates cemeteries. The other five sites are qualitatively included to illustrate the nature of funerary petroform distribution between these two large cemeteries—demonstrating that the burial of the dead was not exclusive to large cemeteries. Some dead were buried in isolated places (Race Rocks); between the larger cemeteries and usually on distinctive points of land (Cape Calver, Manor Point); or on places close to well-travelled bodies of water (Bentinck Island, Eemdyk Passage). To contextualize the morphological and spatial analysis that follows, I briefly summarize each of the recorded cemeteries below.

### ***The Yates Cemetery***

The Yates Cemetery is located at the north end of the DND Rocky Point property and extends onto a private property that is adjacent to and immediately north of it (Figure 18). The funerary petroforms are distributed in a 14.7 ha area that encompasses the bottom and lower slopes of a narrow ravine that runs between the head of Becher Bay and Pedder Bay (Figure 18). This is a landform that naturally funnels overland movement between the villages at the head of each bay (DcRv-1 and DcRv-27), a walking distance of 1.8 km. Traversing this distance by canoe around the Rocky Point Peninsula requires traveling almost 13 km, so it is very likely that a trail connecting these villages ran through the ravine bottom, and therefore through the Yates Cemetery. Situated in the centre of the ravine is a large bedrock knoll colloquially called “Central Hill” (Figure 20).

During the early historic period, three longhouses were located at the village at the head of Pedder Bay (Scia’new elder Bert Charles, personal communication to Randy and Laura Chipps, February 7, 2010). Little archaeological information is available for this village and the building of a marina has largely destroyed it. A small and unpublished excavation was conducted by Don Abbot of the Royal British Columbia Museum, and a radiocarbon sample from between two lower house floors produced a date of cal A.D. 320–644<sup>19</sup> (Kigoshi, et al. 1973). This places part of the occupation to the Pedder Bay village within the transitional Middle/Late Pacific period—the time period in question for the practice of building funerary petroforms.

I identified 106 definite funerary petroforms at the Yates Cemetery. The funerary petroforms are distributed along the base and top of Central Hill and extend southeast to the lower sections of the ravine opposite Central Hill (Figure 20).

---

<sup>19</sup> Refer to Appendix 1 for information regarding this radiocarbon date.

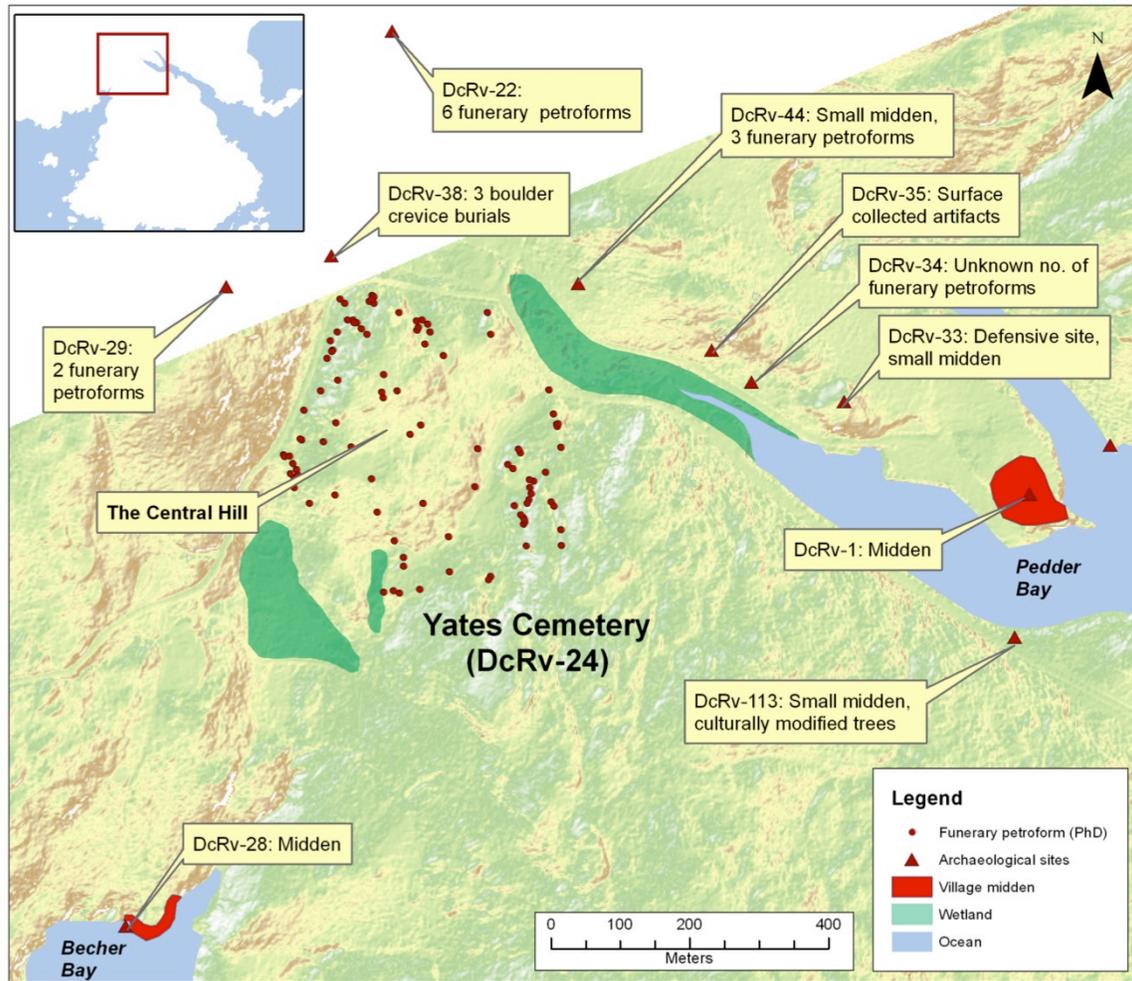


Figure 20: The Yates Cemetery and surrounding area.

There are other smaller concentrations of unrecorded funerary petroforms around and between the village at Pedder Bay and the Yates Cemetery (Figure 20), which are not included in this analysis. Like funerary petroform distribution elsewhere at Rocky Point, there appear to be central concentrations of funerary petroforms within larger cemeteries like the Yates Cemetery, with smaller numbers of funerary petroforms dispersed around and between these larger core burial areas.

In addition to the funerary petroforms at the Yates Cemetery, there are two possible pithouse features along the northeast base of the Central Hill (Wilson 1990). Establishing the contemporaneity, or lack thereof, between these pithouses and the funerary petroforms at the Yates Cemetery has important interpretive implications. Although little is known about coastal pithouses, a synthesis of dated pithouses from the Fraser River suggests these features span much

of the Early to Late Pacific periods (Lepofsky, et al. 2009). The period between AD 0 and 1400 has no recorded use of pithouses in the Fraser River, meaning that the use of pithouses and the building of funerary petroforms do not have a demonstrated contemporaneity, although this may be an artifact of available data. At Esquimalt Lagoon on southern Vancouver Island, the unreported and unpublished excavation of the only excavated pithouse on southern Vancouver Island produced two dates: 767–509 cal B.C. and 977–762 cal B.C. (Erin Willows, personal communication to Darcy Mathews, Feb. 14, 2014)—placing it within the period prior to the advent of funerary petroforms and contemporaneous with the domestic occupation of the main residential terrace at Qithyil. The existing regional data do not therefore support the contemporaneity of funerary petroforms and pithouses. As such, I am assuming that the pithouses at the Yates Cemetery predate the advent of funerary petroforms, much like the houses on the main residential terrace at Qithyil predate the funerary petroforms there.

### ***The Edye Point Cemetery***

Edye Point and the other funerary petroform sites on the Rocky Point property were recorded and inventoried prior to this dissertation research during a systematic archaeological inventory of the entire Rocky Point property (Mathews 2004b). This work was preceded by two archaeological inventories that resulted in the recording of 61 archaeological sites, including funerary petroforms, shell midden, cultural depressions, culturally modified trees (CMT's) and a trench embankment (Mason, et al. 1999; Mathews 2004b). Subsequent to these general inventories, a more detailed survey, recording and analysis of the Edye Point cemetery formed the basis for my Master's thesis research (Mathews 2006b).

The Edye Point Cemetery is approximately 3 ha in area and encompasses 540 m of shoreline, extending inland up to 620 m (Figure 21). The majority of the 382 petroforms at Edye Point occur within 400 m of the shoreline on relatively low and flat terrain (Figure 22). Large amounts of exposed boulders and cobbles, as well as erratics and bedrock exposures provide plentiful material with which to build funerary petroforms. A significant but shallow marsh system, consisting of water-saturated ground with seasonally standing water encompasses approximately one third of the entire site area, naturally partitioning the cemetery into different areas (Mathews 2006b).

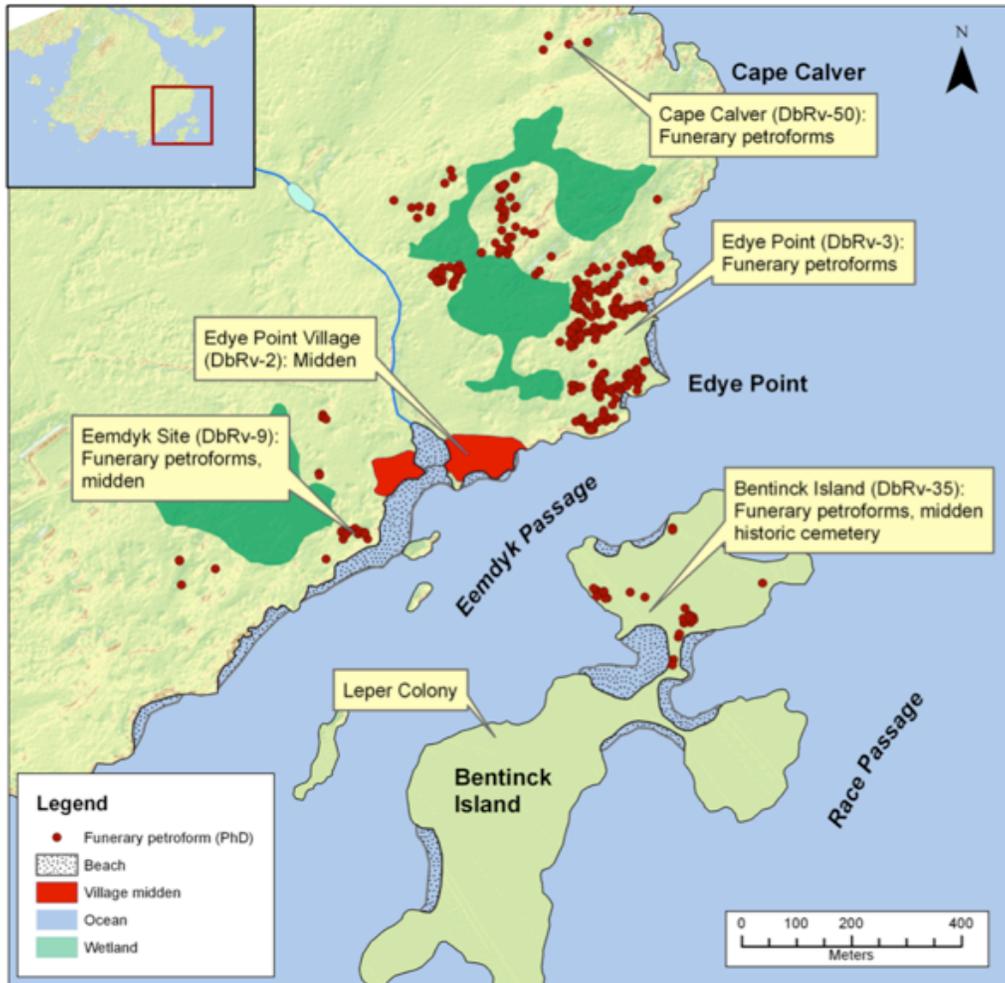


Figure 21: The Edge Point, Eemdyk Passage, Bentinck Island, and Cape Calver Cemeteries in relation to contemporaneous villages.



Figure 22: Funerary petroforms at DbRv-3, looking west from Edge Point towards Feature DbRv-3:C144 (foreground).

The edge of the funerary petroforms at the Edye Point cemetery and the village are separated by only about 200 m (Figure 21). This was defined by a combination of subsurface testing and surface survey (Mathews 2004b), indicating a distinct spatial buffer between the edge of the village and the edge of the cemetery (Mathews 2006b). Cross dating artifacts collected from the Edye Point village (DbRv-2) indicate a Middle and Late Pacific period occupation, suggesting the village and adjacent funerary petroforms are at least partially contemporaneous with one another (Mathews 2004b). There are indications that midden inhumation was also practiced at some point in time, with the partial skeletal remains from at least four individuals previously collected from DbRv-2 (Mathews 2004b). No funerary petroforms are located at DbRv-2.

The Rocky Point seascape was likely a well known, distinctive, and significant transportation route for peoples traversing the south end of Vancouver Island. Paddling in the vicinity of Edye Point along Eemdyk Passage, the narrowest point of the passage was between Edye Point and Bentinck Island. Very dense concentrations of funerary petroforms line both shores (Figure 23). Paddling around the outside of Bentinck Island through Race Passage to avoid Edye Point would have been risky due to the treacherous currents of Race Passage.

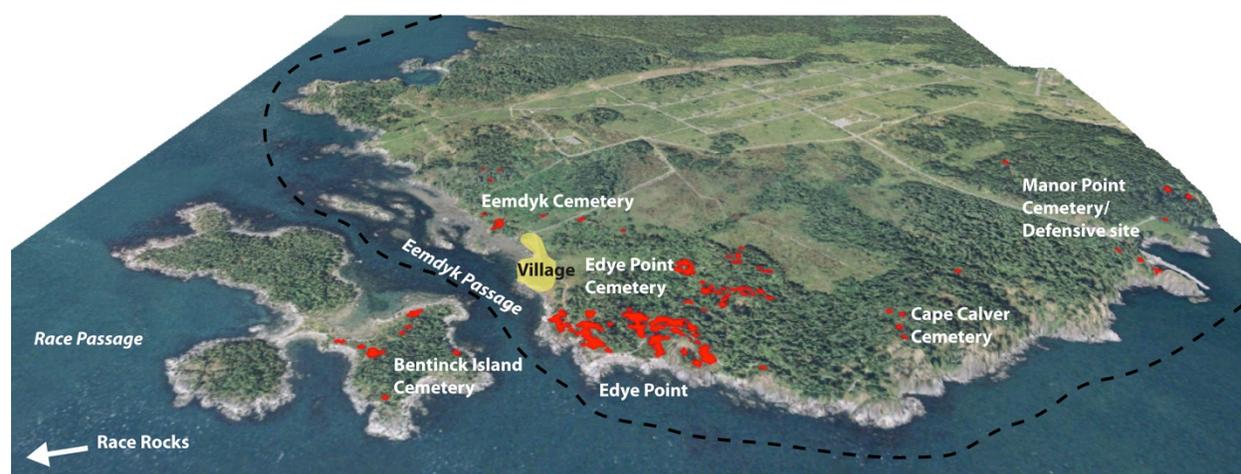


Figure 23: Oblique perspective of Edye Point, looking west. The red dots are funerary petroforms and the dashed black line illustrates the best canoe route from east to west.

### **The Eemdyk Passage Cemetery**

The Eemdyk Passage site is situated on the south side of the Edye Point village (Figure 23). There are 19 funerary petroforms there, all clustered together, and relative to the nearby Edye Point cemetery, all small and low to the ground (Figure 24). Most appear to be partially buried by *in situ* pedogenesis to a greater degree than the nearby funerary petroforms at Edye

Point and Bentinck Island. These three sites are likely subject to the same site formation processes and this difference may be attributable to an older age of construction for the Eemdyk Passage funerary petroforms. Speculatively, their smaller size and partially buried stones may also indicate a transitional burial practice between inhumation and the surficial funerary petroforms seen at Edey Point and Bentinck Island.



Figure 24: Eemdyk Passage Site, looking southwest to Eemdyk Passage and Bentinck Island. Note low-lying funerary petroform in foreground.

### ***The Bentinck Island Cemetery***

There are very few recorded Coast Salish place names for the Rocky Point area outside of Becher Bay. An exception is Bentinck Island. The surveyor Grant referred to Bentinck Island in 1846 as the “Island of Hoyung,” which is the name “Whoyung” given for Pedder Bay by James Douglas prior to the 1850 treaty (Keddie 2003). The Klallam word given to Bentinck Island is  $x^w\acute{a}y\acute{a}\eta$  (Montler 2009), so it may be that Grant’s name and the name used in the 1850 Douglas Treaty are anglicised versions of the Klallam name  $x^w\acute{a}y\acute{a}\eta$ , rather than a Straits Salish/T-Sou-ke name. The root  $x^w\acute{a}y$  with the  $-\acute{a}\eta$  ‘middle voice’ suffix means “to perish, to die (of a group)” (Timothy Montler, personal communication to Darcy Mathews, Nov. 10, 2011). Interestingly, this name is also applied to nearby Race Rocks, and it may be that this entire area—Race Rocks, Bentinck Island, Eemdyk Passage, and Edey Point—were known during the historic period as a place associated with death and the dead.

Bentinck Island is comprised of three islands connected by a sand and gravel tombolo. On the north island closest to Eemdyk Passage are 38 funerary petroforms (Figure 18). Terrain on the north island is relatively flat and punctuated by low bedrock exposures. Areas around the

till flats are saturated in the winter months. Physically, this part of Bentinck Island is almost identical to the terrain opposite at Edye Point. The funerary petroforms also appear comparable in both size and construction. The best place to land a canoe is the southwest beach of the northern island (Figure 18). It is there, slightly inland and ringing the shoreline and tombolo, where most of the funerary petroforms on Bentinck Island are situated.

### ***The Race Rocks Cemetery***

Located at a narrow part of the Strait of Juan de Fuca, Race Rocks covers 3 km<sup>2</sup> of ocean, rocks, and reefs, as well as a small archipelago of windswept islets. The largest of these, Greater Race Rocks, is 1.4 ha in area, and is located 1.7 km southeast of Bentinck Island (Figure 25). Race Rocks is a distinctive landform, visible as a small point of land throughout much of the Strait of Juan de Fuca.



**Figure 25: Greater Race Rocks looking south from the Bentinck Island tombolo, 10x zoom.**

Race Passage is a treacherous body of water for ships navigating their way through the narrow turn of the Strait of Juan de Fuca due to persistent fog, unpredictable winds, tricky tidal conditions, surging waves, and a current reaching 8 knots. As a result of these dangerous conditions, many ships have sunk around Race Rocks, prompting a manned lighthouse to be built in A.D. 1860. This is a very difficult and dangerous destination to reach in a small canoe. Despite this, six large funerary petroforms were constructed on Race Rocks, all set back from the splash zone and situated on the few small pockets of soil on the islet (Figure 26).

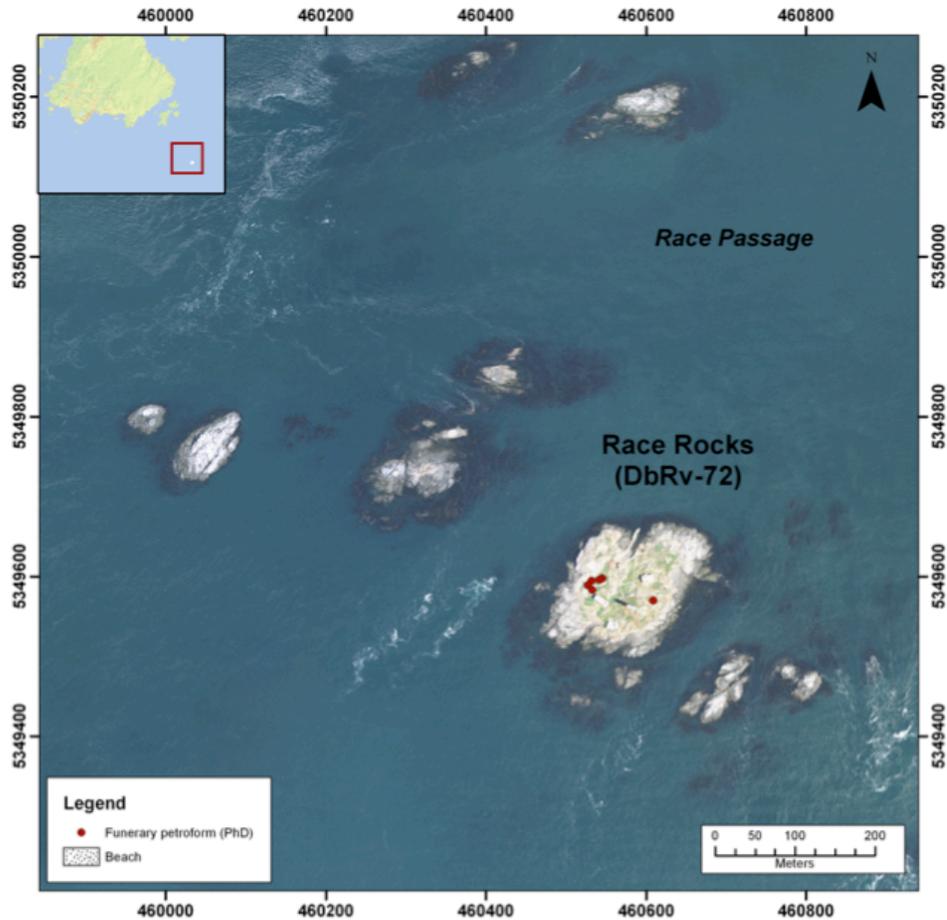


Figure 26: Greater Race Rocks and associated funerary petroforms.

Race Rocks is a powerful place in the Coast Salish worldview; a liminal place associated with acquiring spirit power and transformation. It is home to the power of *skə'ŋət*, the South Wind Man. The Lekwungen expert Jimmy Fraser stated that the face of the old man South Wind was at Race Rocks, possibly in the form of a pictograph or a stone (Duff 1951). South Wind, as a person-in-stone, has a house at Race Rocks where he calls a person's *səl'e'*—the part of you that wanders in dreams and goes to the land of the dead when you die—and “tries you out.” If he approves, he teaches you the song to call on him for help (Duff 1951). This *sia'wən* power is desirable as it allows one to run over the surface of the water like a rainsquall from the south (Jenness 1955). While capable of breaking up ice and bringing rain instead of snow, this power is also dangerous, for South Wind can make houses “fly away” if it blows too hard (Duff 1951). South Wind is also a Transformer, travelling in winter along pathways, following a consecutive line of visible landmarks along the interconnected coastline of the Strait of Juan de

Fuca (Thompson and Egesdal 2008:10). This line-of-sight narrative situates Race Rocks as a place associated with myth-time and the implicit moral lessons of the South Wind.

### ***The Cape Calver Cemetery***

The Cape Calver site is situated about 250 m inland from Cape Calver (Figure 18). The site consists of four funerary petroforms situated on relatively flat terrain within a large Garry oak meadow (Figure 27). This site emphasizes the careful considerations that the Rocky Point people made to ensure that their dead remained dry year-round. This landscape has a very shallow mantle of glaciofluvial till overlying bedrock, which protrudes throughout in low exposures. Thin sediment overlying bedrock means this part of the Rocky Point landscape is very saturated with water in the winter months. So despite the plentiful till materials with which to build funerary petroforms, the few burials constructed here were limited to those few locations that remained dry year-round.



**Figure 27: The Cape Calver site setting. Looking southeast to funerary petroform (DbRv-50, Feature 1).**

### ***The Manor Point Cemetery***

This is a defensive trench embankment and funerary petroform site located at Manor Point (Figure 18). This steep-sided and rocky peninsula has a 46 m long and 10 m wide trench that was excavated perpendicular to the point (Figure 28 and Figure 29). It is likely that a log palisade once stood on the seaward side of the trench, as was common in this area (Keddie 1991; Richardson 1872; Wagner 1933). Fortified defensive sites such as this were constructed during the transitional Middle and Late Pacific periods around the Salish Sea (Angelbeck 2009). It is

possible that the funerary petroforms and defensive feature were contemporaneous, an association that may occur elsewhere on southern Vancouver Island (Keddie 1985).

There are eight funerary petroforms at Manor Point, all on the inland side of the defensive trench, with four of these equidistantly spaced about 4 m apart in a row and at a right angle to the trench (Figure 28). If the funerary petroforms and defensive feature are contemporaneous, then raiders likely passed along this row of burial features during their charge of the palisade—an experience that was likely disconcerting for people predisposed to avoid the dead.

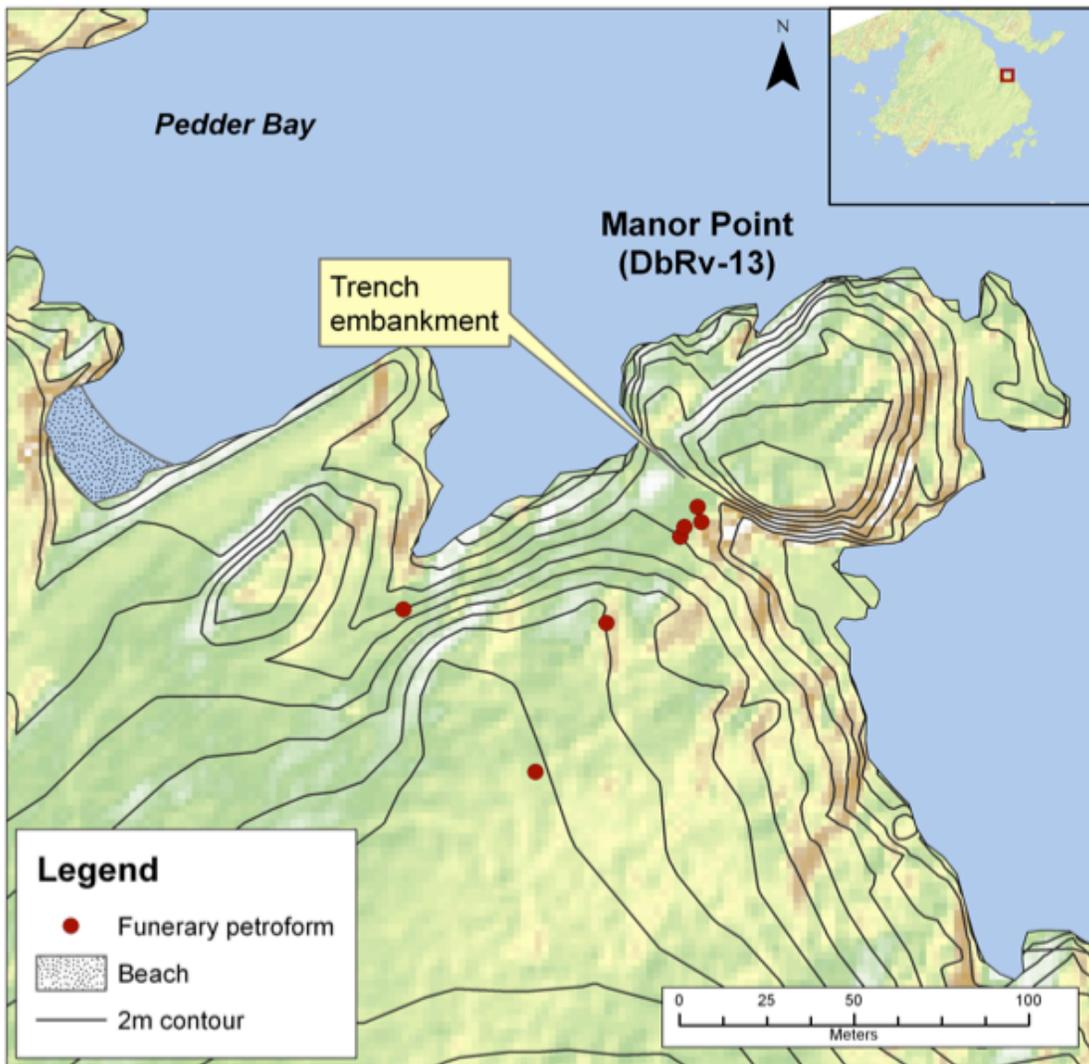


Figure 28: The Manor Point fortified defensive site.



Figure 29: Looking southwest from Manor Point to the defensive trench (foreground) and linear arrangement of funerary petroforms (centre background).

### ***Cremation and Ritual Burning at Rocky Point***

All human remains observed at Rocky Point were cremated. The theoretical implications of cremation were outlined in Chapter 2 and the significance of cremated human remains in the region was discussed in Chapter 5. Although no funerary petroforms were excavated during this research, human remains were observed eroding out of five partially disturbed features. This does not mean that all, or even most bodies were cremated at Rocky Point. Cremated remains, when exposed on the ground surface, have a greater archaeological visibility than unburned bone since organic constituents are largely removed from bone during burning (Schmidt and Symes 2008). But the burning of some of the dead was an important part of funerary practice at Rocky Point, and a brief summary of the analysis of these human remains and associated charcoal illuminates this aspect of the ritual treatment of the dead.

The four features with cremated human remains on Bentinck Island are partially deflated funerary petroforms, consisting of a scatter of cremated remains, thermally altered rock, charcoal, burned faunal bone, and shell amongst a lag aggregate of pea gravel and stones (Figure 30 and Figure 30). Three 50 cm<sup>2</sup> test excavations were conducted around Feature DbRv-35:28 (Figure 30) and a 100 by 150 cm unit was placed adjacent to Feature DbRv-35:27 (Figure 31). These tests, excavated to culturally sterile deposits (about 30 cm DBS<sup>20</sup>), were judgmentally

---

<sup>20</sup> Depth below surface.

placed in those areas with the greatest surface concentrations of burned bone outside of the perimeter of the funerary petroform.

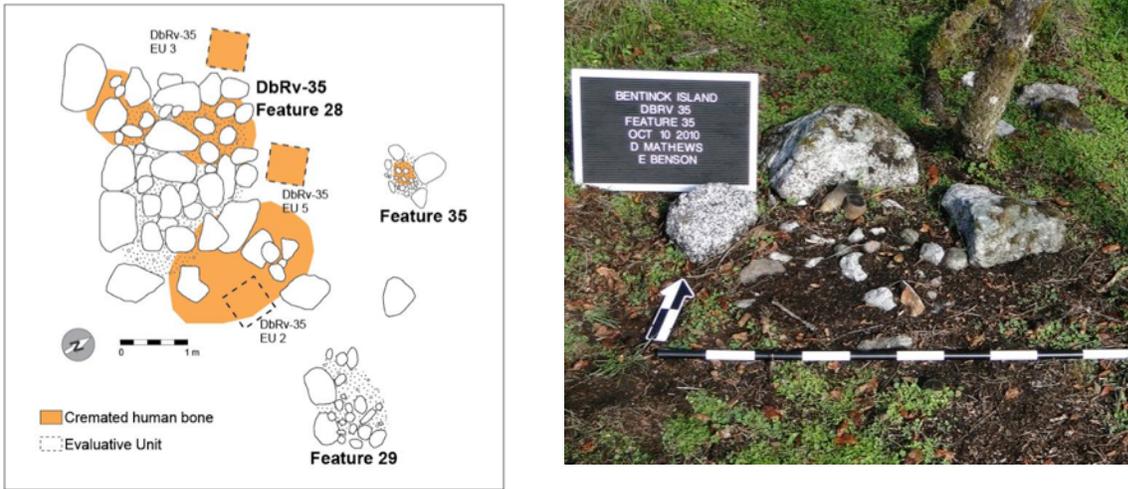


Figure 30: Partially deflated funerary petroform features DbRv-35:28 and 35 (left) at Bentinck Island, showing extent of cremated human remains. Feature 35 (right) is a small funerary petroform with highly fragmented and burned human bone.

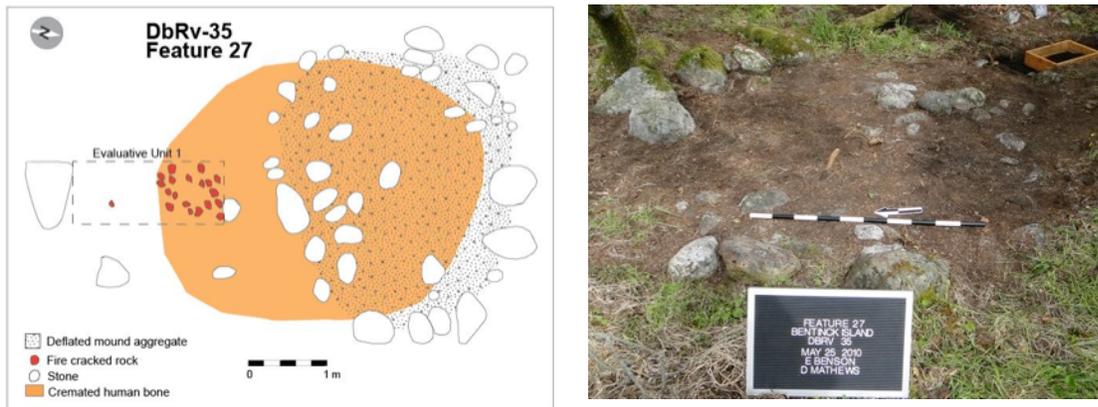


Figure 31: Completely deflated funerary petroform feature DbRv-35:27 at Bentinck Island, illustrating extent of cremated human remains in relation to the deflated burial feature.

The intention was not to disturb the burial itself, but to determine if the human bone was in a primary or secondary context. Based on the results of these test excavations, patterns of burning evident on the bone indicate that the bodies were cremated while they still had tissue. The lack of ash and oxidized sediment within the excavated areas suggests that the corpse may not have been cremated *in situ*.

The cremation may have been done elsewhere, and if so, then building the funerary petroform was part of a secondary funerary ritual, with the burned remains subsequently brought

to the site for interment. This also included some of the thermally altered rock and charcoal from the pyre. At some point subsequent to the building of the funerary petroform, deflation resulting in a comingling of charcoal, cremated human bone, and thermally altered rock with pea-gravel aggregate from the burial feature. This resulted in a loose arrangement of stones demarking the edge of the funerary petroform and a mixture of bone and charcoal located within and around the remaining petroform.

The condition of the cremated bones is suggestive of high and sustained heat (Curtin 2008; Schmidt and Symes 2008). This includes: fragmentation; warping; cracking; and black, blue and white colouration. Identifiable elements from three features included skull fragments and a partial distal humerus, all from adults. Ritual feeding of the dead was indicated by the presence of burned bone and shell, including large land mammal leg elements, fish vertebrae, waterfowl, crab, and littleneck clam (Rebecca Wigen, personal communication, Sept. 23, 2010).

Analysis of the charcoal indicates that Douglas-fir wood and presumably bark was the fuel used to cremate the dead (Naoko Endo, personal communication, May 1, 2010). This fuel has the best burning characteristics of any fuel in the region (Mathews 2010a), and numerous Douglas-fir culturally modified trees with bark removal scars are common at Rocky Point (Mathews 2004b). In addition to other woods, charcoal from red elderberry was also commonly associated with the burned Bentinck Island human remains. Seeds from this species are associated with funerary ritual elsewhere on the Northwest Coast, including Late Pacific period burials at the Greenville site near Prince Rupert (Cybulski, et al. 1992). It may be that elderberry was being burned with some bodies during cremation at Rocky Point. No elderberry grows on this site now; the closest occurs from a wetland along the northeast edge of the Edye Point Cemetery, about 600 m to the north of the Bentinck Island funerary petroforms (James Miskelly, personal communication, May 1, 2012).

### ***Site Formation Processes at Rocky Point***

In my Master's thesis, I summarized the cultural site formation processes at the Edye Point Cemetery (Mathews 2006b:72-9). I concluded that historic Euro-Canadian and contemporary Department of National Defence activities had little direct effect on the archaeological record at Edye Point. As the study area has expanded during the current research, I next briefly consider anthropogenic site formation processes elsewhere in the Rocky Point study

area. I also highlight two principal natural site transforms—conifer encroachment and aeolian deflation—and their profound effects on the funerary petroforms at Rocky Point.

### **Cultural Transforms: Historic Activity**

The Yates Cemetery, situated mostly on private land, is a largely undisturbed landscape. Since 1990, two houses have been built on the property (Figure 32), one of which was done under a British Columbia provincial heritage permit (Wilson 1990; Wilson and Smart 1990).

Prior to house building, the Yates property was used primarily for grazing sheep.

The current property owner, John Homer, is very knowledgeable about the history of the property and his awareness of the burial features was instrumental in recording this site. Mr. Homer continues to take great efforts to protect funerary petroforms and he is confident that no funerary petroforms were impacted during the construction of either house or during the clearing of land for the small field along the northeast side of Central Hill. Most of the area marked “Field” in Figure 32 is along the bottom of a narrow ravine, which has a small stream running through it, draining into the wetland at the head of Pedder Bay. This area is seasonally saturated and based on the distribution of funerary petroforms elsewhere at Rocky Point, it is unlikely that burials were situated this close to a waterway. The surrounding areas are slightly elevated and better drained, and many funerary petroforms are located there, overlooking the stream bottom. East Sooke Road runs along the west side of the Yates Cemetery (Figure 32). The road follows the bottom of the steep-sided ravine between the base of Central Hill and a bluff on the west side of the road. Along the base of this bluff is a complex of boulders, which includes three disturbed boulder crevice burials, designated as site DcRv-38 (Figure 32). Most funerary petroforms are further up the base of Central Hill from East Sooke Road and it is unlikely that this road has impacted many funerary petroforms. Additional unrecorded boulder crevice burials are likely situated along the base of the bluff.

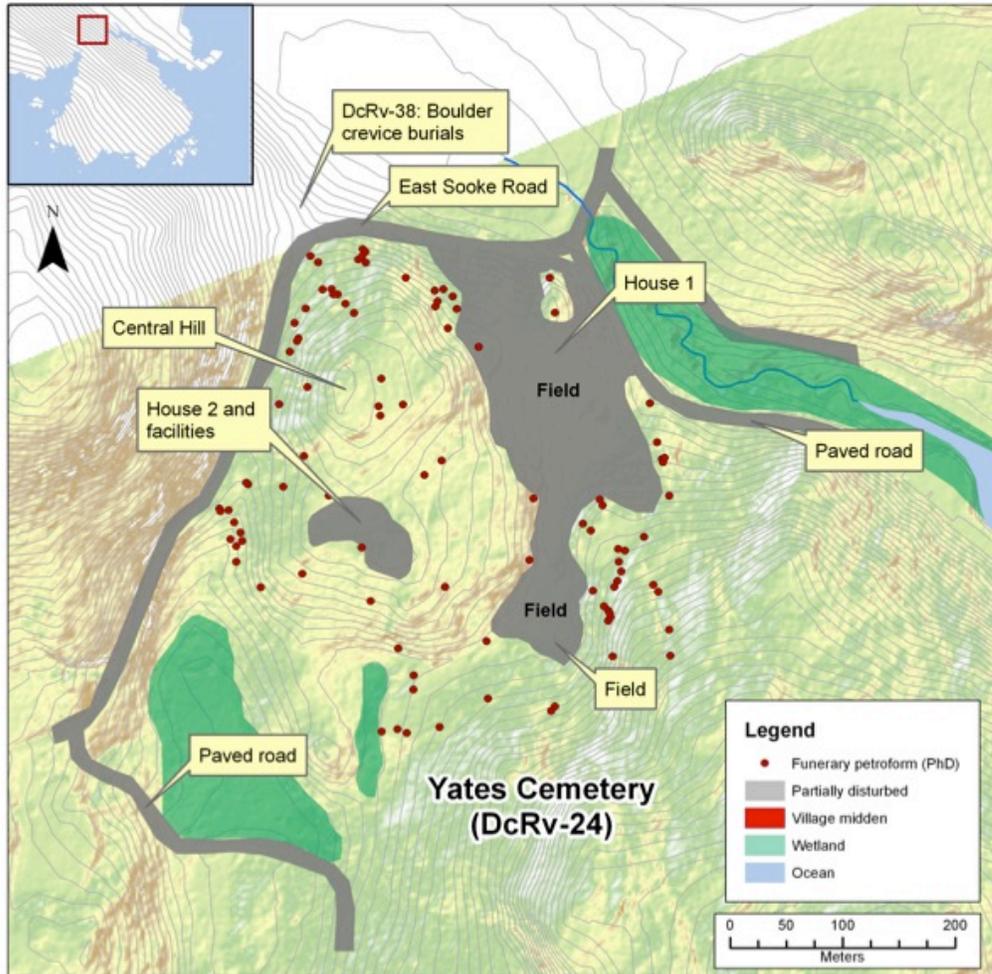


Figure 32: Areas of recent disturbance at the Yates Cemetery.

On Bentinck Island, a leper colony was in operation between 1924-1957 on the southwest part of the island (Figure 33). This area has been heavily impacted by the construction and operation of the facility. It is possible that some funerary petroforms were present in this area prior to 1924, although the level of disturbance is too great to determine this with certainty. The doctor and nurses quarters at the colony have been maintained and continue to be used by the Department of National Defence as part of a demolition training area. The demolitions occur infrequently on the southern arm of the sand and gravel tombolo that connects the three parts of Bentinck Island (Figure 33). It is possible that some funerary petroforms have been impacted by this localized demolition, although other funerary petroforms along the northern arm of the tombolo appear intact and undisturbed.

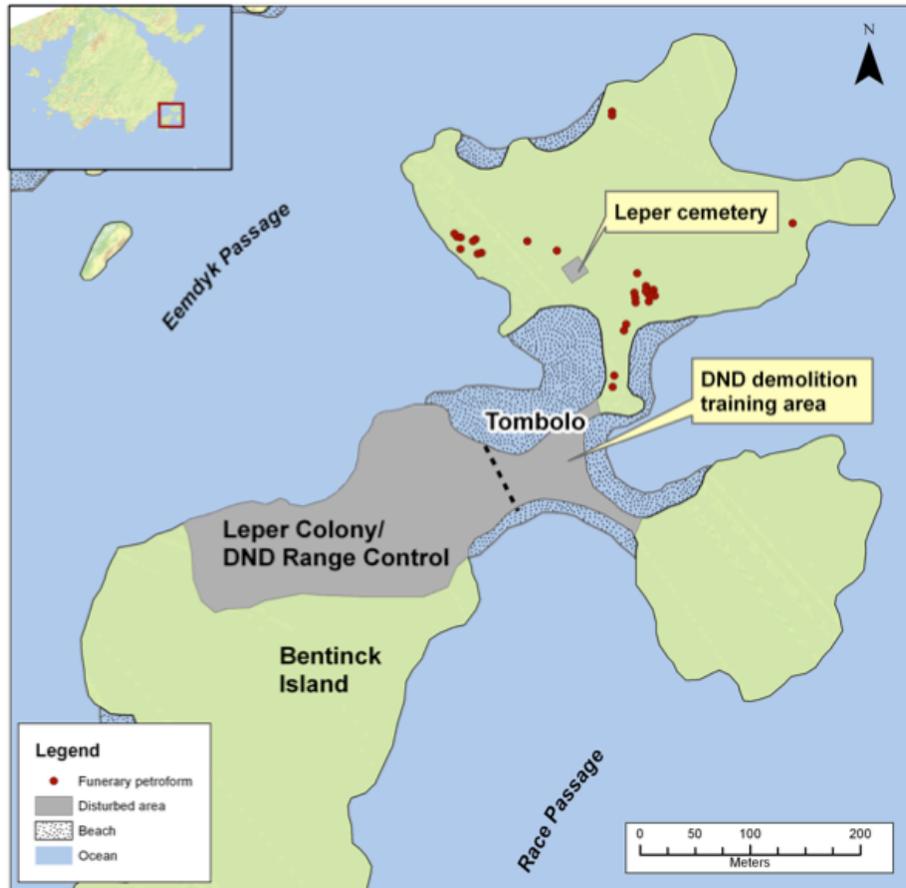


Figure 33: Areas of historic and contemporary disturbance on Bentinck Island.

Race Rocks has been a lighthouse station for 154 years, and includes a lighthouse, six buildings, a helipad and a concrete jetty (Figure 34 and Figure 35). There has been localized excavation and blasting for building foundations, pipes, and power cables (Warren Kennedy<sup>21</sup>, personal communication, Nov. 19, 2010). Stones have also been moved around and cleared in places. It is likely that some of these activities have impacted funerary petroforms. The six funerary petroforms on the island, however, are consistent in morphology with those at nearby Bentinck Island and Edye Point. Cultural site transformation means Race Rocks is not an adequate site for spatial analysis, but the existing funerary petroforms are intact and appropriate for morphological analysis.

---

<sup>21</sup> Junior Lightkeeper at Race Rocks, 1982-1990.



Figure 34: The author recording funerary petroforms at Race Rocks.

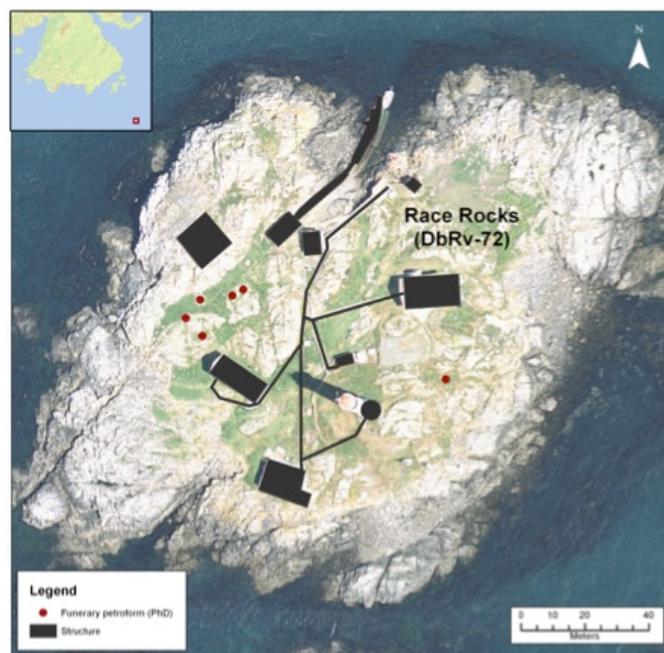


Figure 35: Historic and contemporary structures on Race Rocks.

### Natural Transforms: Conifer Encroachment

The most significant natural site transform at Rocky Point is the historic and contemporary incursion of conifers growing around and through funerary petroforms in what was previously open short-grass prairie. Fire suppression over the past 150 years has resulted in a successional sequence of conifers encroaching into a formerly open short-grass prairie landscape, and thus impacting funerary petroforms. About 53% of funerary petroforms have trees growing immediately adjacent to them. In most cases, the trees are still quite small in diameter and the original shape of the feature is discernable. The process of conifer

encroachment, however, will ultimately prove to be very destructive to funerary petroforms. This research project provides a record of this important funerary landscape that may be significantly altered by conifer encroachment in the coming decades.

### Natural Transforms: Deflation

The presence of a lag aggregate of pea-sized gravel covers most funerary petroforms at Rocky Point. This indicates a deflationary process that has removed much or most of the finer sediment that initially covered funerary petroforms at Rocky Point (Figure 36). It is difficult to estimate the degree of deflation or the amount of finer sediment that originally covered the

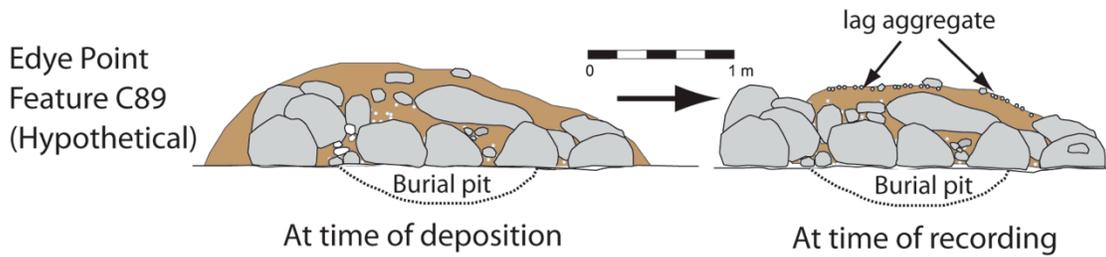


**Figure 36: Pebble lag aggregate on funerary petroform DbRv-35: 9, illustrating deflationary site formation process at Rocky Point. 20 cm photo scale.**

Rocky Point funerary petroforms. The inland Yates Cemetery seems to have a lesser degree of deflation than the rest of study area, although this difference was not quantified during the study. The ubiquity of the pebble aggregate at Rocky Point suggests, however, that adding sediment to funerary petroforms was a common part of funerary depositional practice. Sediment was likely collected around the immediate location of each funerary petroform.

The silt loam component, when dry, may have been quickly deflated in the constant wind and rain exposure along the coastal portions of the study area. This means that the funerary petroforms as they exist today are the stone component of the burial, and how the funerary petroform appeared before it was concealed with sediment during the final part of ritual deposition (Figure 37).

Rocky Point funerary petroforms. The inland Yates Cemetery seems to have a lesser degree of deflation than the rest of study area, although this difference was not quantified during the study. The ubiquity of the pebble aggregate at Rocky Point suggests, however, that adding sediment to funerary petroforms was a common part of funerary



**Figure 37: Hypothetical deflation of a funerary petroform (Feature C89, Edye Point).**

Covering the burial with sediment may have had a homogenizing effect, perhaps concealing to some degree the differentiation evident in the stone component of funerary petroforms, such as the different types and sizes of stones used to structure the inside of the monument.

### **Summation**

The Rocky Point funerary landscape is situated at the southwestern extent of the Coast Salish ethnolinguistic area. While it is culturally and geographically peripheral in this sense, the number and density of funerary petroforms at Edye Point and the Yates Cemetery underscores its centrality as a node of ritual practice during the Late Pacific period. Like its sister cemetery at Qithyil—similarly peripheral at the opposite end of Coast Salish territory—Rocky Point has one of the greatest known and recorded densities of funerary features on the Northwest Coast.

Taking cultural and natural site formation processes into consideration, the precisely mapped and recorded Rocky Point data provides an unparalleled opportunity to consider the ritual deposition and materiality of funerary practice. The analysis of the use of materials and spaces offers insights into the village-scale social practices and relationships of power amongst the Rocky Point people and their entanglements with neighbouring communities of practice throughout the larger region.

## **Chapter 8: The Analysis of Funerary Petroforms as Depositional Practice**

*How did the Rocky Point peoples make distinctions between different kinds of funerary practices, through their use of space and materials, in the burial of their dead?*

To answer this first dissertation question, I conduct a morphological, spatial, and visibility analysis of the funerary petroforms in the two largest cemeteries at Rocky Point: The Ede Point and Yates Cemeteries. Considering the depositional practices that resulted in funerary petroforms offers a useful entry point into the dynamics of ritualization at Rocky Point. The building of these features was an orchestration between ritualists, the ancestral dead, the people assisting with the collection and moving of materials, those possibly witnessing the event, and the materiality of the stones and soil. These actions were all done within a landscape rich with ancestral presence, spirits, and other agents, as well as other funerary petroforms cuing the dispositions and practices of ritualists, mourners, and witnesses. The practice of making these objects is an avenue through which to explore the relationship of the material world with actions that entailed bodily movements of these agents across the landscape. I am concerned with viewing the Rocky Point funerary petroforms depositional practice in relation to a larger genealogy of ritual practice.

In this research I did not excavate these features or analyze the full sequence of their construction (which is only accessible through their systematic destruction). Rather, I consider the end product, not as a totalized whole, but as the material result of practices that carried each stone and basket of soil to the burial site. In her analysis of the ritualized use of dog and python remains, Stahl introduces a useful analytic strategy to “follow the bones” (Stahl 2008:171). I propose that to “follow the stones” means to consider the process by which materials that constitute a funerary petroform moved from the landscape to the corpse.

A description of generalized depositional practice is useful to illustrate this movement of material in the building of funerary petroforms. Synthesizing the historic and contemporary archaeological data on funerary petroform construction (briefly outlined in Chapter 5) and ethnographic Coast Salish ritual practice (Chapter 7), as well as my own experiences both recording and excavating funerary petroforms outside of the scope of this research project (e.g., Mathews 2002b, 2004b, 2006b, 2011; Mathews, et al. 2011; Mathews and McLay 2011), it is possible to glean some sense of the ritual process undertaken in the building of a funerary petroform (Mathews 2009), and how this performance produces burials as structured depositions.

People, as agents following the directives of ritual authorities, originated at the site of the soon-to-be burial and moved outward, possibly directed in their collection towards certain kinds and sizes of stones. The corpse and ritualist served as a focal point from which these agents radiated, stones consequently carried and rolled back to them. With these materials assembled, the ritualists, guided by spiritual assistance, orchestrated the excavation of a small grave pit, into which the corpse was placed (a possible referent back to earlier inhumation practices). Stones were arranged around this to form an enclosure both containing and protecting the corpse. An outer ring of stones was built, sometimes using a perimeter of much larger stones, tabular stones set on edge, and of varying outlines including rounded, straight and irregular margins. The intervening space between the central enclosure and outer perimeter was filled with stones and soil—the soil filling void spaces between the stones. The central enclosure had an overlay of stones, but may have also been covered with a wooden box lid or small cedar planks, or a capstone. While I have described the generalized building of these features in a *chaîne opératoire* way, the point is that the individual stones incorporated into the entire burial in a ritualized context were moved by bodily action and within a field of discourse to produce a visible effect. The building of funerary petroforms was a process as much as it was a product. The elements of the feature, both internal (the corpse, enclosure, perimeters of stone rows, etc.) as well as the external (the capstone, covering stones, etc.), were brought together from one context to another. Ritual burning, as a highly sensuous and visceral finale to the burial, concluded the archaeologically visible part of the depositional practice.

It is through this biography of orchestrated movement that we can come to understand how stone and soil, following a multitude of radiating object pathways from the general context of landscape to the specific context of the funerary perform, came to constitute each burial. The variability or consistency in the kinds of stones collected (white rounded till collected from soil or dark angular stone pried from bedrock), the sizes of the stones (ranging from small cobbles to very large boulders), the relative proportions of stone to soil, the incorporation of an erratic or not, as well as the overall size and shape of the funerary petroform (as an aggregate of all these materials), were brought together through intentional action to both perform the deposition and to produce a funerary petroform. These are fundamental to producing ritualized bodies inculcated through movement and perception, as well as producing a monument grounded in past ritual actions and primed for cueing future ones.

### **Cluster Analysis and Depositional Practice**

In this analysis, I consider the decisions made in the types of materials collected and how those materials were then recontextualized to produce a new relationality between them. What emerges is not a neat and perfectly compartmentalized structuring of burials, but a kind of materialized version of the fuzzy dispositions evident in their construction and the multiple voices and actions of different agents. But by considering ritualization in the depositional practice that produced funerary petroforms, we gain some sense of the social consequences of these burials. Beginning with the different materials brought together for the burial of the dead, and how those materials were then orchestrated to produce what participants understood to be an appropriate form of burial for the deceased, we have an entry point into considering how the Rocky Point peoples negotiated social complexities through the dynamics of ritualization.

What is required is a form of analysis that can recognize how individual stones can be brought together to produce something novel, without imposing an arbitrary classification on the whole. It must also be sensitive to recognizing unexpected configurations of stone and soil beyond the crude heuristics of existing classifications such as “cairn” and “mound” or “large cairn” or “large mound.” One of my central research goals is to identify patterning in the depositional practices that produced funerary petroforms outside of the *a priori* and limiting classifications of cairns and mounds. I recognize that any archaeological taxonomy is a blunt instrument, producing breaks where a continuum likely exists. As such, I am not producing a typology per se, but attempting to identify patterns and dispositions in the way these features were made-in the kinds, types and proportions of different materials and the way these were assembled through a process of ritual action and bodily movement to produce burials for their dead. In this way, I am considering the relationally of stones and soil within an individual funerary petroform with the relationally of materials in other funerary petroforms.

Cluster analysis is, I believe, sensitive to the object biography approach. While it has a long history in archaeological classification, and the classification of mortuary features in particular, by retasking it to consider how different parts come to produce new wholes, it offers a robust means by which to consider the object biographies of these burials. In defining how materials were used to create different kinds of funerary petroforms, we can then proceed to analyses, which consider how these different burials were situated within the larger stage of ritual practice on the Rocky Point landscape. This forms the basis for subsequent spatial analysis,

predicated upon this initial analysis of structured deposition, that examines how funerary petroforms came to constitute the landscape, structure dispositions, and produce and engage memories at scales ranging from the individual burial (itself an aggregate of many stones) to larger scales encompassing two neighbouring villages and their entanglements throughout the larger Salish Sea. It is these engagements and the patterns they produce in both the way features were built and where they were built—or the relationality of materials within features and between them—where we can hope to see how novel funerary ritualization implicating the use of stones, came to produce ritualized bodies both within and outside of the cemetery and in the process contributed to social memory among Rocky Point peoples.

To accomplish the research goal of identifying patterning in feature construction, a method for discovering the pattern of groupings in a set of data is required that holds as few assumptions as possible about the nature of any potential patterning (Shennan 1997:220). Cluster analysis is a process dealing with the discovery of structures or groupings within data. Cluster analysis is a suite of techniques with similar goals that operate on data sets for which pre-specified groups do not yet exist. Rather, the characteristics of the data are used to assign entities into groups. In archaeological applications, cluster analysis often works as a heuristic, a form of exploratory data analysis (Aldenderfer 1982) concerned with the similarity of the subjects. Cluster analysis considers the resemblance of feature attributes over the whole set of variables, a procedure that is “pre-classificatory” in the sense that the researcher has not used prior judgment to partition the subjects. However, it is assumed that at some level “clusters” in fact exist in the data. Cluster analysis was selected as a method exploring patterning in the funerary petroform data because it produces polythetic classes that define members within a cluster on the basis of their shared attributes. But it also allows some members to be dissimilar on some attributes so long as they are similar when judged over all the attributes (Romesburg 2004:216).

While cluster analysis attempts to identify patterns and produce classifications without *a priori* assumptions, there is also no need to formulate explicit expectations or test specific hypotheses. Unlike in the biological sciences where taxonomy and cluster analysis originated, when applied in archaeological contexts, cluster analysis does not provide definitive results or classifications. Rather it is the exploratory potential of cluster analysis to identify the nature of patterns in data that is its strength. The cluster analysis of complex data means that researchers often do not have a clear idea of what the analysis should produce and how results can then be

related to the social world. This means that identifying the validity of any cluster solution in an archaeological context is not meaningful unless it is relevant to and framed within the theoretical perspective of the larger research project.

Briefly, cluster analysis is a general pattern-searching method, a process of assigning a set of objects into groups (called clusters) to identify groups of objects that are similar to each other but different from objects in other groups. Cluster analysis begins with a number of objects (or cases) to subdivide into homogeneous groups, with each case composed of a number of attributes (or variables). Variables are the basis upon which clustering will occur. It must be decided whether the variables are standardized in some way so that they all contribute equally to the similarity between cases. A statistic is selected to quantify how far apart or similar two cases are, based on the number of cases and types of variables to be used for forming clusters. A method for forming the groups, called a clustering algorithm, is then chosen. There are numerous ways in which clusters can be formed. Hierarchical agglomerative clustering, which is employed in this study, is a "bottom up" approach which begins with every case, which is the sum of its attributes, being a cluster unto itself. Pairs of clusters are merged as one moves up the hierarchy. Cluster membership is expressed in a dendrogram or hierarchical tree diagram, and when the clustering algorithm begins, pairwise matches are made between attributes, forming clusters. Clustering begins by finding the two objects that are most similar, based on the similarity matrix, and merging them into a single group. The characteristics of this new group are based on a combination of all the objects in that group. This procedure of combining two groups and merging their characteristics is repeated until every case has been joined into a single large cluster. In agglomerative clustering, once a cluster is formed, it cannot be split; it can only be combined with other clusters. Agglomerative hierarchical clustering does not let cases separate from clusters that they have joined. The objective is to have a high degree of similarity within clusters and a low degree of similarity between members of different clusters. The final steps in agglomerative hierarchical cluster analysis are to determine how many clusters are required to represent the data and a process for the validation of the cluster solution. The similarity matrix and clustering criterion should be chosen carefully as cluster analysis is sensitive to this, and different approaches may yield different results. Consequently, the results should also be compared to analyses based on different metrics and clustering criteria to determine the

robustness of the results. I summarize the cluster analysis methodology in more detail in Appendix 4.

### ***Recognizing Genealogies of Practice in the Funerary Petroform Record***

The depositional practices evident in the construction Rocky Point funerary petroforms produced strings of repeated actions learned, transmitted, and transformed through time. This genealogy of practice produced both patterns in the building of funerary petroforms and distinctions between them at any one point in time, as well as through time. It is through the kinds of stones and materials used that the identification of actions, chains of actions, networks, and citations is possible. The relationally between funerary petroforms—as clusters of things linked by their material, spatial, and temporal properties—renders memory visible in the archaeological record (Joyce 2003; Joyce and Pollard 2010). It is this relationship between groups of materials and how they are distributed that was meaningful to peoples in the past and their practice of memory work.

The expectation, based on the theoretical model, is that patterning exists at some level within the depositional record of funerary petroform construction. There are processes historically and culturally contingent to the Coast Salish that could be expected to produce patterns in feature construction. These include: ritualization and tradition; ritual professionalism; class structure; and vertical versus horizontal status differentiation.

Ritualization and tradition serve as structuring agents. Bell's (1992) notion of ritualization implies that dispositions governing ritual practice involve an element of exclusivity and tradition in those societies where a degree of hierarchy exists. While the ethnographic model suggests some degree of fluidity in ritual practices between different house groups, it is reasonable to expect some level of patterning in the processes of constructing funerary petroforms, with implications for their morphology placement within the cemetery. In other words, a society with hierarchical social structure could be expected to produce both structured cemeteries and structured burials, although the nature of this structuring is culturally and historically contingent. Conversely, in a society that lacked clearly differentiated social identities, practices and dispositions may be more loosely defined and applied. Or perhaps there may be less emphasis on exclusionary practices, thus resulting in greater homogeneity in the use of both materials and spaces.

Ritual specialists may have served as a mediating force in the structuring of both funerary petroforms and cemeteries. Historically they played an active role that crosscut kin groups and

may have served as a counterbalance of consistency. Straits Salish society had a class of ritual specialists who conducted funerals and the treatment of the dead. This was a hereditary position associated with restricted and proprietary knowledge. It is expected that funerals conducted by ritual specialists would follow patterned expectations, while at the same time allowing for the possibility for improvisation based on extant circumstances based on negotiations between the family of the deceased, other mourners at witnesses, and the ancestral and present dead.

As noted in Chapter 5, the foundation of power in Straits Salish society is knowledge; knowledge that is intangible and inalienable property and to which people had unequal access. Ritual knowledge was the fulcrum of power in a funeral and the funerary petroform its materialization, albeit an imperfect and negotiated one. If this is the case, then building a cairn was not about collecting and piling stones—which anyone could do—but about the prescribed knowledge of how to do this work while safely interacting with the dead, using the proper songs and incantations, and so forth, to conclude the ritual in such a manner that the needs of the living and the dead were satisfactorily met. It was ritual mastery that largely determined whether the ritual was successful or not.

Cluster analysis can be employed to identify patterns in the multitude of ways that stones and soil can be combined during funerary ritual to create burials and in turn create a place for the dead. This will not provide meaning, but it can identify patterns in depositional practice produced through ritual practice in Coast Salish funerals.

### ***Coast Salish Material Taxonomies***

An attempt to define separate types of things—implicitly linked to the idea that these were different things for their creators—reflects a common tendency to essentialize our own cultural taxonomies (Meskell 2004). I recognize burials as negotiated things, entangled with ritual performances, consent and resistance. They are sites where multiple actors—human and otherwise converged in a ritually and emotionally charged moment. This was the time and site in which the dead undertook their first steps from corpse to transformed ancestor.

Meskell offers that taxonomy forms a subjective ontology where some similarities are privileged and others are omitted. While she agrees that certain categorizations are useful in the archaeological organization of objects, she prompts archaeologists to consider taxonomy as historically and culturally contingent conceptual categories (Meskell 2004:40-46). While archaeologists tend towards the morphological in their classification, it is the conceptual

categories that allow insight into the social significance of both building and then living with funerary petroforms. As such, I attempt to depart from a functional taxonomy, working instead towards using conceptual categories meaningful to the people who built the burials a millennium ago.

Material is the first relational factor to consider. It can be understood as a conceptual category, such that stone, wood, and clay are meaningfully grouped from the outset (Hodder 2000b; Meskell 2004). As I argued in Chapter 7, to the Coast Salish, stone is a medium and material practically and metaphorically associated with ideas of transformation, concealment, and anchoring. Some stones are also ancestors, transformed agents on the landscape, often associated with the recounting of moral lessons. This makes stone an ideal medium through which to transform the dead from corpse to ancestor; to conceal the putrefying and polluting corpse; anchor the dead in place; and situate them within a conceptual framework of morality and power. As such, stone forms a coherent and conceptual category of taxonomy. Similarly, those features comprised largely of soil might logically form a separate conceptual category.

We might also expect there to be a conceptual distinction between large and small features, or features that have very large stones requiring many agents to manoeuvre, versus those made from smaller cobbles that are easily carried by individuals. This relates to Pollard's (2008) distinction between performative depositional practices. The act of deposition is a performance drawing together combinations of materials and people, in the emotionally charged and metaphorically significant venue of the cemetery. Moving large boulders requires a very different suite of bodily movements and orchestration than does movement of many small stones. Thus the doing and making of monuments with larger boulders, or those requiring movement of many more stones, extends the ritual performance and changes the embodied nature of that performance.

There is an aesthetic to depositional practice. Recognizing the sensuous nature of materiality, for example the distinction between light and dark stones, may be ritual constituents as much as the material itself (e.g., Meskell 2008; Pollard 2001; Pollard 2008). At Rocky Point, the granodiorite glaciofluvial till is typically white, often brilliantly so in the open sunlight, and has a rough and granulated texture. Individual stones are usually rounded or subrounded and occur both on the ground surface and buried within the ground in small till fields across Rocky Point. The other common stone is smooth, dark grey basalt. It is exposed across the landscape in

low weathered bedrock exposures, some of which look to have been quarried by prying stones loose. Others can be collected from around bedrock exposures, having weathering in place. Other types of materials found in lesser amounts both on the landscape and within funerary petroforms include sandstone and conglomerate. While these distinctions are based in western taxonomies, till and bedrock produces two very different visual and textural effects, both close up and from a distance.

Among the other constituents of petroforms are large glacial erratics that populate the Rocky Point landscape, mostly of granodiorite. Often situated in distinctive places, ancestors transformed in mythic time by the creator may be embodied by large boulders such as these, (Chapter 6). Many funerary petroforms incorporate these large *in situ* boulders.

Producing straight sided (squares or rectangles) or curvilinear outlines (circles and ovals) may have been a way of conceptually grouping and taxonomically distinguishing the dead. The other straight-sided and enclosed features common in Coast Salish life are longhouses. As I argued in Chapter 2, houses are often metaphorically and conceptually associated with tombs, such as the monumental tumuli of Neolithic Europe. Those features with curvilinear margins may be an extended trope relating to the oval grave pit outline, the most common form of inhumation shape throughout the mortuary record of the Salish Sea. Features with irregular margins may be due to unaccounted site formation processes. Deflation, for example, exposes what was originally the interior of the feature, such that a well-formed oblong dome of soil with a less well-defined interior arrangement of stones over the body now appears as an irregular stone cairn. In the field, I accounted for site formation issues in the history of the features and similarly account for this during the analysis of structural deposition. As I will argue in Chapter 11, there may also have been an awareness of the role of deflation in the long-term life of these features, such that people were both aware of the process and recognized its metaphorical role in the transformation of the dead. It is also possible that many irregular features were intentionally not built with a curvilinear or straight side for other conceptual reasons.

### ***Results of the Analysis of Funerary Depositional Practice***

In this section, I consider the results of the cluster analysis, recursively tacking back and forth between the hierarchical clustering of funerary petroform attributes and the theoretical and ethnographic models. This is an entry point through which to consider the varied use of materials

in the building of funerary petroforms, which it then offers insights into the structured depositional practices employed during funerary ritual at Rocky Point.

Cluster analysis entails a certain amount of simplification and distortion, as divisions in the data are likely made along what in reality is a multidimensional continuum of practice and tradition. Depositional practices invested in the constructing of a funerary petroform are simultaneously a complex combination of the negotiated identity of the dead at the moment of burial, the conflicting motivations of participating agents, and often are a site of profound emotions. This means it is unrealistic to expect a definitive classification of funerary petroforms, particularly one representing a single aspect of the individual, such as wealth or rank. There is no “right” cluster solution, simply one that fits the research objectives. I do, however, expect some patterning in the data. Ritual derives its legitimacy and effectiveness from regularities in performance that through time and tradition produce genealogies of practice. Furthermore, if the ethnographic Coast Salish class system was present during the Middle to Late Pacific period, it is reasonable to expect different depositional practices within and between these classes. An absence of patterning may indicate many things, including a lack of overt class distinctions in the burial of the dead; an absence of classes themselves; or the possibility that all people buried within a funerary petroform, regardless of its materiality and placement, were in comparable social classes or at a minimum social threshold to warrant such funerary ritual treatment. There are, however, also strong Coast Salish social groupings within classes, particularly the house group, which may have structured their dead as “cairn groups,” expressed in both material and space as an idealized version of house corporate identity. The False Narrows Bluff example, outlined in Chapter 4, also reminds us that some Coast Salish peoples during the Middle Pacific period may have performed very different funerary rituals that cross-cut status distinctions, such as removing the dead from the village, concealing them within stone crevices, and performing cremations, depending upon the manner of death (Curtin 2002). In this way, it was not the overt rank or status of the individual, but perhaps the perceived threat or disruption that the death of that individual posed to the living.

### ***A Dispositional Typology: Defining Patterns in Depositional Practices***

I approach cluster analysis as a means of looking for groupings in the way that materials were used in funerary depositional practices. Cluster analysis is a way of thinking about things through the things of which they are made.

I outline in more detail in Appendix 4, the heuristic process which I explored patterning through nine different cluster analyses. This entailed different clustering and similarity methods and the inclusion and exclusion of different variables. It was a process of determining the appropriate variables, the ways to code them, the clustering procedures to use, and the ways to then define the clusters. Most of these cluster analyses produced some member overlap with other cluster solutions, suggesting that some core combinations of attributes were at the centre of larger constellations of depositional practices.

For the final two cluster analyses I excluded what I suspected were subjective observations, since the inclusion of these variables significantly changed the classification. These variables sometimes correlated with other variables, and some of them were subjective determinations in the field. The presence/absence of a single extraneous variable can change the results of the cluster solution, so attribute selection and coding has to be done very carefully. In many cases we do not know which attributes will be relevant to the patterning of the data; to be prudent the archaeologist should take many measurements. But the presence of irrelevant variables can actually hide structure present in the other variables if their distributions are independent of the significant ones and they are analyzed together (Read and Russell 1996; Shennan 1997:259).

The final cluster solution included 12 attributes (Table 5). A description of these attributes is included in Appendix 3, and their method of coding is outlined in Appendix 4. Two attributes represented feature morphology: “outline”, and “percentage of soil fill” (Table 5). Eight attributes relating to the material type and size of stones were included in the final cluster solution. The attributes “volume” and “number of stones” represented the overall metric aspects of the funerary petroforms (Table 5).

Based on the results of all the cluster analyses, there was generally a poor structure to much of the data, very likely a result of the fuzzy dispositions, negotiated ritualizing, and a multitude of identities and motivations invested in funerary ritual, all conflated into a single temporal unit. These data emphasize that *variability can in fact be the norm*. This is not to say that variation in patterns is meaningless. Rather, they attest to the performative nature of ritual practice. As such, there are no neat taxonomies of practices along which to cleave the ritual practices of the Rocky Point peoples and no single cluster analysis will produce a satisfactory classification of these complex and intermeshed practices. It was in light of this innate complexity

that I concluded that triangulating between the results of the two best cluster solutions offered a means to produce “Dispositional Types” rather than a numerical taxonomy, a process which considers these features as the material product and producer of dispositions and practices.

**Table 5: Attributes used in the cluster solution for funerary petroforms at Rocky Point.**

Feature aspect	Attribute	Data type	Similarity weight	Similarity contribution
Morphology	Outline	Nominal	2	4
	Soil fill %	Ordinal	2	
Stones	Peripheral material	Nominal	1	8
	Interior material	Nominal	1	
	Peripheral cobbles present	Binary	1	
	Peripheral boulders present	Binary	1	
	Peripheral large boulders present	Binary	1	
	Interior cobbles present	Binary	1	
	Interior boulders present	Binary	1	
Metrics	Volume	Continuous	2	4
	Number of stones	Continuous	2	

The idea of producing a dispositional typology originated in the process of cluster validation, determining the best number of clusters from a cluster solution, and deciding where on the dendrogram to “cut the tree.” The validation procedures used by archaeologists, if any, are rarely explicated. Although objective methods have been proposed, their application is somewhat arbitrary. The problem of determining the validity of the cluster solution and the “correct” number of clusters is a difficult one, with no satisfactory formal and objective solution (Baxter 1994:164; Everitt 1980:64-66). Defining groups involves a trade-off between the number of groups and the similarity of elements in the group. If many groups are defined, they will be small in size and their attributes will be highly similar, but the analysis of a great many groups is difficult. If fewer groups are defined, their larger number of elements will show less similarity to one another, but the smaller number of groups will be easier to analyze. In general, it is better to strive for fewer clusters than many (Romesburg 2004:215).

In my process of cluster validation, I used four methods to identify manageable numbers of groupings. First, dendrograms produced by cluster analysis graphically present the information concerning which observations are grouped together at various levels of similarity. At the bottom of the dendrogram, each observation is considered its own cluster. Vertical lines extend up for

each observation, and at various similarity values, these lines are connected to the lines from other observations with a horizontal line. The observations continue to combine until, at the top of the dendrogram, all observations are grouped together. Typically, one looks for natural groupings defined by long stems (Holland 2006), and this was the first step I took towards defining discrete groups, with an initial cut made where the stems were longest. This produced five clusters.

Most archaeological studies consider only one level (McHugh 1999), all clusters defined at a consistent level of similarity, such that one would draw a line at some chosen level of similarity and all stems that intersect that line would indicate a group. But the kind of social structure that burial data in general—and the Straits Salish data in particular—are likely to produce, is one in which small groupings of funerary petroforms may also be members of larger social groupings. As such, when inspecting the dendrogram and considering a meaningful number of clusters, rather than settling with cutting the tree at a single similarity level, I inspected the dendrogram at different levels (Whallon 1990).

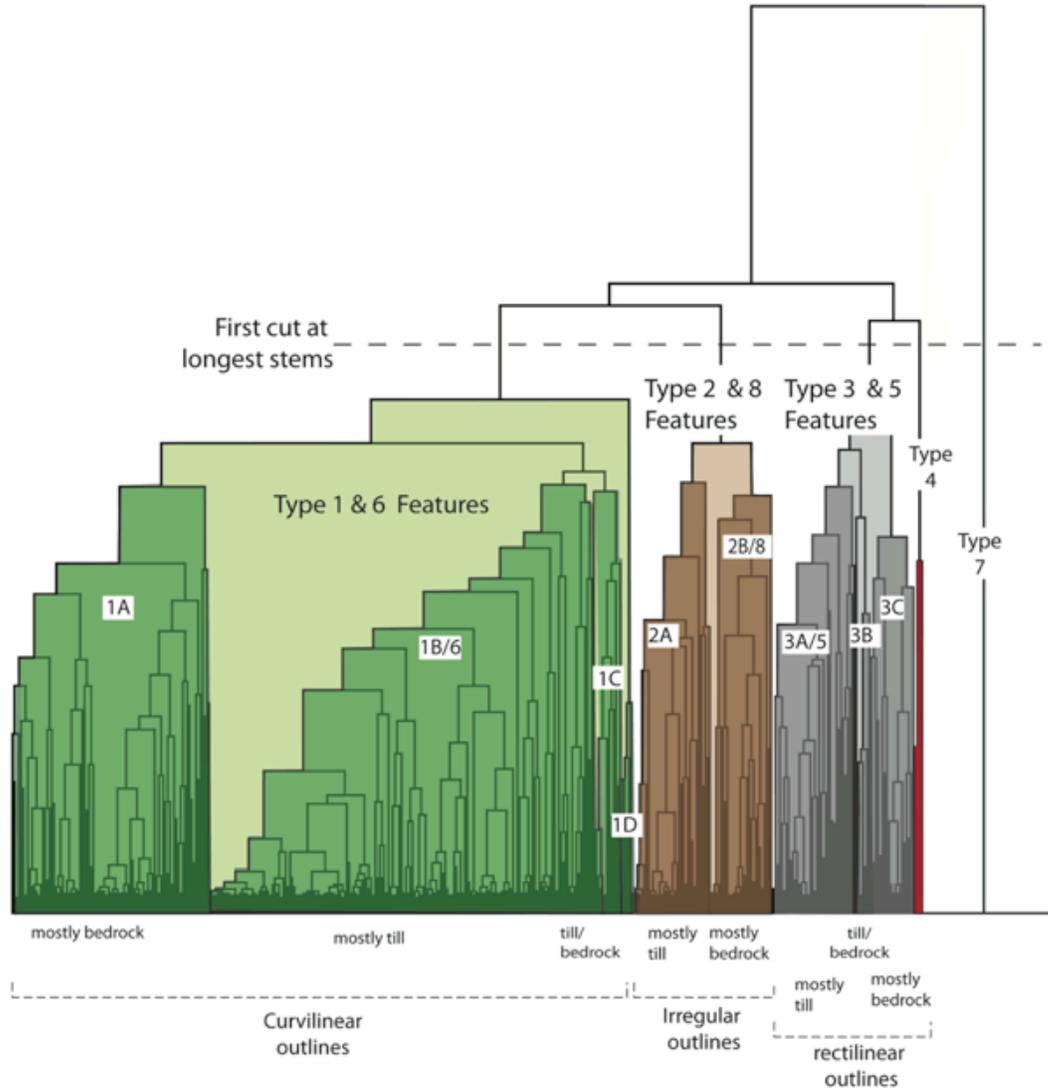
A variation of the above approach is to inspect the cluster solution for cases that one would have *a priori* expectations of clustering together. In the Rocky Point dataset for example, I expected distinctive features made primarily out of bedrock and forming a hybrid boulder crevice/cairn-like feature to cluster together. I then inspected the cluster solution at multiple levels to see where these expected matches separated (Baxter 1994:164), an approach that has archaeological precedent (e.g., Djingova and Kuleff 1992; Gunneweg, et al. 1991).

The third approach I used was to triangulate between two different cluster analyses. The final two cluster analyses I conducted were treated as part of a larger heuristic process of working with two different similarity coefficients and comparing the results between them at two different levels within each resultant dendrogram. This process was integral to considering where overlap occurred in the data, suggestive of core depositional practices in an otherwise cloud-like distribution of dispositions. I used the following two methods:

1. Cluster Analysis 1: Gower's similarity coefficient with average linkage (see Gower 1971; Pader 1982; Palumbo 1987; Peeples 2011; Philip and Ottaway 1983; Rice and Saffer 1982); and
2. Cluster Analysis 2: Jaccard's similarity coefficient with average linkage (Aldenderfer and Blanshfield 1984; Baxter 1994; Everitt 1993; Romesburg 2004; Shennan 1997).

The Gower's similarity coefficient allowed for the use of multi-state data coded at ordinal, nominal, binary, and numerical scales. This required very little data coding and transformation from the original field data. The Jaccard coefficient required that all variables be coded to a binary scale, entailing considerable data transformation and conflating nominal, ordinal and numerical data into a present-absent scale. The Gower's solution strongly emphasized feature outline, and within each of the outline clusters, material type was then concomitantly separated into different bins. The Jaccard solution offered a good alternate perspective on how the Rocky Point data could be structured, since it emphasized material type and material size over outline and other attributes.

Cluster Analysis 1 produced a cluster solution that is an artifact of both the data structure, as well as Gower's coefficient. The method produced clusters dominated by the nominal variables, first by "feature outline", and then by "internal" and "peripheral material types" during the subsequent step in the similarity process. The attributes "volume" and "number of stones" are on a continuous scale, and skewed strongly since most funerary petroforms are smaller and have fewer stones relative to the unusually large funerary petroforms (which are much fewer in number and often have many more stones than smaller burial features). As such, the homogeneity of the attributes "volume" and "number of stones" do not strongly partition most of the features into separate categories—instead it produces a bifurcation between unusually large funerary petroforms, and all other funerary petroforms. This means that "volume" tends to be more variable within each cluster, even though this attribute was weighted so that it could contribute equally to the cluster solution (Appendix 4). Similarly, attributes relating to different stone sizes seem to play a minor role in aggregating funerary petroforms, since many features have cobbles, boulders, and large boulders. In other words, while some funerary petroforms are constructed completely with boulder-sized stones, most funerary petroforms have a combination of boulders, as well as some cobbles, and often one or two large boulders. Similarly, most funerary petroforms have between 1-50% soil fill, meaning that most features are not differentiated according to their relative proportion of soil fill. It is mostly those outliers, with much higher soil to stone ratio, which is differentiated from the rest of the population. This partly explains the distinction of the Type 7 features in the dendrogram (Figure 38). These small soil mounds are the most distinctively different features in the entire Rocky Point population.



**Figure 38: Final cluster solution, illustrating the material relationships within and between the eight dispositional types.**

While the nature of the Gower similarity coefficient certainly contributed to the final cluster solution, the clusters it produced are largely internally homogenous and externally heterogeneous. But there are really only three basic outlines for features (curvilinear, straight, and irregular) and two fundamental types of stones (till and bedrock) with which to build these features. As such, two things happened. First, those features that were a combination of two or more outlier attributes were often hierarchically separated into new clusters (e.g., Type 7 features are unusually small, have no stones, and have more soil than most other features). Second, differentiation in relation to the rest of the features was based primarily on the attribute “outline” (Figure 38). This attribute cannot crosscut different features (i.e., features can not be both

curvilinear and straight); is a discrete category (not a continuum, such as volume); has a small number of categories (features are one of three outlines); and is not strongly skewed within the sample (curvilinear features prevail, but there are substantial numbers of straight-sided and irregularly shaped ones).

Cluster Solution 2 using Jaccard's coefficient does not strongly emphasize outline and in this regard provides a good alternative on how this data could be clustered using the same variables and clustering method (average linkage). Cluster Solution 2 emphasizes material types, but does not exhibit the same degree of internal homogeneity as Cluster Solution 1. It does, however, produce several clusters comparable to Cluster Solution 1.

The final cluster solution I use in this dissertation is largely the results of Cluster Analysis 1, informed by some of the results of Cluster Analysis 2. It is illustrated in Figure 38 and summarized in Table 6. I made several minor manual changes to Cluster Solution 1, informed by the results of Cluster Solution 2. Three additional clusters (Clusters 5, 6 and 8) were not identified as separate clusters by the Gower's coefficient but were extracted from the Gower cluster solution as separate clusters. The rationale for this is discussed within each cluster description.

Comparing the results of these two cluster analyses also brought to light previously unnoticed groupings in the data and was thus particularly useful at pointing out some different ways to consider the outliers. Both cluster solutions consistently identified the expected outliers, such as the bedrock crevice/cairns, very small all-soil features, as well as the distinctive square-based mounds. Interestingly, both solutions identified smaller and larger versions of feature types. The largest mounds, for example, also had much smaller counterparts that were not recognized as such in the field. In this way, cluster analysis proved to be an effective means by which to test *a priori* categories, but also offered categories or ways of thinking about features derived directly from the data itself. Below I discuss each of the disposition types, and explain how they were derived from the cluster analysis process. Table 6 summarizes the characteristics of each of the dispositional types.

**Table 6: Summary of the cluster analysis results, comparing the proportions of materials and metric attributes across the eight dispositional types.**

Type		Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
<b>N</b>		280	57	61	6	2	2	3	9
<b>Percentage of features</b>		66%	13%	14%	1%	1%	1%	1%	2%
<b>Outline</b>	Curvilinear	100%	0%	0%	33%	0%	100%	100%	11%
	Straight	0%	0%	100%	67%	100%	0%	0%	11%
	Irregular	0%	100%	0%	0%	0%	0%	0%	78%
<b>Peripheral material type</b>	Mostly till	65%	53%	52%	50%	100%	100%	0%	0%
	Mostly bedrock	28%	40%	34%	50%	0%	0%	33%	100%
	Equal till/bedrock	6%	7%	13%	0%	0%	0%	0%	0%
	Soil only	0%	0%	0%	0%	0%	0%	67%	0%
<b>Interior material type</b>	Mostly till	65%	53%	56%	50%	100%	100%	0%	0%
	Mostly bedrock	30%	37%	31%	50%	0%	0%	33%	100%
	Equal till/bedrock	5%	11%	13%	0%	0%	0%	0%	0%
<b>Peripheral material size</b>	Soil only	0%	0%	0%	0%	0%	0%	67%	0%
	Cobbles	67%	75%	70%	100%	50%	100%	33%	78%
	Boulders	95%	100%	100%	100%	100%	100%	0%	78%
<b>Interior material size</b>	Large boulders	32%	46%	31%	0%	50%	0%	0%	67%
	Cobbles	96%	93%	97%	100%	50%	100%	33%	78%
	Boulders	83%	91%	85%	100%	100%	100%	0%	78%
<b>Soil fill (%)</b>	Large boulders	12%	26%	13%	0%	50%	0%	0%	55%
	0-25	49%	63%	49%	0%	100%	0%	0%	89%
	26-50	35%	28%	39%	0%	0%	0%	0%	0%
<b>Volume (cubic metres)</b>	51-75	10%	2%	8%	17%	0%	100%	0%	0%
	76-100	3%	0%	2%	83%	0%	0%	100%	0%
	Min	0.1	0.1	0.1	9.9	4.6	13.2	1.4	0.4
<b>Number of visible stones</b>	Max	9.8	8.0	17.8	102.9	8.4	34.6	3.5	10.2
	Mean	1.5	1.2	3.3	46.4	6.5	23.9	2.1	2.7
	Median	1.1	0.9	2.1	38.9	6.5	23.9	1.5	1.8
	Standard deviation	1.6	1.2	3.6	36.8	2.7	15.1	1.1	3
	Skewness	0.1	0.3	0.3	0.8	n/a	n/a	1.2	0.7
	Min	4	7	8	18	25	200	0	3
<b>Ad hoc type</b>	Max	300	104	280	100	75	215	7	110
	Mean	42	32	80.8	33.5	50	207.5	3.5	29.7
	Median	31.5	22	55	20	50	207.5	0	11
	Standard deviation	37.7	22.2	64	32.6	35.3	10.6	4.04	35.1
	Skewness	0.14	0.31	0.3	0.84	n/a	n/a	1.22	0.7
	<b>Small curvilinear cairns</b>	<b>Small irregular cairns</b>	<b>Small rectangular cairns</b>	<b>Monumental mounds</b>	<b>Deflated monumental mounds</b>	<b>Medium-sized tumuli</b>	<b>Very small mounds</b>	<b>Crevice/cairns</b>	

As previously mentioned, six of the attributes collected in the field were removed from the final two cluster analyses, since they were more subjective field observations. While these

attributes are distributed throughout the data, they may have been tropes that cross-cut different depositional practices. I reintroduced them to the dispositional typology after cluster analysis, as it is worth considering how they are distributed between the various clusters, and I include them as Table 7 below.

**Table 7: Summary of the secondary attributes excluded from the cluster analysis, comparing proportions of the attributes across the eight types.**

Type	1	2	3	4	5	6	7	8
<b>N</b>	280	57	61	6	2	2	3	9
<b>Percentage of features</b>	66%	13%	14%	1%	0.4%	0.4%	0.7%	2%
<b>Includes erratic (%)</b>	16%	26%	10%	0%	0%	0%	0%	33%
<b>Built against bedrock (%)</b>	8%	32%	6%	0%	0%	0%	0%	89%
<b>Vertical peripheral stones</b>	25%	21%	39%	0%	0%	0%	0%	33%
<b>Horizontal stones</b>	3%	5%	4%	0%	0%	0%	0%	33%
<b>Capstone</b>	12%	8%	6%	0%	50%	50%	0%	11%
<b>Endstone</b>	27%	40%	22%	0%	0%	0%	0%	11%
<b>Ad hoc type</b>	<b>Small curvilinear cairns</b>	<b>Small irregular cairns</b>	<b>Small rectangular cairns</b>	<b>Monumental mounds</b>	<b>Deflated monumental mounds</b>	<b>Medium-sized tumuli</b>	<b>Very small mounds</b>	<b>Crevice/cairns</b>

The cluster analysis was a process of discovery, considering the patterning of attributes that comprise the funerary petroforms, which in turn illuminate something about the depositional practices used to build these features during funerary ritual. Dispositions of practice produced these features through time, and the complexities of these processes are expressed in the similarly complex and fuzzy nature of the cluster analysis. While the outliers were adequately identified in both cluster solutions, these features are the minority in a much larger population of burials that defy easy grouping. Hierarchical methods such as cluster analysis cleave what is otherwise “fuzzy” data where breaks do not necessarily exist. Dispositions of funerary practices, while forming cohesive practices, are not discrete packages. They were likely subject to individual and family-based interpretations (and practices of identification at these scales), as well as differential access to the ritual experts or ritual knowledge and expertise that building these features likely required. Also, while the building of funerary petroforms at Rocky Point was part of a larger genealogy of practice founded in long-term tradition, incremental change (both unintentional and intentional) likely produced a continuum of practices rather than discrete

temporal categories of practices and their products. But the process does identify several key points:

- Within clouds of shared dispositions, there are cores of depositional practice;
- Some attributes cross-cut depositional practices, thus linking different kinds of practices through commonalities in the use of stone and soil to build funerary petroforms;
- Many features exist on a continuum of cairn-mound and small-big;
- One category—Type 4—is an exception. It is very discretely defined in how these features (both large and small versions of each other) were constructed. This distinguishes them from all other features;
- There is a significant difference between those features with a curvilinear and a straight-sided outline. Speculatively, the curvilinear outlines of funerary petroforms may be a play on the oval inhumation pits of earlier mortuary practices, while the straight-sided features are part of an emerging house metaphor. I discuss this in more detail in Chapter 11. It is also important to consider the possibility that outline shape emerges from the bodily orientations of participants. This provokes a consideration of what may dispose people to stand in a circle, as opposed to people adopting a more linear arrangement, such as lining up around a rectilinear grave at burials.

Most typologies of monumental burials privilege one attribute: size. While this attribute is certainly important, my approach gives other attributes of funerary petroforms equal opportunities to form unique clusters. This recognizes that funerary petroforms are not simply a product of aggrandizing attempts at making the largest features (a kind of funerary arms-race), but that other social factors were engaging with materiality in the process of ritualizing. Size is certainly a defining attribute in some of the clusters, but not exclusively so. The dispositional typology I have produced sidesteps the size tautology and acknowledges that these burials resulted from depositional practice within a ritual process that was not an overt power play performed with complete consensus; rather, their construction was bound up in the very process by which power was negotiated, both within and outside of the cemetery.

## **Type 1 Features: Small and Medium-sized Curvilinear Funerary Petroforms**

Type 1 features are the largest dispositional category of features at Rocky Point, accounting for 66% of all features. These are the “classic” burials cairns, common throughout southern Vancouver Island and adjacent islands. Based on the cluster analysis dendrogram, however, the depositional practices of these features were not strongly structured. The fuzzy nature of this dispositional category is indicated, for example, in the process of chaining evident in the dendrogram (Figure 38). The level of similarity at which elements join a cluster indicates the strength of clustering. The cascading effect evident within the Type 1 features displays chaining, meaning small groups of features are progressively added to the tail of the bigger cluster rather than forming separate new clusters. Furthermore, a lack of long stems suggests that there are fewer discrete clusters within that segment of the data. When compared to each other, this poor structure suggests a high degree of variability in how these features were built. Rather than discrete core types of burials, these features, as the sum of their different attributes, might be better understood as a cloud of attributes sharing a dispositional space in which depositional practices are not rigidly defined and controlled, but occur within a suite of tropes.

This loose set of depositional practices produced funerary petroforms that are either round or oval in outline, and built predominately with till and lesser amounts of bedrock (Figure 39). The peripheries of these features are generally built with boulders and cobbles and about one third with large boulders. About a quarter of these peripheral stones are set on edge vertically, or angled slightly inward, providing a distinct outer margin for these burials. The interior stones are often slightly smaller, usually cobbles and boulders. The median number of stones visible is 31, although as many as 300 are visible on the largest of these features. Almost all of these features have less than 50% soil fill. Rarely are they built against an *in situ* erratic or against a bedrock exposure (Table 6). The median size of these features is the third smallest of all eight types (Table 6). Despite the variability evident in this dispositional type of feature, the patterns evident in their construction extend across the entire size spectrum of these features, such that some of the smallest features evidence some of the same practices visible in the largest, including the common perimeter of larger stones filled with smaller ones, and compared to Types 2 and 3, a slightly high proportion of features with one or more capstones in the centre. The centre of many of these features is convex, suggesting a collapse of the central enclosure containing the corpse.



Figure 39: Examples of Type 1 features from Rocky Point. 1 m photoscale.

Further down the dendrogram, Type 1 features cluster into four smaller sub-clusters, derived largely (although not exclusively) from the types of materials they are made from (Figure 38).

### Type 2 Features: Small and Medium-sized Irregular-shaped Funerary Petroforms

This dispositional category accounts for 13% of all features at Rocky Point, and encompasses most of the irregular-shaped features in the study area (Figure 40). These features range from loosely defined arrangements of stones, to hemispherical petroforms built against bedrock exposures (Figure 40). Some of the diversity evident in this class of features may be due

to site-formation processes<sup>22</sup>, although I excluded the obviously disturbed features from analysis altogether. At least 20% of the Type 2 features, however, were classified as deflated features that I suspect originally may have been Type 1 features. There is, however, also considerable variability in this dispositional type that is not accounted for by site formation issues.

The cluster analysis dendrogram indicates that the Type 1 and 2 features are more alike than Type 3 and 4 features (Figure 38). About half of the Type 2 features are made with till, although they are more likely than Type 1 features to have greater amounts of bedrock incorporated into their construction. Like Type 1 features, Type 2 funerary petroforms also cluster further down the dendrogram into two clusters; those made mostly with bedrock and those made mostly with till (Figure 38). They are constructed primarily with boulders and cobbles, and have a significantly great proportion of large boulders than Type 1 features. However, they have less soil fill than Type 1 features, which may be in part a reflection of the role of deflation in affecting these burials. Both Type 1 and 2 features are comparable in volume and number of stones. Unlike Type 1 and 3 features, which often seem to be smaller and larger versions of each other, Type 2 features do not follow this pattern.



---

<sup>22</sup> In retrospect, if I were to tease out the deflated features, I might see that those irregular features built against bedrock form a more internally homogenous cluster, particularly in their associations with exposed bedrock and erratics.



Figure 40: Examples of Type 2 Features. 1-m scale. The bottom two features are examples of deflated funerary petroforms. 1 m photoscale.

There is a greater degree of anchoring Type 2 features to the landscape than both Type 1 and 3 features. Type 2 features have the greatest relative proportion of endstones and *in situ* erratics, and are more often built against bedrock (Table 7). As I argue below, this may indicate a different anchoring or containment idea than Type 1 and 3 features, which also incorporate these tropes in their construction, but not to such a significant extent.

### Type 3 Features: Small and Medium-sized Rectilinear-shaped Funerary Petroforms

This dispositional category of features is comprised of funerary petroforms with a rectilinear peripheral structure (Figure 41). Like Type 1 and 2 features, there is considerable variation in the proportions of types and sizes of stones, as well as soil fill used to make these features. Similarly, Type 3 features also cluster further down the dendrogram into those constructed primarily with till, an equal proportion of till and bedrock, and bedrock (Figure 38). There are, however, some significant differences. First, there is a much greater proportion of stones, as well as more stones set vertically on edge around the perimeter of this type (Table 7). The rectilinear-based Type 3 features are also more likely to be larger in volume than the

curvilinear Type 1 features. To determine if rectilinear features are significantly larger than curvilinear ones, I conducted a Fisher's Exact Test.





**Figure 41: Photographic examples of Type 3 features. 1 m photoscale.**

In comparing the frequencies of feature volumes, categorized in four size classes defined by Jenks natural break method<sup>23</sup> (Jenks 1967), for curvilinear and rectilinear features, the difference between the volumes of straight-sided versus curved-sided features is highly significant,  $\chi^2$  (DF 1, N=355) = 44.909,  $p \leq 0.005$ . With a problem  $\chi^2$  of 44.90 and a critical  $\chi^2$  (0.005, 1) of 7.419, the variation of the feature volumes between curvilinear and rectilinear features is too great to be explained by chance alone. The strength of the association is very strong, Cramer's  $V = 0.356$ . This result forms, in part, the decision in the subsequent spatial analysis (Chapter 9) to consider the distribution of funerary petroforms at Rocky Point not just by dispositional type, but also by feature volume.

The cluster dendrogram suggests that Type 3 and 4 features are more alike than Type 1 and 2 features (Figure 38). Type 4 features, as I discuss shortly, are a class of large, square-based burial mounds. Near the top of the cluster dendrogram, Type 4 features are hierarchically similar with Type 3 features (Figure 38). Type 3 features are similarly square or rectangular based, but unlike the Type 4 features, Type 3 features do not have a statistically greater proportion of soil to stone.

#### **Type 4 Features: Medium and Large Burial Mounds**

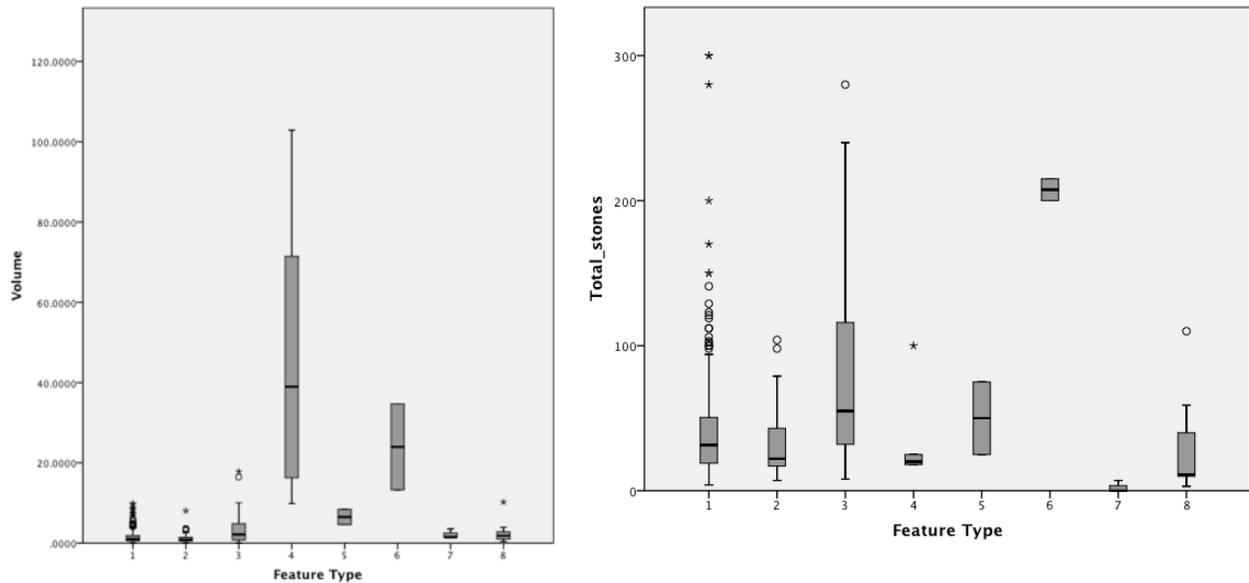
This small but significant cluster of features consists of large, square-based mound-like features (Table 6). They have very little visible exterior stone and consist primarily with soil,

---

<sup>23</sup> A data clustering method designed to differentiate values into different classes, with the variance reduced within each class and maximized between them.

which was been excavated from around the bases of these features, leaving a visible trench around these burials. Stones, when visible along the basal perimeter of these features, are equally till and bedrock cobbles and boulders (large boulders appear absent). Unlike the previous features, Type 4 features have no other secondary associations: they are not built against bedrock, do not have end stones, and so forth (Table 7).

Type 4 features have the greatest range in feature volume but the smallest range in the number of stones per feature (Figure 42). This is the result of Type 4 features being made mostly from soil, or at least that is what is visible externally. Also, there are both very large and smaller versions of the same feature type.



**Figure 42: Box plot showing feature volume (in cubic metres) by type (left) and number of visible stones (right).**

Type 4 features are some of the largest at Rocky Point, bearing an uncanny resemblance to the largest class of burial mounds at Qithyil (Chapter 4). The largest funerary petroform at Rocky Point is Feature DcRv-24:55, which has a volume of 102 m<sup>3</sup> and is about 9.7 m long (Figure 43 and Figure 44). A 6 m wide trench rings it. This feature is comparable to Mound 1 at Qithyil, which is similarly square-based, if not somewhat larger. Mound 1 has an internal rectangular low wall of stones concealed within the periphery of the mound soil matrices. Similarly, stones are visibly protruding at four points from the base of DcRv-24:55, which are likely corners of an internal petroform.



Figure 43: Feature DcRv-24:55, the largest funerary petroform at the Rocky Point, looking northwest (and uphill). 1 m photoscale.

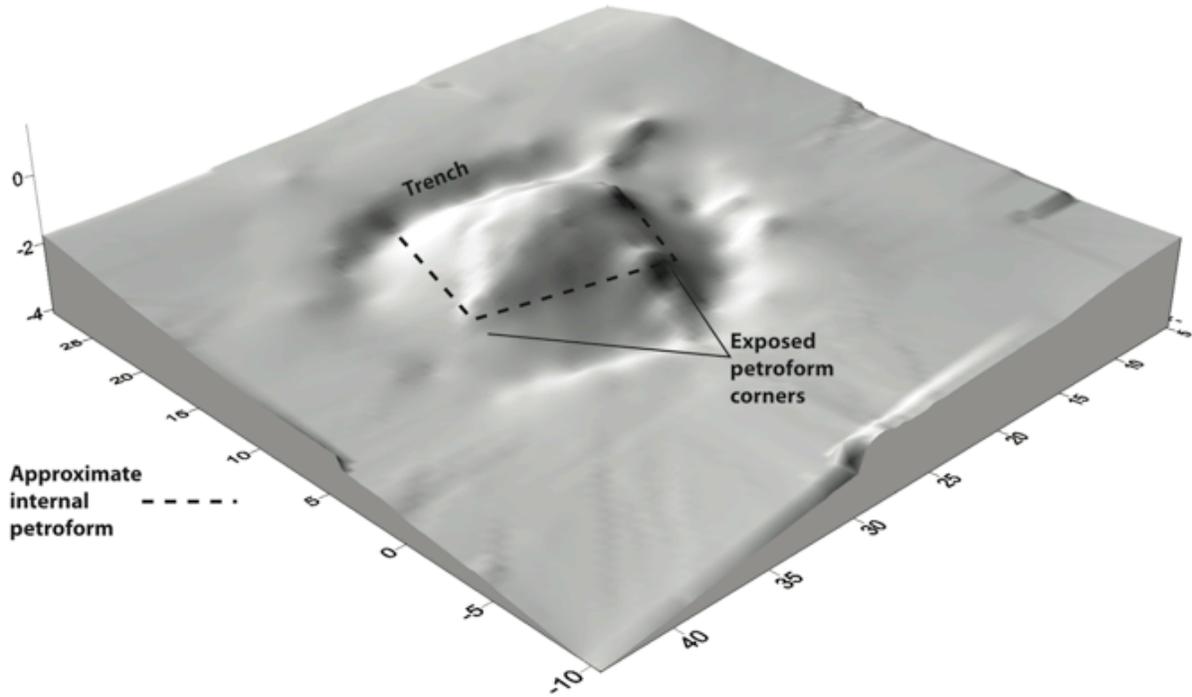


Figure 44: Hill-shaded relief map of feature DcRv-24: 55, based on three dimensional point data collected in 30 cm intervals. Note rectangular basal outline, rounded profile, and substantial trench excavation. Oriented looking northwest (the same orientation as the above photograph).

An unexpected outcome of the cluster analysis process was the grouping together of the large Type 4 features, such as DcRv-24:55 and 60, with Feature DcRv-24:61 (Figure 45) a feature that is significantly smaller than the other Type 4 features. In effect, it appears that there were some smaller versions of these otherwise monumentally large features, which shared very similar depositional structuring in the use of soil and stone. As I discuss in Chapter 11, a second

unexpected outcome of the cluster analysis was the spatial grouping of all Type 4 features to the top and sides of a small hill at one site (the Yates Cemetery). I explore the spatial significance of this in Chapter 11.



Figure 45: Two other Type 4 features, DcRv-24: 60 (left) and DcRv-24:61 (right). Both have square bases and peripheral trenches. 1 m photoscale.

#### Type 5 Features: Rectilinear Petroforms (Possibly Deflated Monumental Burial Mounds)

Only two of these features were identified at Rocky Point. They are rectilinear petroforms from two adjacent sites, DbRv3:C144 at Edge Point and DbRv-9:14 at Eemdyk Passage (Figure 46). This type is heuristically derived, as these features were not isolated during Cluster Analysis 1. Rather, they were grouped together in Cluster 3A (n=37), the mostly rectilinear till-based petroforms (Figure 38). Cluster Analysis 2 (using Jaccard's coefficient), however, hierarchically isolated DbRv3:C144 into its own cluster. I decided to artificially create a separate cluster from these two unusual and similar features, since they may morphologically be the remnant of similar depositional practice and site formation processes that differed from those of Type 3 features. In fact, I suspect they are deflated versions of Type 4 features.



Figure 46: Type 5 features, DbRv-3:C144 (left) and DbRv-9:14 (right). 1 m photoscale.

Feature DbRv-3:C144 consists of three petroforms enclosed by a low stone wall (Figure 47). The largest petroform (A) is 3.5 m long, has a peripheral structure of about 20 very white, bright granodiorite stone boulders (with some cobbles and large boulders). The internal structure is comprised of 27 visible cobble and boulder-sized granodiorite stones. There is a conspicuous rounded capstone on the top of this petroform. Aside from being inside a rectangular petroform, this feature is comparable to many other Type 1 features in the vicinity. It has about a 25-50% soil content and is covered with a thick layer of pea-sized gravel. I suspect this whole feature is a deflated burial mound and that the gravel covering this largest internal petroform is remnant soil matrix, with the very fine charcoal rich silt characteristic of Edye Point having washed or blown away over time. The two other petroforms (B and C) are situated in the two corners opposite from the larger petroform (A). Both are almost 2 m long and consist of till and some bedrock cobbles and boulders, with no visible soil fill. Feature DbRv-9:19 is similar to this feature, although only the external rectilinear petroform remains, with one loosely defined petroform in the northeast corner. It is possible that other stones may have been removed.

The overall morphology of feature DbRv-3:C144 is reminiscent of the internal structure of Mound 1 at Qithyil (Michael Blake, personal communication, October 9, 2006) and the possible internal structure of Type 4 features at Rocky Point (Figure 47).

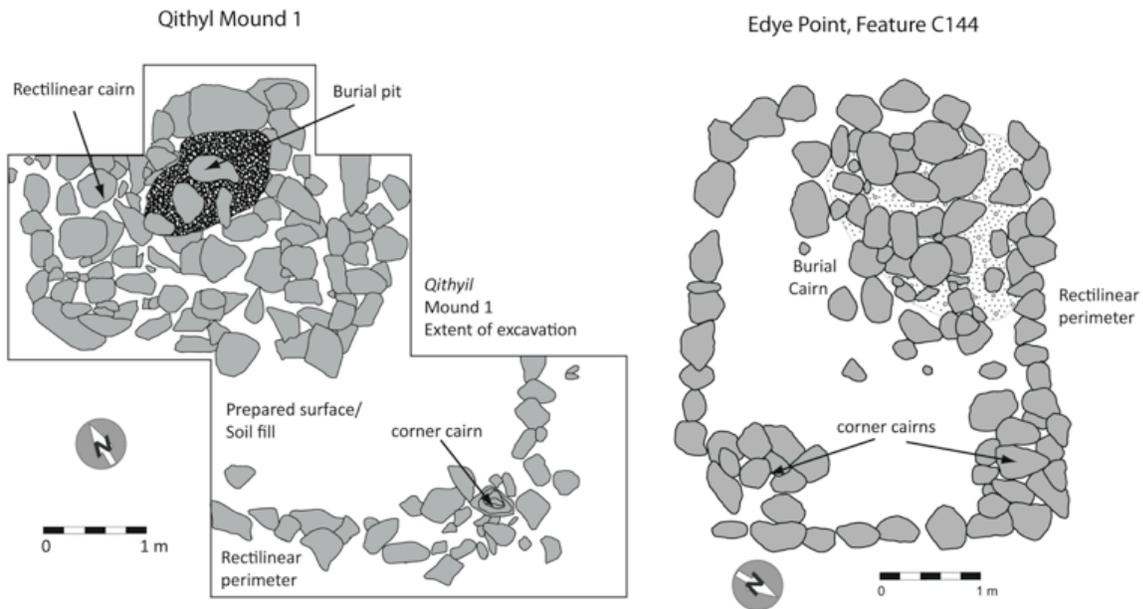


Figure 47: Comparison of plan views between the excavated portion of Mound 1 at Qithyil (left, after Thom 1995) and DbRv-3:C144 at Edye Point (right).

It may be that Type 4 and 5 features are the same funerary petroforms. Type 5 features may be either deflated versions of Type 4 features or the interior components of Type 4 features without most of the covering mound of sediment. While I cannot be certain, I suspect that only the central cairn within the larger petroform of feature DbRv-3:C144 was ever covered with sediment (Figure 47). This cairn has a lag aggregate of pebbles, suggesting deflation that is seemingly confined to the main cairn and absent from other parts of the feature. The internal similarity of DbRv-3:C144 to Mound 1 at Qithyil, and the assumed internal composition of the two largest Type 4 features at the Yates Cemetery (DcRv-24: 55 and 60) is striking and suggests a conservative and regional level of practice when it comes to at least one class of funerary petroform.

### **Type 6 Features: Medium-Sized Stone and Soil Rounded Funerary Petroforms**

These features are medium-sized oval-based and rounded features, built with more soil than stone (Figure 48). Unlike the large Type 4 features, which have conspicuously little stone within the mound-portion of their structure, for example feature DcRv-24:55 (Figure 43), Type 6 features have little external differentiation in the placement of stone and soil. They also lack any external indication of a stone perimeter like the Type 4 features. They are made primarily with granodiorite till cobbles and boulders.



**Figure 48: Features DbRv-3:C82 (left) and DcRv-24:52 (right). 1 m photoscale.**

This cluster was derived by heuristic means. These two features clustered together in Cluster Analysis 1 as part of a much larger cluster (n=175) although they were not grouped together in Cluster Analysis 2. While they were originally clustered as part of Type 1, they are

greatly exaggerated versions of these features, and outliers not only in their relatively large size (DbRv-3:C82 is the largest feature at Edye Point) but also in their unusually high proportion of soil to stone.

### **Type 7 Features: Small Earthen Mounds**

These small rounded earthen mounds are unusual for Rocky Point (Figure 42 and Table 4). At the highest level of the cluster analysis dendrogram, there are two branches—Type 7 features and all other funerary petroforms (Figure 38). The length of these two initial branches suggests these are two very discrete categories of features. Type 7 features are like the “small oblong domes” which are the most common features at Qithyil (Oakes, et al. 2008) but are among the most unusual at Rocky Point.



Figure 49: Photographic examples of Type 7 Features. 1 m photoscale.

### **Type 8 Features: Hybrid Boulder Crevice-Cairn Features**

This cluster of features is a broad category of burials that appear to be a hybrid form of boulder crevice burials and funerary petroforms (Figure 50). In Coast Salish epistemology, stone crevices can be places for ritually charged things, as outlined in Chapter 7. Bones of salmon, for example, were placed in stone crevices during the first salmon ceremony. Some of the Type 8 features are consistent with the naturally occurring boulder crevices, into which burials were placed at False Narrows Bluff and around Becher Bay (Chapter 4). Unlike these other features, however, the bedrock boulders at Rocky Point were moved and positioned to form obvious cavities for the cadaver, which were then subsequently sealed with small stone cairns. These features are found distributed amongst funerary petroforms, although it is unclear if they are contemporaneous. They are, however, variations on the same material tropes and metaphors as funerary petroforms.

Type 8 features clustered together in Cluster Analysis 1; however, they were part of a larger cluster of irregularly shaped bedrock features (n=29). Similarly, in Cluster Analysis 2, they were grouped together, but as part of a much larger cluster of features (n=114). I manually separated these features into their own cluster based on the distinctive use of stone to produce definite crevices, many of which were visible along the sides of the features. Unlike funerary petroforms, these features do not appear to have internal enclosures for the corpse, the external feature itself forms the cavity for the body. These features are the most likely burials at Rocky Point to incorporate an *in situ* erratic (Table 7). Most are also commonly built against a low bedrock exposure and some incorporate stones placed both horizontally and vertically, sometimes forming small dolmen-like features (Figure 51). These features are not very distinctive, and unlike many funerary petroforms, are not easily distinguished from the natural bedrock exposures that dot the Rocky Point landscape (Figure 50).

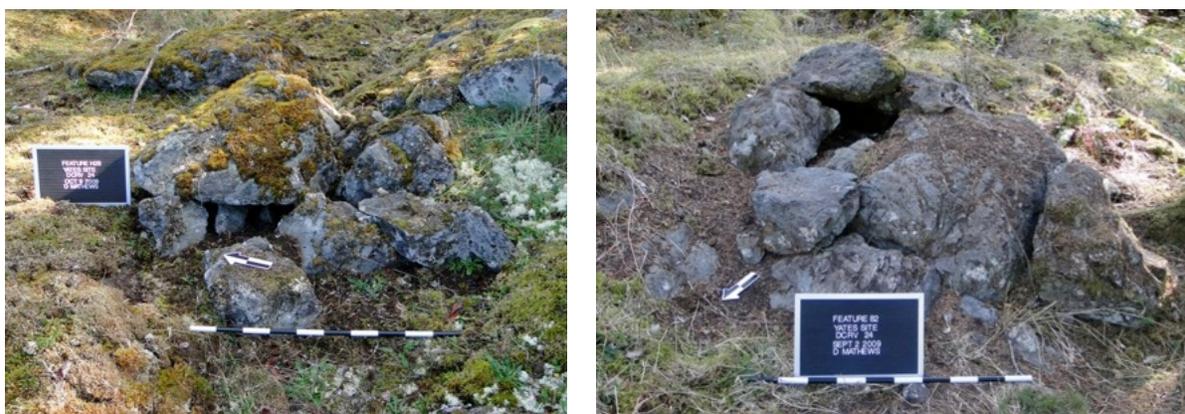


Figure 50: Examples of smaller Type 8 hybrid boulder crevice-cairn features. 1 m photoscale.

There are two very unusual Type 8 Features. Feature DcRv-24:H30 consists of four very large bedrock boulders placed facing each other and creating a large void-space between them. Two elongate boulders are parallel to each other with two somewhat smaller ones at each end. The two larger stones are each about 1.6m long, 0.7–1.5 m wide, and weigh between 7–10 metric tonnes apiece. The void space within these boulders was filled with hundreds of granodiorite till cobble-sized stones, and bedrock stones have been placed blocking up the two largest external openings (Figure 51). Around the entire perimeter of the feature, cobbles and boulders have been wedged into the smallest spaces between the bottom of the boulders and bedrock to seal it up. There is a thick pebble soil aggregate over the entire structure, suggesting it was entirely covered with soil fill at one time and has since deflated.



**Figure 51: Type 8 Feature DcRv-24:H30 (left) showing the four large stones angled together. The dashed line (right) indicates in plan view, the approximate size of the internal chamber, presumably used for burial.**

Feature DcRv-24:H30 is a small hybrid burial cairn/crevice burial situated along the south face of a small vertical bedrock bluff (Figure 52). It consists of a long tabular piece of bedrock (2.4 m long horizontally, 2.3 m wide, 0.3 m thick) that exfoliated from the rock face. It is unclear if it naturally came to rest obliquely against the side of the bluff or was moved into this position by people. Regardless, this created an internal space about 2 m deep and 0.7 m wide at the bottom, tapering upwards. About 2.5 m in front of the feature, five large stones were placed in a row perpendicular to the bluff, creating a flat platform in front of the crevice burial on what is otherwise steeply sloping hillside (Figure 52).

The entrance of this crevice is sealed with carefully stacked rocks, beginning with large (ca. 70 cm diameter) angular bedrock boulders at the base that get progressively smaller and somewhat more rounded towards the top of the opening (Figure 52). This front cairn is about 1.7 m long, 1 m wide and 1 m high, with the outermost basal stones set on edge. The topmost layer of stones has fallen into the shelter. At the back of the crevice a second smaller cairn has been built. Within the feature, a layer of stones and soil was placed to cover at least one set of human remains. From the few elements visible, the burial appears to be the remains of one articulated and tightly flexed body oriented with the head to the southeast (conforming to the internal orientation of the rock feature). The proximal epiphysis on the femur is unfused; suggesting that the person died in their late teens and the sciatic notch is narrow, indicating the individual was

possibly male. The body was located in the bottom corner of the feature and it is possible that other burials are present in this feature.

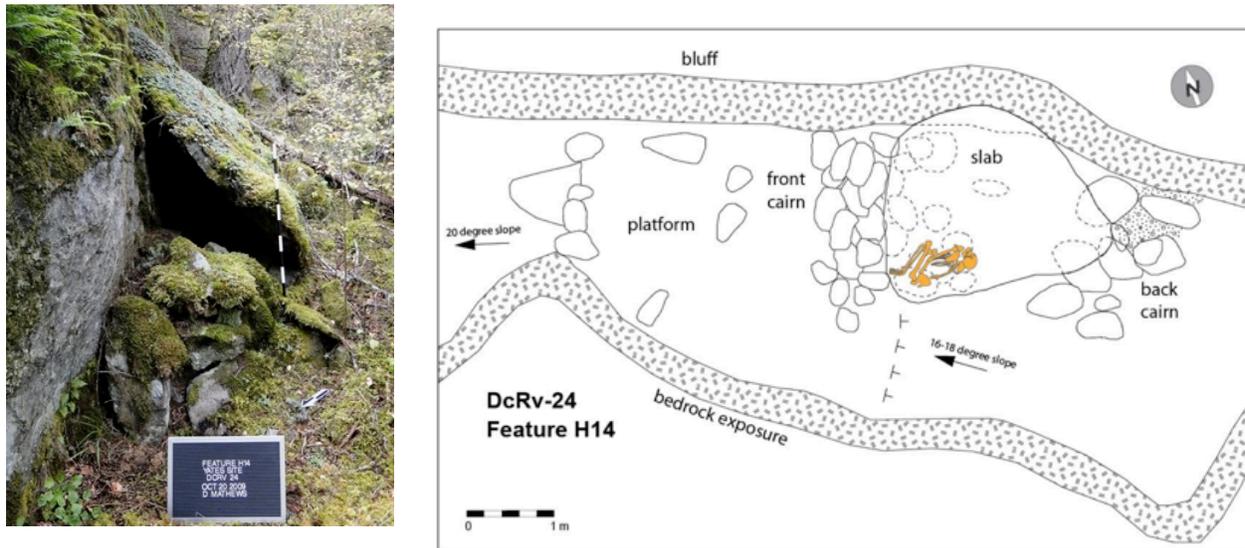


Figure 52: DcRv-24:H30, illustrating the front profile of the feature (left) and the plan view of the burial and platform fronting it (right).

### Summation

I used cluster analysis to investigate the building of funerary petroforms as acts of ritualized deposition. While internal cluster homogeneity might seem appropriate when trying to define social groupings, the body of social theory I employ recognizes that groupings of people interact with each other and that boundaries are often somewhat permeable, sometime poorly defined and always in a process of ongoing negotiation. As such, it is the connections *between* social groups that are of as much interest as the groups themselves. While the criteria for a successful cluster solution are groupings with internal homogeneity and external heterogeneity, can this kind of crisp classification be expected of social practices? This is particularly so if the Rocky Point people did not take a product-centred view to the outcome of their funerary practice. In Tambiah's (1984) study of Thai amulets, for example, he highlights that the Thai do not have a single system of categories that exhaustively classify all amulets. Each individual amulet is named and some of these fall into more than one conceptual category (Meskell 2004:43). The numerical taxonomy I used clearly cannot account for this kind of multiplicity of meaning and emic classification.

With this in mind, how does one define what is a useful or successful cluster analysis? Archaeologists have overwhelmingly looked for evidence of rank or status in their cluster analysis

results, with different clusters often interpreted as representing different social classes, ranks, or statuses. They assume that rank and status are discrete attributes expressed clearly in mortuary practice and cluster analysis essentially becomes relegated to an exploratory tool in identifying how rank is *expressed* in the burial of the dead (McHugh 1999:71) rather than *if* rank, or some other combination of social factors, is the *material outcome* of processes that include funerary ritual.

Based on the results of the cluster analysis, it is clear that the depositional practices associated with the funerary ritual of the Rocky Point people were not strongly structured. Despite an absence of demographic information, it is likely that only a subset of people were interred within a funerary petroform at Rocky Point. Within this subset of people, their burials seem to exhibit shared principles that situate their specific depositional practices within a cloud of similar dispositions, with stone and soil materials used in a combination of novel ways.

Unlike most mortuary analyses that use cluster analysis, there are no grave goods or demographic information available for Rocky Point. While this is a point of departure from the typical use of cluster analysis in a mortuary context, this is also one of its greatest strengths, as the materiality and use of space is considered irrespective of what is actually inside the feature. Traditional mortuary analysis focuses almost exclusively on grave goods, and to a lesser extent on the biological sex of the remains inside. The form of the burial is often considered as a secondary factor, if at all, in any form of classification of mortuary practice. During the funerary ritual, stone and soil were entangled in a social process of ritualizing, with the resultant funerary petroforms as the final material and archaeologically detectible word about who the dead were and their relationship to the living.

Although Processual approaches to cluster analysis expect a high degree of redundancy in mortuary patterning, a more nuanced social archaeology position would expect that complex social relationships and practices may result in both consistency of practice related to tradition, but also a degree of variability or play within practice as ritual proceeds in an imperfect and performed way, with subtle innovations, mistakes, and contesting of tradition also part of any funeral. As such, it was expected that applying cluster analysis, which produces crisp boundaries between classes of data, entails a certain amount of cleaving along planes of attributes in multidimensional space, when in reality attributes and the cases they comprise could more accurately thought to have fuzzy boundaries, with many feature perhaps able to belong in more than one definable cluster. The approach I have taken here is an imperfect one, but what it

illustrates well is the lack of uniform structure in the data, capturing the fact that within these larger clusters there was variability in the tropes available to people to draw upon during the funeral, while also identifying some of the smaller outliers in the dataset that represent more radical departures from the “norm.”

## **Chapter 9: The Spatial Analysis of Funerary Petroforms at Rocky Point**

*How were funerary petroforms placed on the landscape, at various scales, to produce places for the dead?*

As outlined in Chapter 2, cemeteries are spatial places, where each burial is entangled with its neighbours, and each successive burial predicated upon earlier burials. Identifying spatial patterns is not a final goal in itself, but identifying such patterns is an entry point through which to consider the processes important in structuring the burial of the dead at Rocky Point. This is a means of considering the spatial relationality within and between the different types of features identified in the dispositional analysis of variation in depositional practice in Chapter 8.

In spatial analysis, space is approached as quantitative and homogenous, whereas the landscape in which people dwelt was qualitative and heterogeneous (Ingold 1993:154). The geographic and Cartesian notion of space is something that can be externally bounded and segmented, but landscape cannot be cut out from the whole. Each place embodies the whole and yet is different from it (Ingold 1993:155). The Rocky Point funerary landscape is in this sense comprised of funerary petroforms, each of which is an individual thing yet inseparable from the others around it. This landscape owes its character to each burial there and these in turn were both derived from the kinds of practices and activities of the peoples who lived there, as well as recursively predisposing present and future actions there. Ironically this includes the Canadian Armed Forces, whose fencing off of Rocky Point has protected it from the destruction wrought on other cemeteries on southern Vancouver Island.

There was a relational context for people's engagement with this place, which was the basis of the significance of each burial and cemetery. The spatial analysis, then, like the dispositional analysis, is a process of identifying patterns, aimed at discerning structure within a fuzzy whole. A certain level of cleaving between things and places is necessary for something that is otherwise not so easily segmented and definable. But in the process I recognize that for the Rocky Point peoples, it was landscape, not space, that was significant, and place emerged through the relational distances and placements of burials such that each successive burial gathered significance from those that preceded it. I do not intend to privilege form over process (Oyama 1985:13), imagining that people inscribed landscape according to some pre-existing pattern or template; rather I understand the funeral as a process in which burials were situated,

using cues from prior uses of material and space. In this way patterns will be significant, as they identify the recursive engagement of ritual practice and tradition with the appropriate and socially negotiated places where such practices could occur. The identification of spatial patterns is not a final goal in itself, but by identifying such patterns we can begin to understand which social processes may be important in the cemeteries and the landscapes they inhabit.

The cluster analysis identified that the morphological data is not strongly structured and that we should not rule out key alternative explanations for the spatial processes at play at Rocky Point. As such, I conduct the spatial analysis using the cluster-analysis derived typology, but I also consider the distribution of feature attributes, independent of the typology, at Rocky Point. The physical presence of funerary performs influences the movement, orientation, and interaction of peoples at multiple scales. Funerary petroforms are material and spatial cues that structure dispositions in a place, inscribing the landscape and structuring movements and experiences of peoples to produce ritualized bodies.

The expectation is that people burying the dead in two closely neighbouring cemeteries may have a similar sense of the use of space and ritual practices of spatially structuring burials within their cemeteries. With the first dissertation question answered, I now address the second fundamental question:

*How were features placed on the landscape, at various scales, to produce places for the dead?*

To answer this question, I consider six thematic avenues of investigation:

1. The distribution of funerary petroform dispositional types between cemeteries;
2. The intensity (density) of funerary petroform distribution (whether features are clustered, random, or dispersed);
3. The interaction of different types of funerary petroforms;
4. Networks of movement within and around cemeteries;
5. Visibility and perception of the dead within cemeteries; and
6. Visual differentiation between the dead and tensions between inclusivity and exclusivity of space.

The specific questions I pose of the spatial data are summarized in Table 8 below.

**Table 8: The Spatial Analysis questions, sources of data, and methods of analysis.**

<b>Theme</b>		<b>Question</b>	<b>Data Source</b>	<b>Analysis Method</b>
<b>Theme 1</b> Distribution of funerary petroforms	1.1	How are the different dispositional types of features distributed between the different cemeteries at Rocky Point?	Cluster analysis results	Descriptive statistics
	<b>Theme 2</b> Intensity of funerary petroforms	2.1	How do funerary petroforms occupy space?  The theoretical and ethnographic expectation is that communities had their own cemeteries away from the villages of the living. Within each cemetery, individual families or other social groups may have had specific burial places for their members. When possible landscape correlating effects are removed from consideration, are funerary petroforms, as a whole, placed randomly within the two largest cemeteries or clustered together?	Point data for each cemetery
	2.2	Within the two largest cemeteries, do funerary petroforms of the same type attract or repel each other? Within the two largest cemeteries, do funerary petroforms of the same size attract or repel each other?	Cluster analysis results	Kernel density analysis, and Nearest Neighbour Analysis
	2.3	Recognizing that there might be clusters of clusters, (family groups clustered within larger house groups, for example) at what scales are features clustered or dispersed within the two largest cemeteries?	Point data for each cemetery, cluster analysis results	Ripley's K-function
<b>Theme 3</b> Interaction of funerary petroforms	3.1	If clustering of different types of funerary petroforms occur, where are these clusters within the two largest cemeteries? Comparing the locations of clusters within and between types and attributes leads to identifying possible social factors contributing to the clustered pattern.	Cluster analysis results	Nearest Neighbour Hierarchical cluster analysis
	3.2	Within each large cemetery, are the relative proportions of types of funerary petroforms within one spatial cluster comparable to the relative proportions of funerary petroform types in different	Cluster analysis results	Descriptive statistics

	3.3	spatial clusters? When considered independently of the depositional feature typology, how are features distributed by volume in relation to clusters of burials?	Nearest Neighbour Hierarchical Cluster Analysis	Distribution of features by volume.
<b>Theme 4</b> Networks of ritual movement	4.1	Trails have biographies based on the people, events and places associated with them, endowing routes with cultural meaning and significance that are often entangled in relations of power. Assuming there were trails through the two largest cemeteries at Rocky Point, how might people have moved within these cemeteries in both ritual contexts and the day-to-day travel between other places?		Continuous sector analysis, heuristic landscape analysis
<b>Theme 5</b> Visibility of the dead	5.1	Movement within cemeteries is foundational to producing ritualized bodies and creating and controlling perception. Visibility is implicated in the discourse of power relationships and ideas of monumentality understand visible burials as markers inscribing landscape with the fields of power, influence the spatial movements, orientation and interaction of peoples. Were funerary petroforms at the Edye Point and Yates cemeteries visible in the day-to-day context of traveling around or past them?	Funerary petroform data Digital elevation data	Visibility analysis Multiple viewshed analysis
<b>Theme 6</b> Visual differentiation of the dead within cemeteries	6.1 6.2	Based on the prior results of spatial analysis, there may be exclusive burial areas within the larger communal cemeteries. As privacy is central to distinguishing social groups (and these clusters may in fact be house groups), are clusters of funerary petroforms intervisible within the largest cemeteries?? Are there areas within cemeteries that are significantly less visible than others?	Funerary petroform data Digital elevation data	Visibility analysis Multiple viewshed analysis

### **Theme 1: The Distribution of Funerary Petroforms by Cemetery**

As outlined in Chapter 7, there are seven cemeteries in the Rocky Point sample area. Considering the distribution of the eight dispositional types between these cemeteries (Figure 53),

from south to north, some patterns are evident in the relative proportions of features across the Rocky Point landscape.

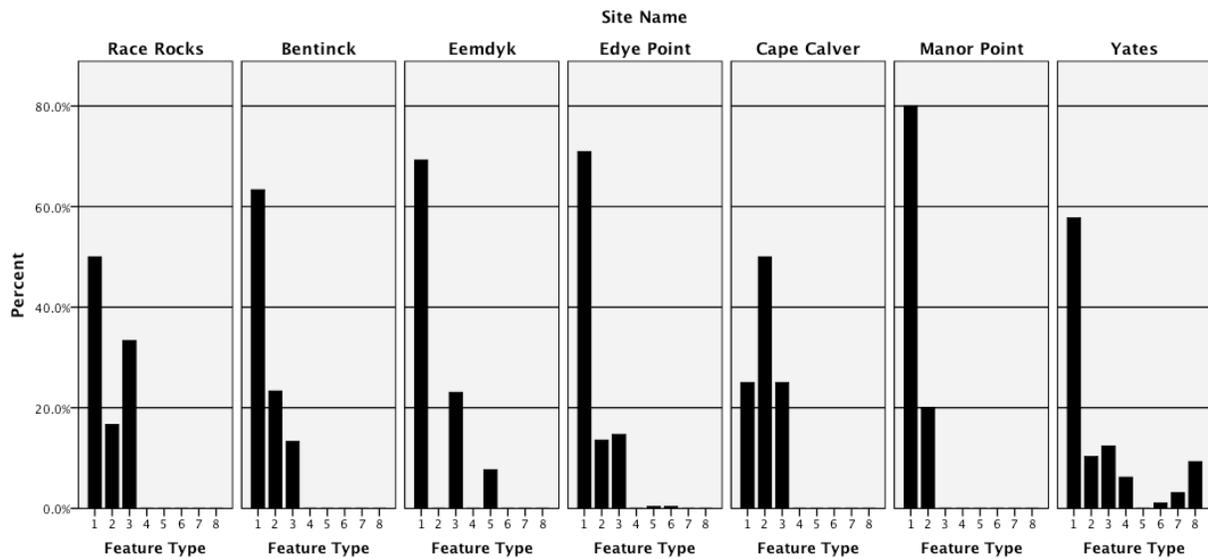


Figure 53: Proportions of funerary petroform feature types across the Rocky Point cemeteries.

I briefly discuss the distribution of funerary petroforms, both by dispositional type and volume, in the following section. While there is a general pattern of Type 1 (small and medium-sized curvilinear features) predominating at most cemeteries, there are some differences in feature and volume proportions between cemeteries. These distributions suggest the potential for similar depositional practices centered on the Edye Point cemetery, with different ritual depositional practices at the meso-scale beyond this village. This section then forms the basis for a detailed analysis of funerary petroforms within the Yates and Edye Point cemeteries.

### The Nearby Cemeteries: Bentinck Island, Eemdyk Passage, and Edye Point

There is similarity in the relative proportions of feature types between the large Edye Point cemetery and the much smaller Bentinck Island and Eemdyk Passage sites. Situated around the Edye Point village, this triad of somewhat intervisible cemeteries form an equidistant triangle. Very similar types and proportions of different types of features are present in this triad of cemeteries (Figure 53). The feature volumes in these cemeteries are also comparable (Figure 54). Like at most cemeteries, Type 1 features (small curvilinear stone and soil features) predominate. Unique to the Edye Point triad are the two large rectangular petroform Type 5 features, which may be deflated versions of the monumental Type 4 mounds (otherwise absent at

Edge Point) or they may be local variations of these features, incorporating the internal attributes of the burials without much or any of the accompanying soil mound evident at the Yates Cemetery, Q̄ithyil, and elsewhere in the Salish Sea.

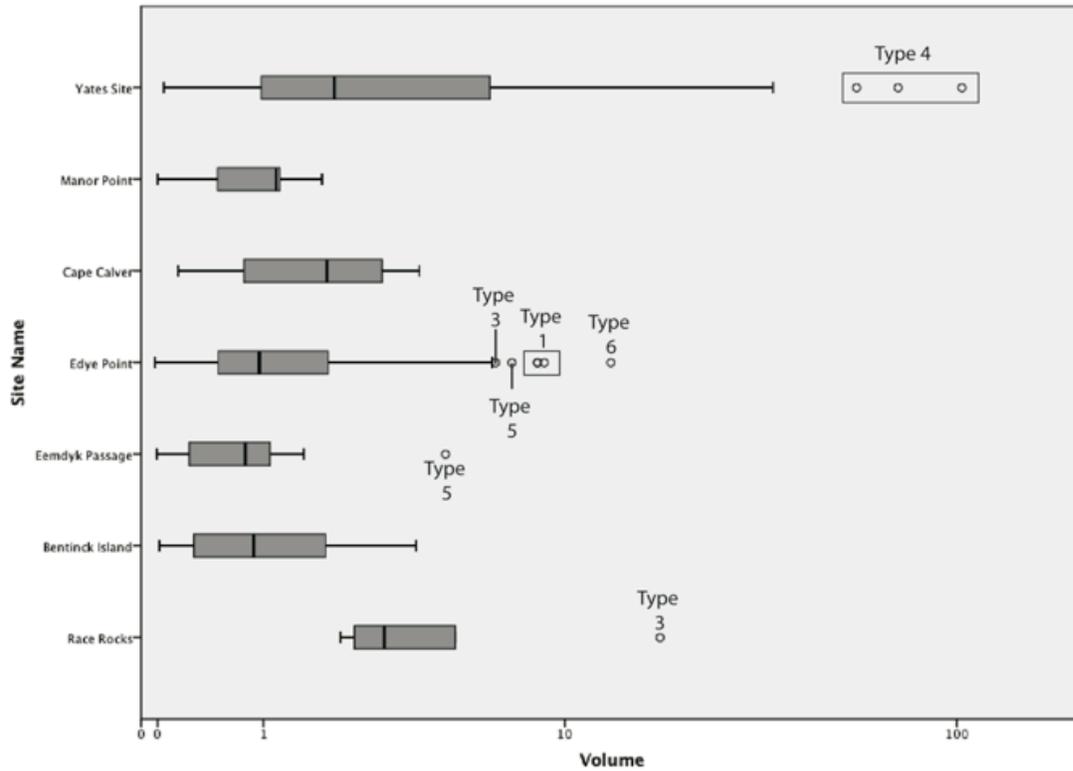


Figure 54: Feature volume by site.

### The Isolated Island Cemetery: Race Rocks

The Race Rocks cemetery, offshore from Bentinck Island, is small, with only six features included in the analysis. Type 1 features are the most common, but this isolated place also has the highest relative proportion of straight-sided Type 3 features in the study area (Figure 53). Interestingly, this remote cemetery also has the highest median feature volume in the study area (Figure 54).

### The Intervening Cemeteries: Cape Calver and Manor Point

Cape Calver and Manor Point are both very small cemeteries and their sample size makes meaningful comparisons within and between them tenuous. Recognizing this, Manor Point has the least diversity of features types, although Type 1 features are the most common, a

pattern that holds true throughout most of Rocky Point (Figure 53). At Cape Calver, irregular Type 2 features are the most common, with equal numbers of rectilinear Type 3 features and curvilinear Type 1 features. This may speak to some unaccounted site formation process resulting in irregular features, or to a social process that was producing less specific forms of burials.

### **The Inland Cemetery: Yates Cemetery**

The Yates Cemetery has a distribution of feature Types 1, 2 and 3 similar to its counterpart cemetery at Edye Point (Figure 53). These two larger cemeteries each have one Type 5 feature (medium-sized stone and soil funerary petroform). The Type 6 feature at Edye Point is the largest feature at that site; the comparably sized Type 6 feature at the Yates Cemetery is significantly smaller than the monumental Type 4 features (although it is the largest feature if the three largest Type 4 features are excluded). Unlike that larger cemetery, however, there are three types of features not evident at Edye Point, including the monumental Type 4 features (Figure 54), the small mound-like Type 7 features, and the hybrid crevice/cairn Type 8 features. In addition, the median feature volume is also greater (Figure 54).

### ***Theme 2: The Density of Funerary Petroform Distribution***

Every funerary petroform at Rocky Point constitutes a point in space with an associated suite of attributes. Considered together, point data such as these are the basis for detecting patterns so that inference regarding the distribution of an observed set of attributes in specific locations can be made (Waller and Gotway 2004:118). The theoretical and ethnographic expectation is that communities had their own cemeteries away from the villages of the living. Within each cemetery, individual families or other social groups may have had specific burial places for their members. When considered at both the study area scale of analysis, and at the cemetery scale, are the Rocky Point funerary petroforms aggregated, random, or dispersed in their density?

Based on the results of the dispositional type analysis (Chapter 10), combined with the ethnographic thematic analysis and body of social theory, detecting sets of points and locations representing similar clusters of events, such as the aggregation of burials with particular attributes, offers an entry point into analyzing patterns of ritual practice. It is then possible to pose questions concerning the locational practice in the burial of the dead at Rocky Point. This

approach falls under the rubric of point pattern analysis. Point pattern analysis (PPA) is the study of the spatial arrangements of points in two-dimensional Cartesian space. It is a suite of spatial statistical processes to determine if points and their attributes have a tendency to be systematically patterned within the research area or if they are randomly distributed (Diggle 2003; Ripley 1981). I outline the PPA process in Appendix 5.

PPA is conducted excluding the possible effects of landscape. With the results of the PPA analysis, landscape attributes can be reintroduced back into the analysis, but for this stage of the analysis, I consider only the spatial relationships between the burials themselves, independent of the landscape around them. This is purely a process of identifying spatial patterns between points of data. Funerary petroforms may be aggregated or dispersed depending largely on landscape variables, such as the avoidance of placing burials in wet areas. These are called first-order properties. While this is a dispositional practice, it does not explain how different funerary petroforms relate to each other, only that they mutually avoid or are similarly attracted to certain places. Second order properties consider how funerary petroforms co-vary, or how they react to each other (either attracting, repelling or placed indifferently in regard to other burials). I am presupposing that both first and second order effects structured the placement of funerary petroforms. The first order-producing practices of not placing the dead in wetlands or on top of bedrock are themselves meaningful and unite all the people buried in funerary petroforms within a core ritual practice structured by shared dispositions of what constitutes an appropriate or inappropriate place for the dead. Furthermore, it highlights the potential significance of any burials actually placed on bedrock. But it is the second order-producing practices of placing the dead in specific ways relative to each other, with regard to the backdrop of landscape, that are revealing when considering who was buried together and how these burials were structured spatially to produce places of and for the dead.

In this analysis, I used two PPA techniques to consider the first order effects: quadrat counting and kernel density analysis. To consider the second-order structuring of space, I used Nearest Neighbour Analysis (NNA) and Ripley's *K*-function (Baddeley 2010; Boots and Getis 1988; Diggle 2003; Dixon 2002; Fortin and Dale 2005; Tong 2010; Upton and Fingleton 1985). Each of these analyses is done at the cemetery scale, since the entire study area does not meet all of the requirements for Point Pattern Analysis (see Appendix 5). The two largest cemeteries, however, are spatially discrete collections of point data (funerary petroforms) with well-defined

edges, all the points are precisely mapped, first-order landscape covariates such as bedrock exposures and wetland are similarly mapped, and the funerary petroforms are isotropic (with the assumption that the position of one funerary petroform affects the position of another in some way, even if that way is currently unknown).

The Rocky Point PPA data set consists of a collection of observed events (funerary petroforms), event locations (cemeteries) and a spatial domain of interest (the study area). One of the initial objectives of point pattern analysis is recognizing the type of point pattern. To define spatial clustering, we begin by defining its absence (Waller and Gotway 2004:119). This is accomplished first by statistically comparing the observed pattern of points with a random pattern. This is the concept of complete spatial randomness (CSR), which defines a situation where an event is equally likely to occur at any location within the study area, regardless of the locations of other events. That is, events follow a uniform distribution across the study area, and are independent of one another. Uniform means there is a uniform probability distribution across the study area, not in the sense of evenly dispersed events across the study area. Determining complete spatial randomness serves as a boundary condition between spatial processes that are more aggregated than random and processes that are more regular than random (Waller and Gotway 2004:119). If there is no significant difference between random and observed patterns, the analysis is complete. If there is a difference, the next step is to determine if the pattern is an aggregated or dispersed point pattern (Krivoruchko 2011).

### **The Landscape-Level Intensity of Funerary Petroform Distribution**

The first scale of analysis is the landscape level of the study area. I test for aggregated, random or dispersed distribution using quadrat-counting tests for CSR. Using the Spatstat package for R, (Baddeley and Turner 2005), the quadrat test is a window divided into subregions, or quadrates of equal area. The number of features falling within each quadrate is tallied and is then applied to the Pearson's ( $\chi^2$ ) goodness-of-fit test (Baddeley and Turner 2005:74). For the moment, I will consider clustering irrespective of the environmental variables that may produce some clustering of the features, since it is clear that burials are not placed in marshes or on bedrock. I am using quadrat tests simply to determine if additional tests against CSR are required.

At Edye Point, using a 3x3 grid, Chi-squared test of CSR using quadrat counts, the observed counts are in the top left corner of Figure 55, the expected counts are in the top right,

and the Pearson's residuals are in the bottom centre. For Edge Point (p-value < 2.2), the Null hypothesis is rejected and the spatial point pattern is aggregated at the cemetery level.

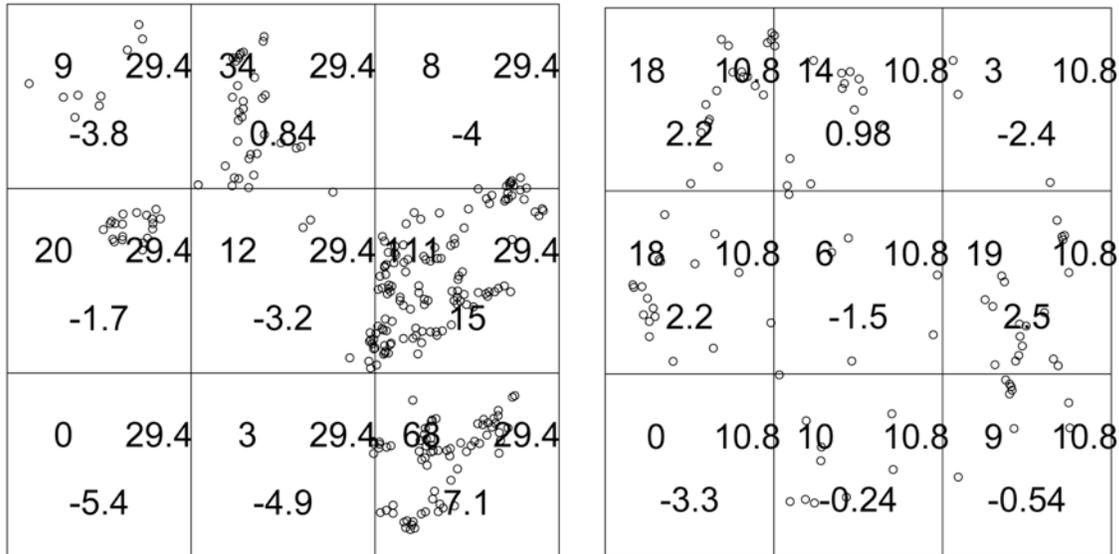


Figure 55: Quadrat counting test for complete spatial randomness of funerary petroforms at Edge Point (left) and the Yates Cemetery (right). Both cemeteries have clustered distributions of funerary petroforms.

At the Yates Cemetery, the Null hypothesis is similarly rejected and the spatial point pattern is aggregated (p-value = 3.864). While the quadrat count for CSR is often used in the PPA literature, it is of limited information since its only real utility is providing an alternate to the null hypothesis. The power of the quadrat test also depends upon the size of the quadrat, and carries with it an implicit assumption about the spatial scale (Baddeley and Turner 2005:75). Furthermore, quadrat analysis is limited to this single scale but as the intensity of features depends upon the scale at which it is examined, other analyses are necessary to examine the nature of feature clustering at multiple scales.

### The Mesoscale Intensity of Funerary Petroform Types within the Edge Point and Yates Cemeteries

*Within the two largest cemeteries, do funerary petroforms of the same type attract or repel each other?*

I next consider mesoscale funerary petroform density for each dispositional type of funerary petroform within the Edge Point and the Yates Cemeteries. This section introduces the significance of identifying the kind of distribution that each type of feature exhibits within each of

the two cemeteries. The determination of a feature type's intensity, or its propensity towards clustering, spatial randomness, or dispersion has fundamental interpretive significance since the depositional practices, as chained actions, produced the material and spatial disposition of the funerary petroforms at Rocky Point. Identifying the spatial relationship between different types of funerary petroforms is a first necessary step towards understanding the associations between groups of materials and how they are distributed. It was these material and spatial relationships that were meaningful to peoples in the past and their practice of memory work. Genealogies of funerary ritual practice are accessible through patterns in the building of funerary petroforms and the spatial distinctions between them. Each feature type is also displayed according to its volume, a key attribute of ideas of monumentality, which defines each type to some extent but also crosscuts each type, adding another interpretive perspective to the spatial analysis.

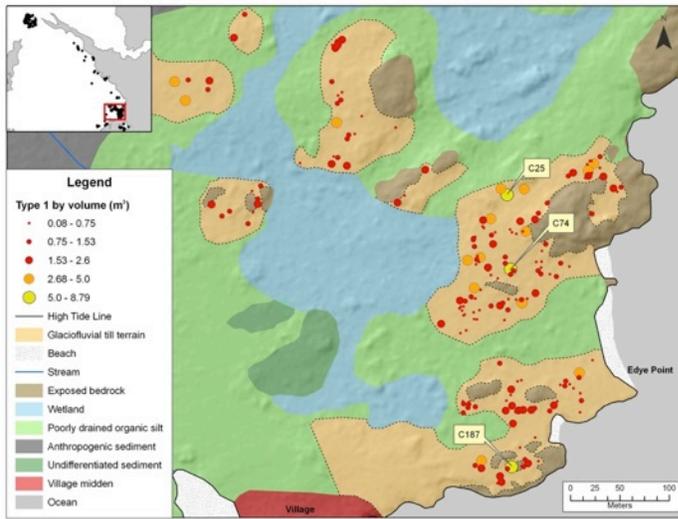
Nearest Neighbour Analysis (NNA) is widely used in archaeology and is a means of evaluating point intensity where its assumptions are valid (Banning 2000; Conolly and Lake 2006:164). Importantly, the point-map must not omit any data points; therefore a sample of a larger population cannot be used unless it is a fairly large and spatially contiguous sample such as the two well-defined and thoroughly surveyed cemeteries at Edye Point and the Yates Cemetery. To calculate the NNA statistic, the linear distance between any two points is measured and the average of all these distances is used to obtain the mean distance to nearest neighbours and the standard deviation of this distance. The degree of randomness (i.e. the intensity) in the distribution is the ratio of the observed and expected mean distances, with the nearest neighbour ratio results ranging between 0 (highly aggregated), through 1.0 (random) to a little over 2 (dispersed). A more complete methodology is included in Appendix 5. At this initial stage of the analysis I am not considering possible covarying effects, such as aspects of the natural environment (e.g., marshes). These potential *first order effects*—aspects of the environment that may contribute to or structure spatial patterning more so than cultural factors—will be considered in subsequent analyses of density. The results of the NNA test for funerary petroform density are summarized in Table 9.

**Table 9: Edye Point and the Yates Cemetery funerary petroform NNA by Dispositional Type.**

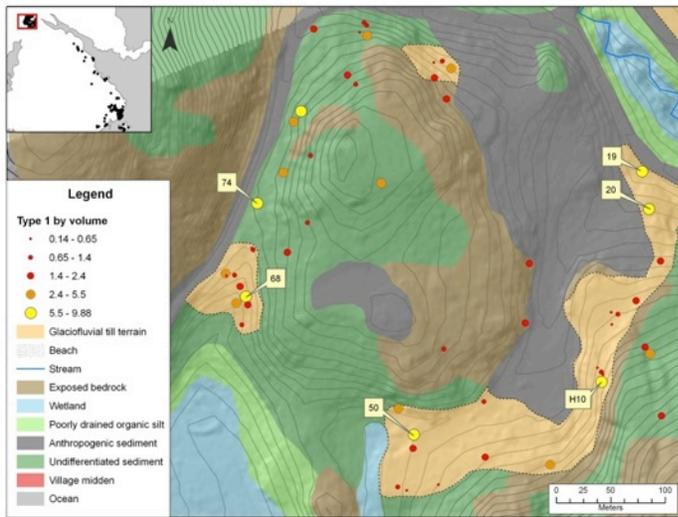
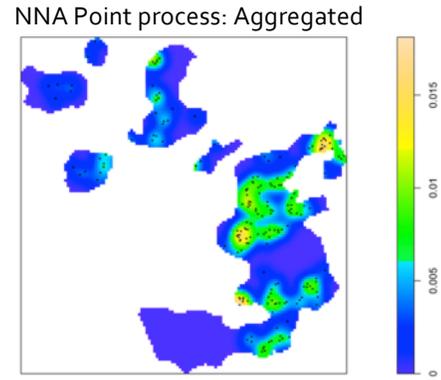
Cemetery	Type	n	Nearest Neighbour Ratio	Z-score	P value	Process	Comments
Edye Point Area: 50,408 m <sup>3</sup>	1	188	0.88	-3.13	0.001	Aggregated	There is less than 1% likelihood that this aggregated pattern could be the result of random chance.
	2	36	1.62	7.17	0.00	Dispersed	There is less than 1% likelihood that this dispersed pattern is the result of random chance.
	3	39	0.811	-2.25	0.02	Aggregated	There is less than 5% likelihood that this aggregated pattern could be the result of random chance.
	5*	1	n/a	n/a	n/a	n/a	Sample size is too small for NNA.
	6*	1	n/a	n/a	n/a	n/a	Sample size is too small for NNA.
	Yates Area: 100,472 m <sup>3</sup>	1	56	0.974	-0.373	0.709	Random
2		10	0.778	-1.345	0.179	Random	While somewhat aggregated, the pattern may be due to random chance.
3		12	1.532	3.524	0.000	Dispersed	There is less than 1% likelihood that this dispersed pattern could be the result of random chance.
4*		6	n/a	n/a	n/a	n/a	Sample size is too small for NNA.
6		1	n/a	n/a	n/a	n/a	Sample size is too small for NNA.
7		3	n/a	n/a	n/a	n/a	Sample size is too small for NNA.
8		9	0.778	-1.273	0.203	Random	While somewhat aggregated, the pattern may be due to random chance.
* Violates the minimum number of required points for NNA.							

The NNA identified Type 1 feature intensity at Edye Point as aggregated, and those at the Yates Cemetery as random (Table 9 and Figure 56). While nearest neighbour analysis does not allow subsets or samples of data to be extracted from the whole without violating assumptions about the point pattern process, a visual assessment of the distribution of the Type 1 features at both Edye Point and the Yates Cemetery suggests that there is a differential distribution in larger Type 1 features compared with their smaller counterparts. At Edye Point, the smaller Type 1 features form small clusters, sometimes in sinuous arrangements, whereas the medium features (i.e. those between about 2.6–5 m<sup>3</sup> in volume) are more dispersed. The largest features (5–8.7 m<sup>3</sup> in volume), while few in number, are even more dispersed. At the Yates Cemetery, most of the Type 1 features are dispersed, but the largest category of features (5.5–9.8 m<sup>3</sup>) appear to strongly repel each other and seem more dispersed than random in their intensity. It may be that the largest and the smallest Type 1 features, when considered together, are clustered, but when

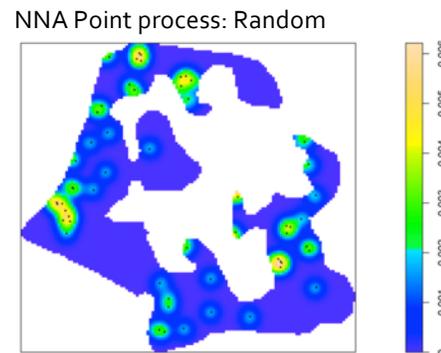
separated according to their volume (and perhaps a greater degree of monumentality), patterns of intensity my crosscut Type 1.



**Edge Point Type 1 Features**  
Small and medium-sized curvilinear funerary petroforms

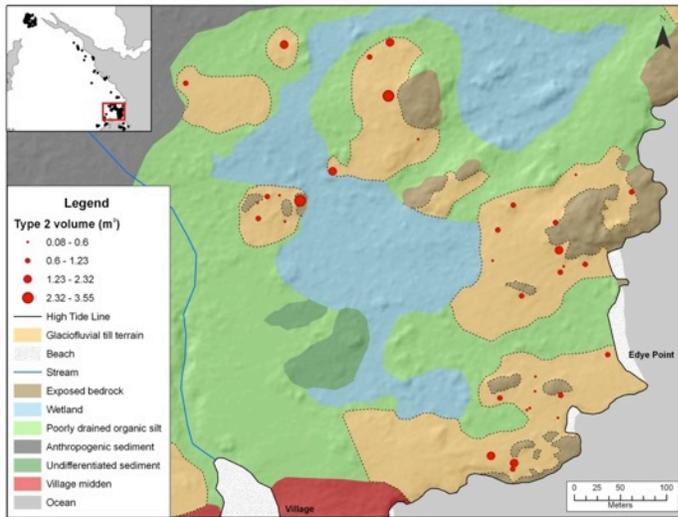


**Yates Cemetery Type 1 Features**  
Small and medium-sized curvilinear funerary petroforms



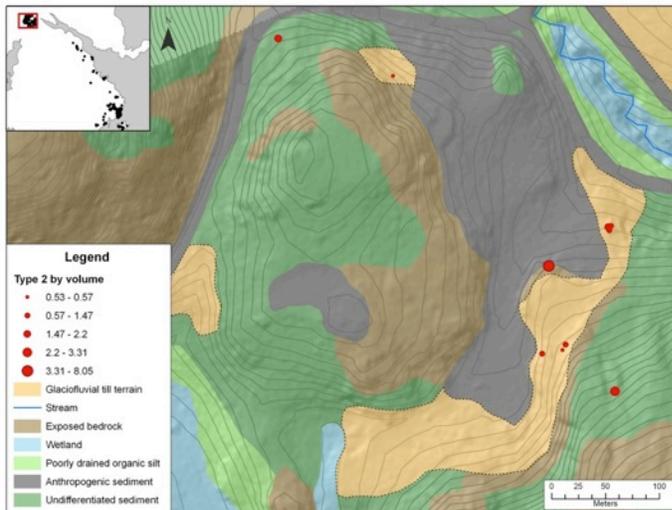
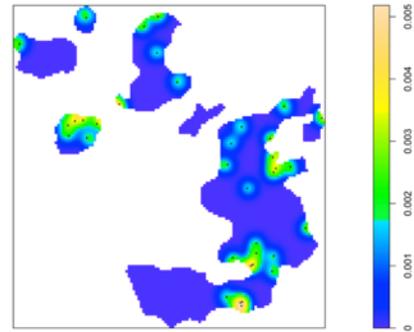
**Figure 56: Type 1 Feature Nearest Neighbour and kernel Density analyses results, Edge Point (above) and the Yates Cemetery (below).**

The Type 2 features (small and medium-sized irregular funerary petroforms) at Edge Point are identified as dispersed, meaning these features repel each other to some extent, resulting in an evenly spaced distribution, whereas at the Yates Cemetery, the features are once again random in their intensity (Figure 57).



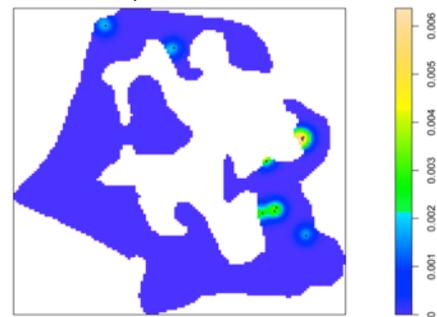
**Edge Point Type 2 Features**  
Small and medium-sized irregular funerary petroforms

NNA Point process: Dispersed



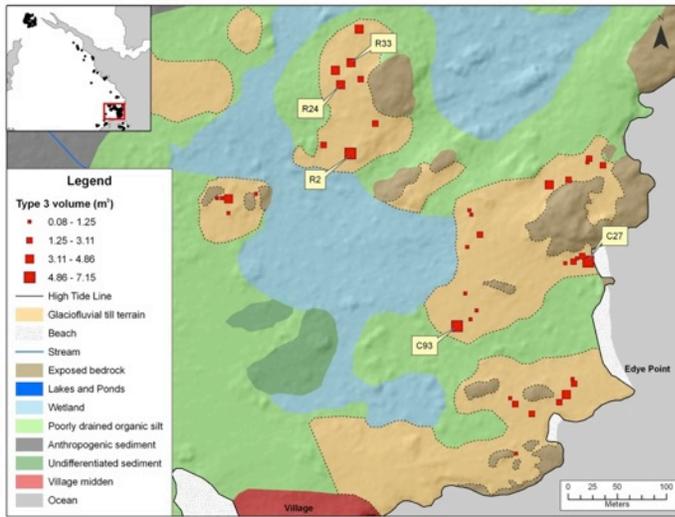
**Yates Cemetery Type 2 Features**  
Small and medium-sized irregular funerary petroforms

NNA Point process: Random



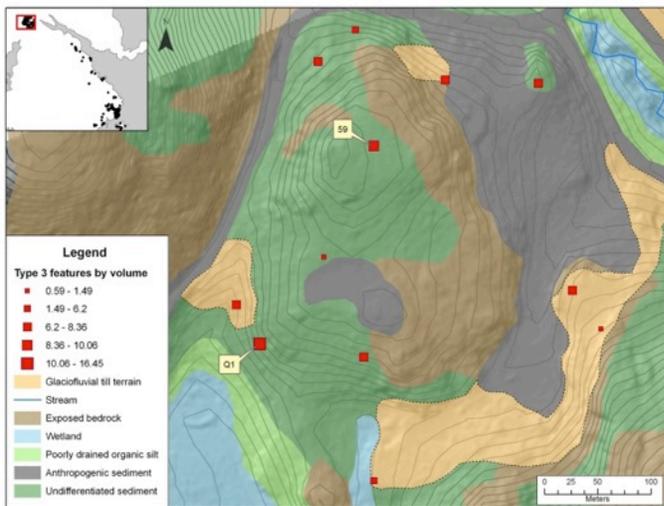
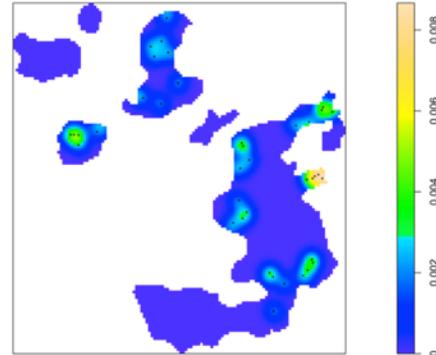
**Figure 57: Type 2 Feature Nearest Neighbour and Kernel Density Analyses results, Edge Point (above) and the Yates Cemetery (below).**

The square-based small to medium-sized rectilinear Type 3 features are aggregated at Edge Point and dispersed at the Yates Cemetery (Figure 58). While NNA identified two different patterns of intensity for this type of feature within the two cemeteries, visually it seems that it is the smaller Type 3 features aggregating at Edge Point, whereas the larger features appear to be more dispersed like the Type 3 features at the Yates Cemetery.



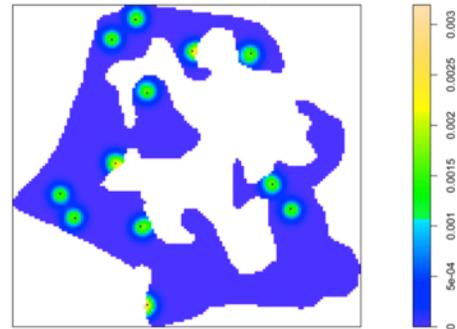
**Edge Point Type 3 Features**  
Small and medium-sized rectilinear funerary petroforms

NNA Point process: Aggregated



**Yates Cemetery Type 3 Features**  
Small and medium-sized rectilinear funerary petroforms

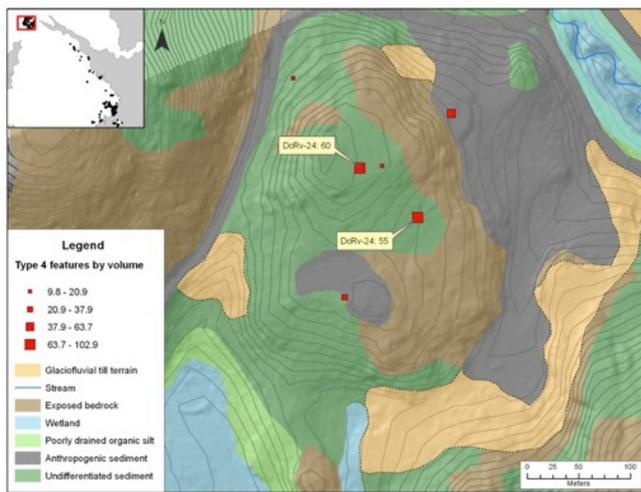
NNA Point process: Dispersed



**Figure 58: Type 3 Feature Nearest Neighbour and Kernel density analyses, Edge Point (above) and the Yates Cemetery (below).**

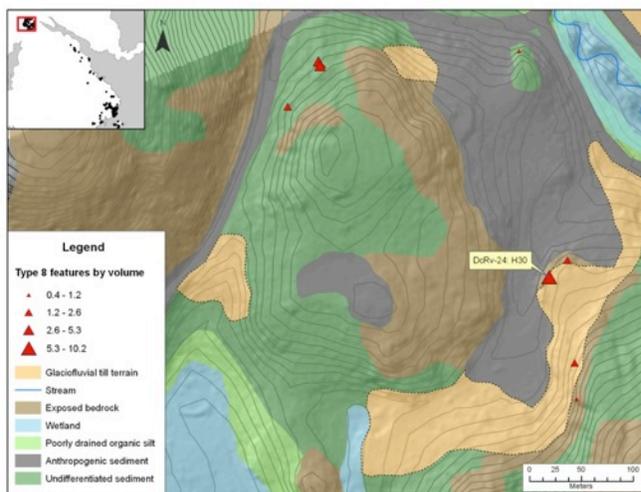
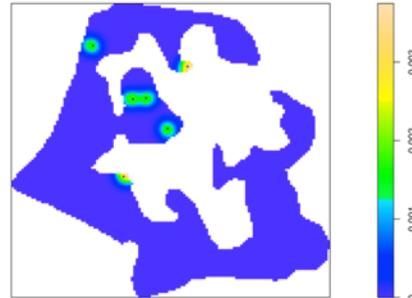
Unlike Type 1, 2 and 3 features, which are distributed across the Rocky Point landscape, both the large square-based and mounded Type 4 and boulder-crevice Type 8 features are uniquely confined to the Yates Cemetery. There is few of each of these features, making a statistical assessment of their intensity difficult. There are not enough Type 4 features for a valid test of the NN statistic, although Type 8 features were identified by NNA as random in their intensity. I have little confidence in this result, however, due to the low sample size. An additional confounding factor is that Type 4 features are confined to the top and sides of Central Hill at the Yates Cemetery, while the Type 8 features are conversely placed such that they ring the base of

Central Hill (Figure 59). At this point it is unclear what factors (cultural, physical or geographic) may be structuring this pattern. I discuss this in more detail in subsequent analyses below.



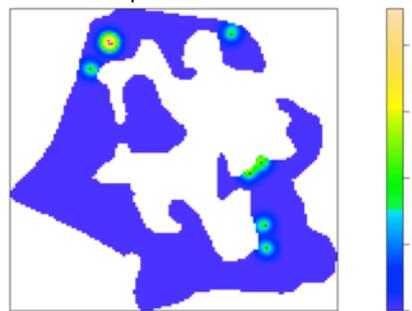
**Yates Cemetery Type 4 Features**  
Medium and large-sized square-based mound-like features

NNA Point process: n/a



**Yates Cemetery Type 8 Features**  
Medium and large-sized square-based mound-like features

NNA Point process: Random



**Figure 59: Type 4 and Type 8 Feature Nearest Neighbour and Kernel Density analyses for the Yates Cemetery.**

Both Type 4 and Type 8 features may be correlated with specific geographic units that are structuring their intensity, so while they may or may not have been placed in specific ways relative to one another, this placement may also be structured by other factors for which NNA and other intensity analyses cannot account. As I argue later in this chapter the placement of Type 4 features relates not only to specifically locating these kinds of burials within one central place within the entire Rocky Point landscape, but that their placement within this central place was influenced by visibility.

## **The Mesoscale Intensity of Funerary Petroform Volume within the Edye Point and Yates Cemeteries**

*Within the two largest cemeteries, do funerary petroforms of the same size attract or repel each other?*

Concepts of monumentality suggest that monuments such as funerary petroforms may be implicated in assertions of power, kinship, and other social processes that are negotiated during funerary ritual (Chapter 2). An important aspect of monumentality is the size of the monument. Independently examining the intensity of funerary petroforms both by their dispositional type and their size (volume), allows for the consideration of their depositional form (*volume* being one of 18 contributing attributes), as well as their size independent of how they were constructed.

To test the intensity of different sizes of funerary petroforms, I conducted a nearest neighbour analysis for the Edye Point and Yates Cemetery cemeteries. The sample size for other cemeteries was too low for intensity analyses. As NNA cannot work with continuous scale attributes, I used the Jenks natural breaks classification method to determine the best arrangement of values into four different classes (Figure 60). This is done by seeking to minimize each class's average deviation from the class mean, while maximizing each class's deviation from the means of the other groups (Conolly and Lake 2006:142). The method seeks to reduce the variance within classes and maximize the variance between classes. I then conducted a NNA analysis on each of the four resultant volume classes for the funerary petroforms at the two largest cemeteries (Table 10).

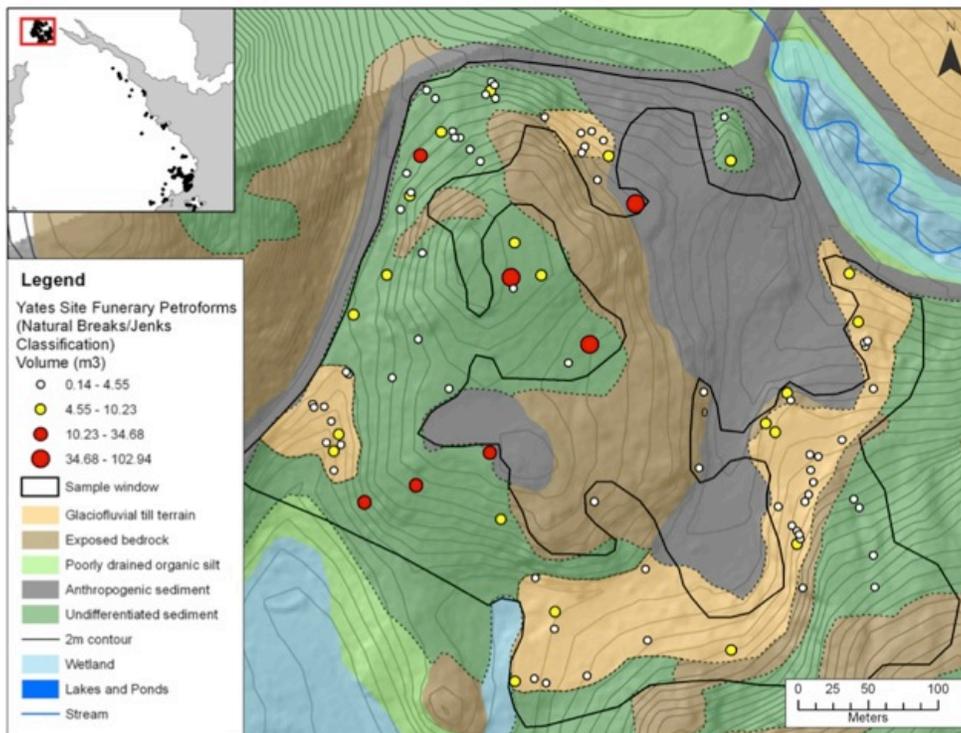
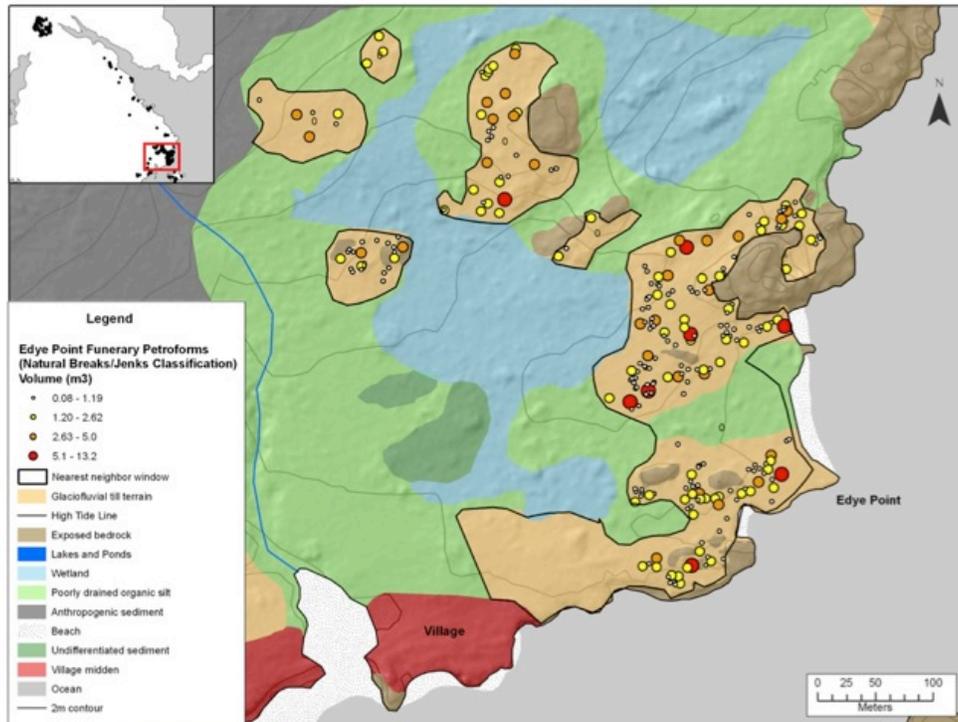


Figure 6o: Map illustrating the distribution of the four volume classes of funerary petroforms at Edge Point (above) and the Yates Cemetery (below). The black polygons denote the extent of the PPA sample window at each cemetery.

At Edye Point, the class of funerary petroforms with the largest volume (5.0–13.27 m<sup>3</sup>) are dispersed in their intensity (Table 10). At the Yates Cemetery, the class of features with the greatest volume (22–102 m<sup>3</sup>) do not have a large enough sample size for NNA (at least eight neighbours, as a rule of thumb, are required). Combining the first and second categories of largest features, however (n=27), indicates that features larger than about 5 m<sup>3</sup> in volume are dispersed at both Edye Point and the Yates Cemetery (Table 10). Similarly, at both cemeteries, those features that are about 1–5 m<sup>3</sup> in volume are also dispersed. The features with the smallest volumes (around 1 m<sup>3</sup> and smaller) at both Edye Point and the Yates Cemetery have an aggregated intensity. At Edye Point, this is 58% of all features and 29% of all features at the Yates Cemetery.

**Table 10: Edye Point and the Yates Cemetery funerary petroform NNA by Volume Class.**

Cemetery	Volume (m <sup>3</sup> ) range	n	Nearest Neighbour Ratio	Z-score	P value	Process	Comments
Edye Point Area: 50,408 m <sup>3</sup>	13.27 – 5.0	9	1.96	5.55	0.00	Dispersed	There is less than 1% likelihood that this dispersed pattern could be the result of random chance.
	5.0 – 2.62	28	1.25	2.55	0.01	Dispersed	There is less than 5% likelihood that this dispersed pattern could be the result of random chance.
	2.62 – 1.19	74	1.15	2.49	0.01	Dispersed	There is less than 5% likelihood that this dispersed pattern could be the result of random chance.
	1.19 – 0.08	154	0.78	-5.19	0.00	Aggregated	There is less than 1% likelihood that this clustered pattern could be the result of random chance.
Yates Area: 100472 m <sup>3</sup>	102.94 - 22.8	4*	n/a	n/a	n/a	n/a	Sample size is too small
	22.89 - 5.02	23	1.19	1.75	0.07	Dispersed	There is less than 10% likelihood that this dispersed pattern could be the result of random chance.
	102.94 – 5.02 **	27	1.19	1.97	0.04	Dispersed	There is less than 5% likelihood that this dispersed pattern could be the result of random chance.
	5.02 - 1.03	42	1.15	1.93	0.05	Dispersed	There is less than 10% likelihood that this dispersed pattern could be the result of random chance.
	1.03 - 0.14	28	0.65	-3.52	0.00	Aggregated	There is less than 1% likelihood that this clustered pattern could be the result of random chance.
	* Violates the minimum number of required points for NNA. ** Derived from the first two volume classes of funerary petroforms at the Yates Cemetery.						

The results of the intensity analysis suggest that funerary petroforms at the two Rocky Point village cemeteries share very similar patterns of intensity when considered by their volume. The largest features tend to be dispersed—they repel each other—suggesting some social structure that limits the proximity of the largest funerary petroforms. Conversely, the smallest features tend to cluster together, forming aggregate distributions of funerary petroforms. I will return to these NNA results below, when I consider a means by which to explore how intensity of both feature types and volumes varies at multiple scales, using Ripley’s  $K$ -function, as well as spatially identifying clusters of features within the cemeteries using Nearest Neighbour Hierarchical Cluster Analysis (NNHC).

### **The Multiscalar Intensity of Funerary Petroform Dispositional Types**

First order analyses (Quadrat Counting, NNA, and Kernel Density Analysis) indicate spatial clustering of funerary petroforms at both the study area and cemetery level. This result provokes the following question:

*Do funerary petroforms of the same Dispositional Type and Volume Class, independent of possible landscape covariates, aggregate or repel one other within the two largest Rocky Point cemeteries?*

One of the fundamental principles of point data processes is that they may have variable intensities based on the scale in which they are examined (e.g., clustering at large scales and regularity at small scale). I use Multi-Distance Spatial Cluster Analysis, a transformation of Ripley’s  $K$ -function, to analyze the spatial pattern of funerary petroform distributions, since it provides a more effective summary of point intensity at a wider range of scales (Illian, et al. 2008; Ripley 1977).  $K$ -function analysis has been used to analyze settlement patterns (Bevan and Conolly 2006) and burial patterns (Sayer and Wienhold 2012), although its usefulness in archaeological applications is still novel and largely unexplored. Considering its capability to identify patterning of point data at multiple scales, however, it is well suited to archaeological work, providing that the archaeological data meets the requirements of the process.

Briefly, the Ripley  $K$ -function is another way to analyze the spatial pattern of point data, but unlike the previous analyses, it summarizes spatial dependence (feature aggregation or dispersion) over a range of distances. The  $K$ -function counts the number of neighbouring features within a given distance of each feature, then sums the values. If the number of features found within the distance is greater than that for a random distribution, the distribution is clustered.

The value is calculated at multiple distances, then displayed to illustrate at what distance clustering is greatest. When exploring spatial patterns at multiple distances and spatial scales, patterns change, often reflecting the dominance of particular spatial processes at work. The  $K$ -function illustrates how the spatial clustering or dispersion of features changes when the neighbourhood size changes. This is significant because whenever clustering is identified in the landscape, we are seeing evidence of underlying spatial processes at work. Looking at statistically significant peaks or dips in the observed  $K$ -function index, and comparing the spatial intensity for different point datasets within the same study area, is evidence that spatial processes are operating at the associated spatial scale. In the case of funerary petroforms, I propose that these processes, when separated from possible environmental covariates, are the spatial products of ritualized depositional practices.

One of primary assumptions of  $K$ -function analysis is environmental homogeneity, however no landscape is ever homogenous. To eliminate environmental heterogeneity, I conducted the  $K$ -function analysis within a window that enclosed all funerary petroforms within homogenous micro-units of terrain, excluding marsh, exposed bedrock and other terrain from the analysis window. Although it is usual to assume stationarity (homogeneity in terrain, for example),  $K$  is interpretable for non-stationary processes because  $K$  is defined in terms of a randomly chosen event (Dixon 2002). Each cemetery, however, is not a homogeneous environment. In particular, some areas are closer to the mean water level and other areas are exposed bedrock. These are areas where funerary petroforms were not placed. Those features made primarily with bedrock also occur more closely to bedrock and those made of till occur in exposures of till (although the dispositional typology may mitigate the influence of material type since feature outline and proportions of stone to soil and volume are of greater influence than material type at the level of the dendrogram at which I defined the clusters). We must be aware, however, that clustering of certain kinds of funerary petroforms could simply be a response to a heterogeneous environment. The problem at hand then is to separate the effects of direct burial-burial interaction on the spatial pattern (the second-order effects) from effects resulting from large-scale variation in landscapes covariates (the first-order effects) because both may lead to similar spatial patterns such as clustering (Getzin, et al. 2008). Cultural clustering of burials might denote socially significant processes, whereas first order clustering might be the constrained nature of a landform forcing burials closer together than they might otherwise be built. To

minimize this possibility, I used sample windows enclosing the funerary petroforms but which excluded those parts of the landscape when funerary petroforms would not be built (bedrock exposures, wetlands, the beach, etc.). The second condition of Ripley's  $K$ -function is that all events (i.e. funerary petroforms) in a defined study area must be mapped and included in the analysis.

The  $K$ -function is an estimate of point intensity at multiple scales (the maximum extent being specified by the sample window and the edge of the point distribution). However, I wish to also judge the significance of departure of an empirical  $K$ -function from a theoretical line based on CSR. Using the statistics program  $R$  with the *Spatstat* package, I used the  $K$ -function combined with Monte Carlo tests to compute a critical envelope for the Monte Carlo test. The Monte Carlo test performs simulations and computes envelopes of a summary statistic based on 99 lines of simulated realizations of CSR. The resulting envelopes can be used to assess the goodness-of-fit of a point process model to point pattern data (Baddeley and Turner 2005). The  $K$  values get very large as the distance increases, so for ease of visual interpretation, I used the square root transformed  $K$ -function, known as  $K$ - $L$ -function (Besag 1977). To interpret the resulting graph, at any given distance, if the line of observed  $K$ - $L$  values is above the line of expected values, the distribution is more clustered than expected. If it is below the line of expected values, the distribution is more dispersed. If either of these observed values lies outside the Monte Carlo simulated envelope then the null hypothesis is rejected and the pattern is significant. A peak means that there is clustering of features at a particular distance and a second peak indicates the clusters themselves are clustered. Conversely, a dip in the chart indicates that the distribution is less clustered at that distance (Mitchell 2005:99).

For Edye Point, the  $K$ - $L$  function was calculated for all funerary petroforms (Figure 61) and then for Dispositional Types 1, 2 and 3. There were not enough data points to compute a  $K$ - $L$  function for Types 4, 5, 6, and 8. It must be remembered that Type 4 and 8 features—mostly very large mound-like features and hybrid boulder crevice-cairn features respectively—occur only at the Yates Cemetery, so in this sense they are *de facto* large-scale aggregations on the Rocky Point landscape (as in fact are the cemeteries themselves, again, when considered at this larger landscape level). The  $K$ - $L$  function for all the funerary petroforms at Edye Points indicates an overall pattern of multiscalar aggregation throughout the spatial extent of the cemetery, although

the Type 1 features (n=188; small and medium sized circular and oval petroforms) largely drive this intensity (Figure 61).

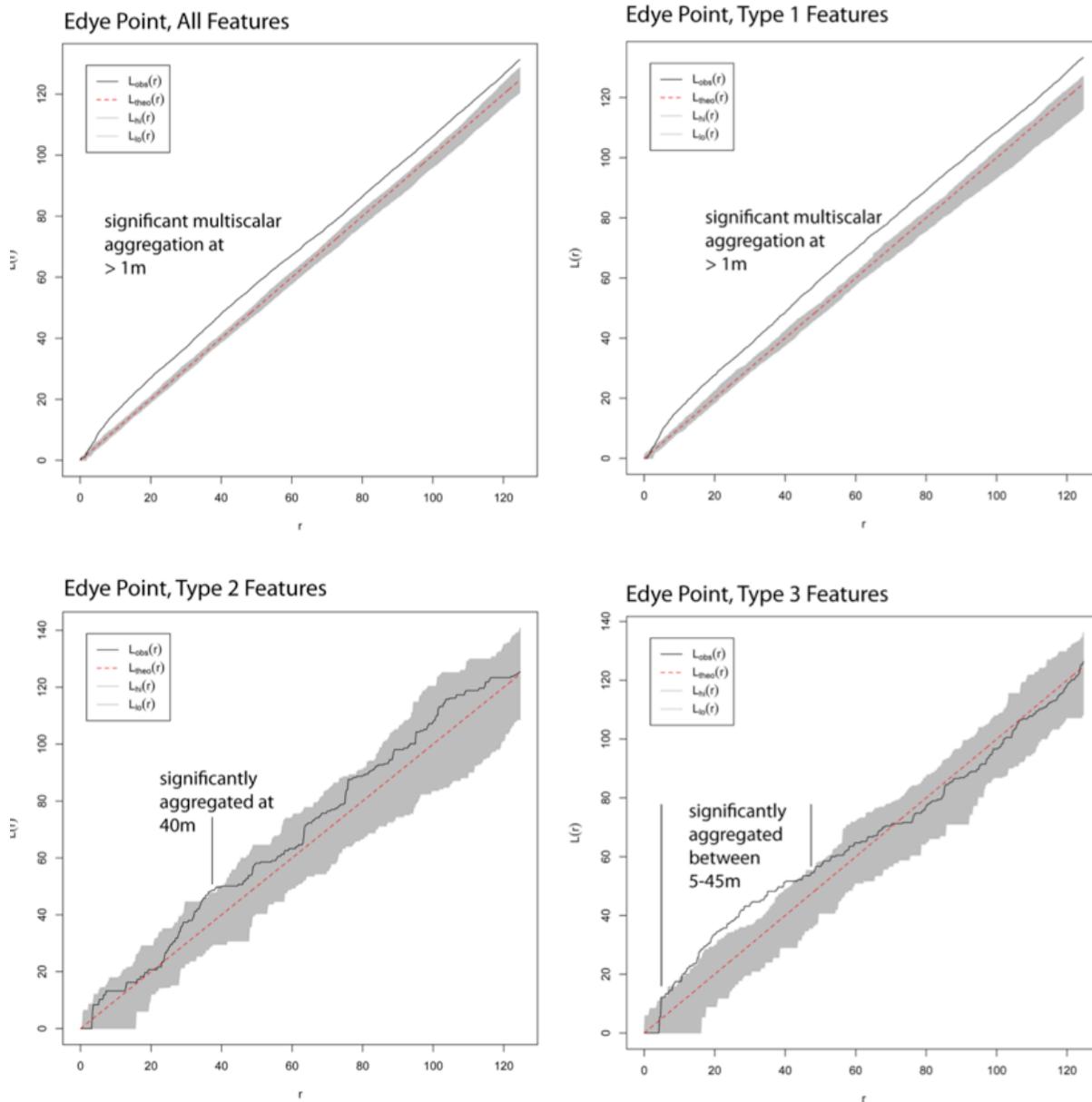
The  $K$ -function graph exhibits a large and consistent positive deviation from the Monte Carlo envelope, even at the largest distance examined (120 m). This indicates clustering at all scales, but his result of homogenous clustering of Type 1 features is problematic because it does not specify the possibility of differential clustering, or clustering in certain areas of the cemetery that may hinder the identification of smaller-scale spatial structure in others. In other words, there may be many clusters of Type 1 features and perhaps some clusters of clusters, but the  $K$ -function results are unclear in terms of how these clusters spatially relate to each other or are distributed within the cemetery. While this homogenous aggregated result is congruent with the results of the NNA analysis for Type 1 features (Table 11), a different analysis is required to further explore how this aggregation occurs at multiple scales at Edeye Point.

**Table 11: Comparison of the Point Pattern Process results for Dispositional Type Feature Intensity at Edeye Point and the Yates Cemetery.**

Cemetery	Type	NNA intensity	K(L)-function	
			Intensity (significant)	Intensity (not significant)
Edeye Point	1	Aggregated	Aggregated at > 1m	Dispersed at 0-1m, aggregated at all other scales.
	2	Dispersed	Aggregated at 40 m	Dispersed at 0-1m, aggregated at 1-15m and between 25 and 120 m.
	3	Aggregated	Aggregated between 5-50m.	Dispersed at 0-4m and between 70-120 m. Aggregated between 4-70m.
Yates	1	Random	Aggregated between 7-25m and 35-62m	Dispersed at 0-2m, aggregated at all other scales.
	2	Random	n/a*	n/a
	3	Dispersed	n/a*	n/a
	8	Random	n/a*	n/a

\* Not enough data points for  $K$ -function analysis.

The NNA and  $K$ -function results for Type 2 features (irregular small to medium-sized features) are not congruent. NNA indicates a dispersed pattern for these funerary petroforms, while the  $K$ -function results indicate the burials are significantly aggregated at around 40m. Results within the  $K$ -function Monte Carlo envelope, however, suggest a complex spatial process in which features are aggregated at 2–15 m and again at 25–120 m (indicating possible clusters of clusters). This pattern of intensity, however, only departs from the simulation envelope at 40 m, meaning that the null hypothesis of CSR cannot be rejected for an aggregated intensity at any other scale.



Notes:

1. The dashed red line denotes the theoretical Poisson distribution of CSR, the solid black line is the observed  $K$ -function based on the intensity of the data, and the grey shading is the Monte Carlo envelope (based on 99 simulations of CSR, using 10 distance bands at 35 m increments). Significance level of pointwise Monte Carlo test: 0.02. Analysis conducted using isotropic edge correction.
2. The sample sizes for Type 5, 6 and 8 features were too small for  $K$ -function analysis.

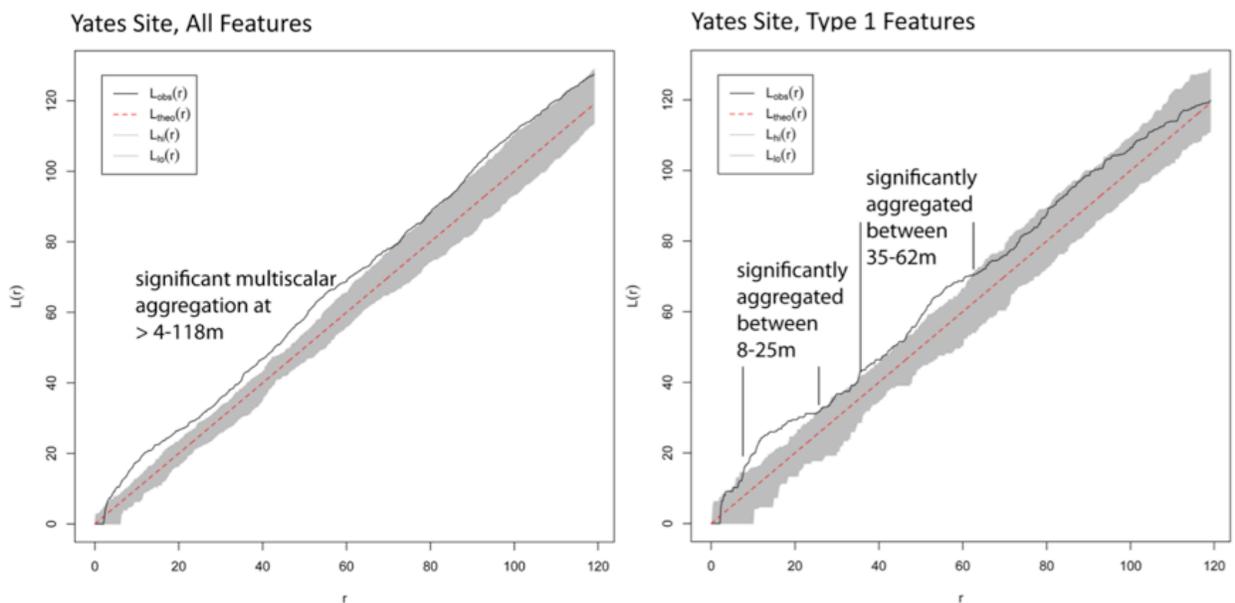
**Figure 61:  $K(L)$  function Result for the Edge Point Dispositional Funerary Petroform Types.**

Type 3 features (small and medium-sized straight-sided petroforms) are significantly aggregated between about 5–50 m, which is congruent with the NNA results. Within the  $K$ -function Monte Carlo envelope, however, Type 3 funerary petroforms are also aggregated

between 5-70 m, and then dispersed between 70–120 m. While these results are not significant, it suggests the possibility of clusters of Type 3 features, larger in area than Type 1 feature clusters, but which are otherwise dispersed around the Edey Point cemetery, lacking the “clusters of clusters” evident for Type 1 funerary petroforms.

Type 1, 2 and 3 features at Edey Point are actually dispersed at very small distances of about 0–4 m. This suggests a disposition towards building funerary petroforms at least a metre apart, but then often quickly aggregate together at distances greater than that.

When considering the intensity of all the funerary petroforms at the Yates Cemetery, there is a general pattern of aggregation between 4 to 118 m (Figure 62 and Table 11). The Type 1 features (small and medium-sized curvilinear petroforms) are aggregated between 8–25 m and 35–62 m, suggesting that some of smaller clusters may in turn form a larger-scale cluster. There are not enough points for any other dispositional types at the Yates Cemetery to conduct a  $K$ -function analysis.



**Figure 62:  $K(L)$  function Result for the Yates Cemetery Dispositional Funerary Petroform Types.**

The Multi-Distance Spatial Cluster Analysis of funerary petroform dispositional types, using a transformation of the  $K$ -function, provides an effective summary of point intensity at a range of scales encompassing the full extent of each of the two major cemeteries (Table 11). While the results of the NNA and the  $K$ -function are not always congruent, some patterns emerge. First, when considering all funerary petroforms at each cemetery, there is significant

multiscalar aggregation, suggesting the possibility of clustering of funerary petroforms at two or more levels within each cemetery. Type 1, 2, and 3 features aggregate in some manner in both cemeteries, although such clustering is not significant at all scales. At Edye Point, Type 1 features (small and medium curvilinear petroforms) aggregate at all scales, possibly consisting of clusters of features extending across the entirety of the cemetery and forming clusters of clusters.

Similarly at the Yates Cemetery, Type 1 features exhibit multiscalar aggregation, although this density ends at 118 m and appears to more conclusively form clusters at two scales but not at a scale that encompasses the entire site (so possibly limited to a cluster of clusters in one portion of the cemetery). At Edye Point, the Type 2 and 3 features are not forming clusters of clusters like Type 1, but are aggregated together at a slightly larger scale, suggesting that, while these kinds of features attract each other, they form fewer and slightly larger clusters and were unlikely to produce clusters of clusters. At the microscale, many features at both cemeteries tend to be dispersed from other like features by about 1-4 m (although this distance does not reject the null hypothesis).

### The Multiscalar Density of Funerary Petroform Volume

Like the previous analysis of dispositional types, I conducted a *K*-function analysis for each of the volume classes of funerary petroforms for the Edye Point and Yates cemeteries using the same methods. The results are summarized in Table 12.

**Table 12: Volume Intensity at Edye Point and the Yates Cemeteries: Comparison of the Point Pattern Process results.**

Cemetery	Volume class	Volume range (m <sup>3</sup> )*	NNA Intensity	<i>K(L)</i> -function	
				Intensity (significant)	Intensity (not significant)
Edye Point	1	13.3 – 5.0	Dispersed	n/a**	n/a
	2	5.0 - 2.6	Dispersed	Aggregated between 47-60 m	Dispersed between 0-20 m, aggregated at all scales beyond that.
	3	2.6 - 1.2	Dispersed	Aggregated between 30-52 m	Aggregated at all scales.
	4	1.2 - 0.08	Aggregated	Aggregated at all scales.	n/a
Yates	1	102.94 - 22.8	n/a**	n/a**	n/a
	2	22.89 - 5.02	Dispersed	Random	Close to the Poisson distribution, with dispersion between 60-75 m.
	3	5.02 - 1.03	Dispersed	Random	Aggregated from 35 m on.
	4	1.03 - 0.14	Aggregated	Aggregated between 5-60 m.	Aggregated at all scales

\* Derived from Jenks Natural Breaks Classification Method.  
 \*\* Not enough data points for *K*-function analysis.

### **Edye Point Cemetery: Multiscalar Density of Funerary Petroforms**

There were not enough data points for a  $K$ -function analysis of Volume Class 1 at Edye Point. These are the largest features, which NNA identified as dispersed in their intensity. This is corroborated by the kernel density analysis, which visually displays a dispersed intensity (Figure 63). NNA identified the two intermediate size classes (Volume Class 2 and 3) as dispersed, but  $K$ -function analysis suggests that the pattern of intensity for these features is more complex. Volume Class 2 at Edye Point is significantly aggregated between 47–60m. While  $K$ -function analysis indicates this size of features is dispersed at a smaller scale (around 0–20 m), this pattern of intensity is within the simulation envelope, meaning that the null hypothesis of CSR cannot be rejected. Furthermore, these features have a larger volume than the smaller Size Class 4 features, so by virtue of their size (and the centroids used to plot them), these features are going to be further apart in Euclidean space. Despite this, Volume Class 2 features at Edye Point show a much greater level of dispersion at smaller scales, even when considering their overall greater size. Volume Class 3 features similarly aggregate at a larger scale (30–52 m). This means that funerary petroforms with a volume between about 1 to 5 m<sup>3</sup> cluster together at a larger scale but are otherwise random in their intensity. This is in contrast to the smallest features, Volume Class 1, which are aggregated together at all scales within the Edye Point cemetery.

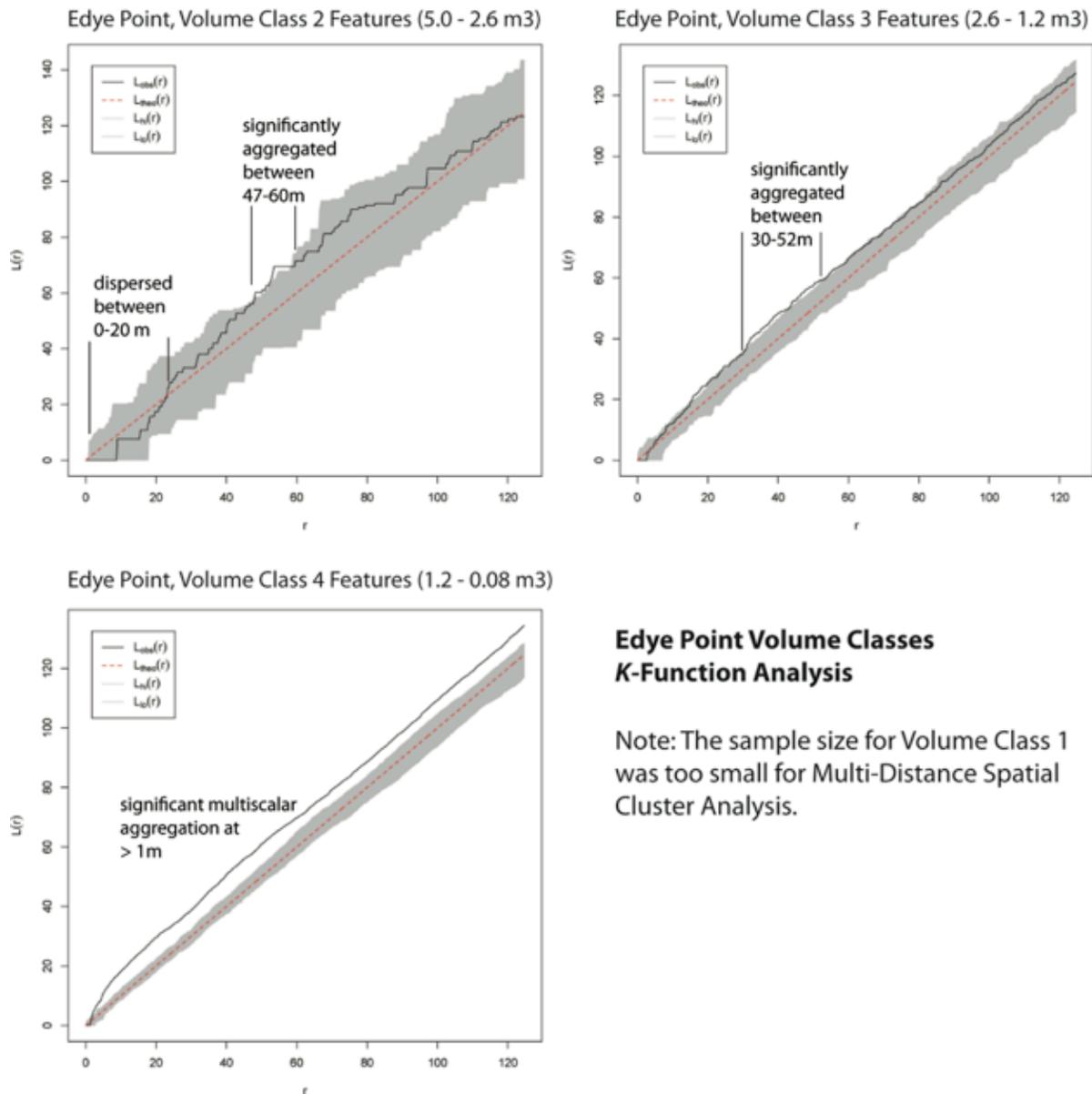


Figure 63: Edge Point Ripley's- $K(L)$  function analysis for Volume Classes 2, 3 and 4 (99 permutations, 10 distance bands at 35 m increments).

### The Yates Cemetery: Multiscalar Density of Funerary Petroforms

At the Yates Cemetery, again, there are not enough data points for a  $K$ -function analysis of the largest features (Volume Class 1). For Volume Class 2, the null hypothesis of CSR cannot be rejected. NNA identified the Volume Class 2 intensity as dispersed. While there is dispersion in the  $K$ -function analysis of this class between 60–75 m, it is captured within the Monte-Carlo simulation of a null distribution (Figure 64). The Volume Class 2 features at the Yates Cemetery are dispersed between 0–10 m. Like the larger features at Edge Point are dispersed at small scales

(20 m for features between 2.6–5 m<sup>3</sup>), the larger features at the Yates Cemetery (5–22 m<sup>3</sup>) are dispersed at 10 m and only minimally dispersed at 1–5 m<sup>3</sup>. Neither of these levels of dispersion seems unexpected considering that the centre points of larger features are going to be farther apart than the centre points of smaller features.

Volume Class 3 also never deviates from the null distribution and is close to the Poisson distribution until about 55 m. From that point, the intensity becomes aggregated, but the null hypothesis cannot be rejected for this intensity. The class of smallest features, Volume Class 4, has an aggregated intensity at all scales, but it is only at the scale between 5–55 m that the pattern rejects the null hypothesis (Figure 64).

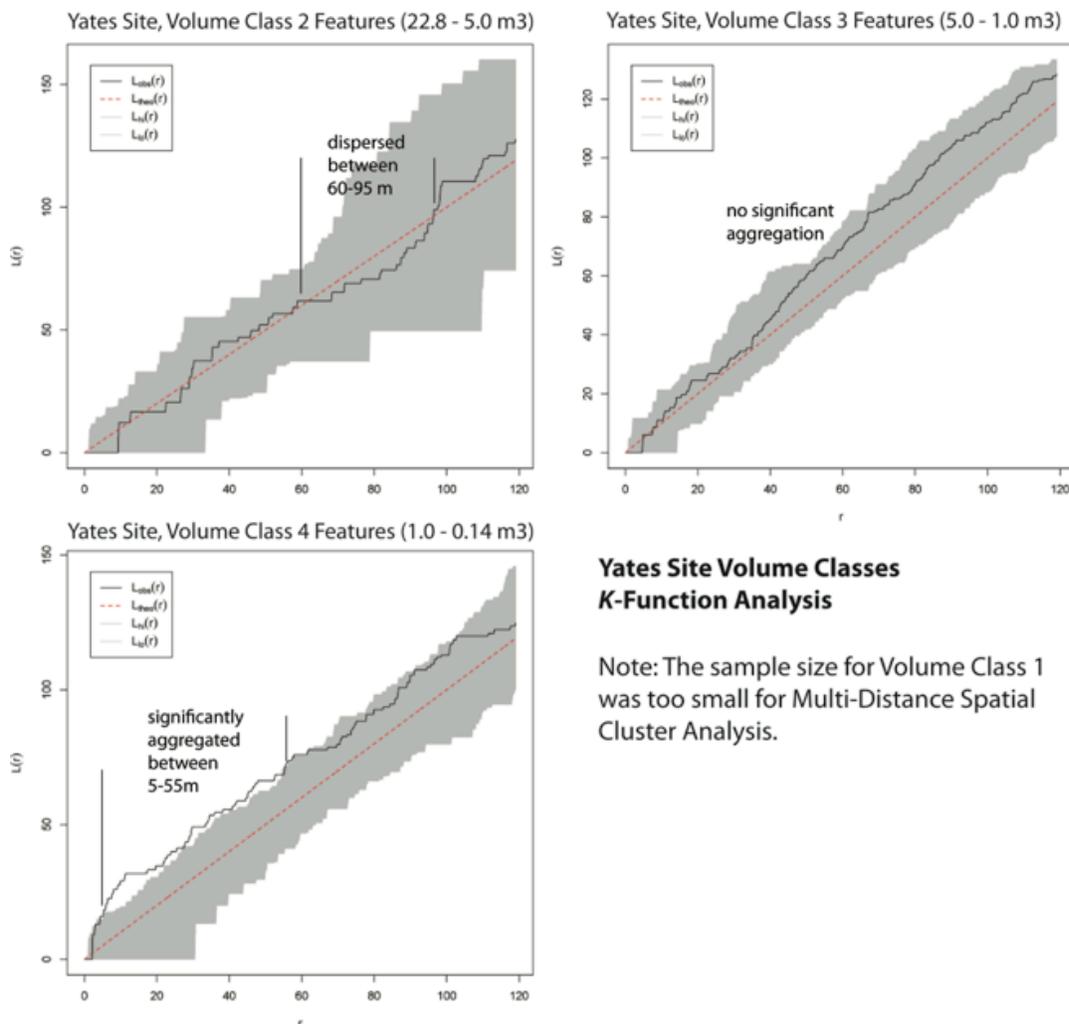


Figure 64: The Yates Cemetery Ripley's K(L) function analysis for the four volume classes of funerary petroforms. The sample size for Volume Class 1 was too small for analysis.

## Intensity Analysis Summary

To analyze the intensity of funerary petroforms, I used different methods that relied both on area (quadrat analysis) and distance (Ripley's  $K$ -function), while using progressively greater statistical certainty (culminating in Monte Carlo testing of the null hypothesis). Points of congruence between different ways of considering intensity allow for a greater level of confidence in the overall results. While some intensity analysis methods simply determined an aggregated, dispersed or random point pattern process (NNA and Quadrat counting), the intensity of archaeological point data is often inherently multiscalar (Bevan and Conolly 2006; Sayer and Wienhold 2012). Using Ripley's  $K$ -function analysis indicated how feature intensity behaved at different scales across the two largest cemeteries. Furthermore, this second-order approach allowed for the consideration of first-order effects in the structuring of funerary petroform intensity. Following Bevan and Connolly (Bevan and Conolly 2006, citing Goreaud, 2000 #11530), Ripley's  $K$ -function allows for the narrowing of analytic focus to just those areas where most funerary petroforms are distributed. In environmental terms, these areas are relatively homogenous, with similar topography, drainage, soils, and access to both till and bedrock stone with which to build funerary petroforms. It is in this more consistent microscale of homogenous intra-cemetery space, where ritual practices were performed within the available space to position the dead in such a way that spatial relationships relating to social ideas and dispositions produced the kinds of intensity identified by Ripley's  $K$ -function (clusters, clusters of clusters, dispersed features, etc.).

The Rocky Point intensity analyses indicate a complex spatial orchestration in which each funerary petroform performs spatially in concert with those around it. There appears to be a dispositional distance at which some minimal amount of space must separate most funerary petroforms. Harlan Smith observed, for example, that individual funerary petroforms on southern Vancouver Island were generally spaced about 6 m apart (Smith and Fowke 1901). This small-scale separation of funerary petroforms occurs in conjunction with a larger scale aggregation of individuals into clusters. While most funerary petroforms at Rocky Point are dispersed in the order of less than 5 m, Volume Class 2 features at Edye Point are dispersed as much as 20 m. While these are the second largest features at that cemetery (as long as 5 m), the intra-centroid space between these features alone does not account for this dispersed intensity. A similar process is also likely occurring between the Volume Class 1 features at Edye Point,

although there were not enough of these features for a  $K$ -function analysis. This suggests that additional analysis exploring the spatial relationships between the largest features relative to each other, and relative to clusters of smaller features, is warranted.

Even though the Ripley's  $K$ -function process describes the spatial pattern of small-scale dispersion and larger scale aggregation quite well, it is inappropriate here to uncritically conclude that ritual practice is the sole process responsible for funerary petroform intensity. Other factors can lead to similar patterns. While I used sample windows to limit the environmental heterogeneity of landscape around funerary petroforms, the one factor I could not control for was elevation. Edye Point is more homogenous in terms of elevation and is relatively flat with only micro topographic variation between till flats containing most of the funerary petroforms. At the Yates Cemetery, however, the site is comprised of a central hill surrounded by two broad ravines, with funerary petroforms located from the hilltop, down the sides of the hill and along the bottom of the ravine. Along the west side of the hill, the petroforms continue up onto the opposite side of the ravine as well. This possibility of spatial structuring resulting from the elevation of the Yates Cemetery in particular suggests additional analysis is warranted. In this case, elevation may be a determining factor if funerary petroforms placement where questions of visibility (a function of elevation) are concerned.

Visibility may have important implications for understanding feature placement (and hence intensity) since funerary petroforms are monuments, which are presumably built with visibility in mind (Criado 1995). I return to the potential structuring effects of visibility in Chapter 10.

While NNA and particularly  $K$ -function analysis indicates a complex interplay between the mutual attracting or repelling of burials at some scales, what is still unclear is where these clusters of dispositional types and size classes of features are within each of the two largest cemeteries. One way to accomplish this is a spatial statistic that produces visible and statistically significant clusters within a GIS to distinguish where the aggregating is taking place at multiple scales. This would then facilitate a more fine-scaled analysis of these clusters, and the relationships of these clusters to other clusters, funerary petroforms that defy clustering, and reintroduce the landscape again, not as a covariate defining point patterns, but as a place in which ritual practices were producing structured depositions and defining and redefining the landscape with each subsequent burial.

### **Theme 3: The Interaction of Funerary Petroforms**

*If clustering of different types of funerary petroforms occur, where are these clusters within the two largest cemeteries?*

Comparing the locations of clusters within and between types and attributes leads to identifying possible social factors contributing to the clustered pattern. The results of the Ripley's  $K$ -function determined that some of the funerary petroform distribution at Rocky Point was more clustered than might be expected by random chance, while also providing a statistically significant indication of the nature of the scales at which that clustering occurs within the site. Nearest neighbour hierarchical clustering (NNH) takes this analysis to the next logical level by actually identifying those clusters. This entails locating the clusters of funerary petroforms within the two largest cemeteries, as well as clusters of the different dispositional types and the spatial relationship of the volume of these features to the locations of these clusters. Comparing the locations of clusters within and between types and attributes leads to identifying possible contributing social factors to the clustered pattern.

To identify the clusters in cartographic space, I use nearest neighbour hierarchical clustering, which compares the distance between pairs of points to the distance expected in a random distribution of points in the sample window area, and it clusters those groups of pairs that are unusually close together (Everitt 1993; Levine 2006; Mitchell 2005). With these first-order clusters identified, the process is hierarchical because the routine continues to group the clusters into larger clusters at several different geographic scales, circling clusters that are unusually close together, creating second-order clusters. It continues establishing more levels of clusters until it can no longer find any clusters. In practice, the routine often stops after identifying second-level or third-level clusters, which are represented by standard deviation ellipses. While it is functionally similar to NNA, it is multi-scalar like the  $K$ -function and is a good balance between these two approaches. I am unaware of any archaeological applications of this process, and this dissertation is a novel application of NNH. However, it has been used extensively in the analysis of other spatial point patterns with associated cultural activity, particularly crime analysis (e.g., Levine 2006). I outline the NNH methodology in Appendix 5.

Briefly, in any point pattern distribution, a certain amount of clustering will occur by chance. As such, it is important to test any clustering against a random distribution. NNH allows statistical significance to be tested with a Monte Carlo simulation (Levine 2006:). The resulting

clusters are displayed using a standard deviation ellipse, thereby giving some sense of the spatial extent of each cluster and the relative level of dispersion or concentration of clusters. Of course, NNH only identifies a collection of points that are close together, it does not explain why they are together. For that, additional research and analysis is required. Clustering could be due, for example, to attributes of the landscape that promote a location over others as an appropriate place to bury the dead, or spatial segregation for certain peoples be buried in specific places. To begin examining the causes for clustering, it is necessary to compare the clusters to a control group. The principle method is to use all burial features as a control group and then to compare the clustering of each type against the entire assemblage (Mitchell 2005:160). To conduct the analysis, I used the *CrimeStat 3.3* software (Levine 2007, 2006), setting the clustering algorithm to use a minimum of three points in cluster formation, with a 99.9% confidence interval assigned to it, running 99 Monte Carlo simulations. Each NNH analysis was done within the area of the specific cemetery study window. The results were imported into ArcGIS 10.1 for mapping and further analysis.

### **The Clustering of Dispositional Types at Edye Point**

The NNH analysis of all funerary petroforms at the Edye Point cemetery produced 30 first-order clusters and a second-order cluster. To this, I added the results of an earlier spatial cluster analysis of point data from Edye Point (Mathews 2006b:164-165). This process was used to identify clusters of features on the landscape independent of typological and morphological attributes, defined only their spatial attributes. As it was cluster analysis, all points were assigned to a cluster, unlike NNH, which only assigned 61% of features to a cluster. This is a useful way to consider not only the features captured within the many small NNH clusters, but the larger intra-cemetery clusters of features that lie both within and immediately outside of the NNH clusters, yet are still spatial distinct from neighbouring clusters of funerary petroforms. The analysis used Euclidean distance to construct the proximity matrix and the single linkage (nearest neighbour) algorithm to define the cluster solution. All definite archaeological features, including features excluded from morphological analysis, were used in this analysis, since disturbed features still retain discernable spatial attributes even though their morphological attributes are not. This cluster analysis identified seven clusters, which I call intra-cemetery localities. Both the NNH and spatial hierarchical cluster analysis parse space into units at different scales, although the Rocky Point cemeteries often appear to have a graduated transition between different clusters. To

illustrate this, I superimposed the kernel density analysis, which is an interpolated statistic showing the degree of spatial relatedness between points. Together, these results are mutually informing: NNH defines statistically significant clusters of points with attributes, hierarchical cluster analysis defines clusters of all points, and kernel density interpolates the feature density between these clusters (Figure 65).

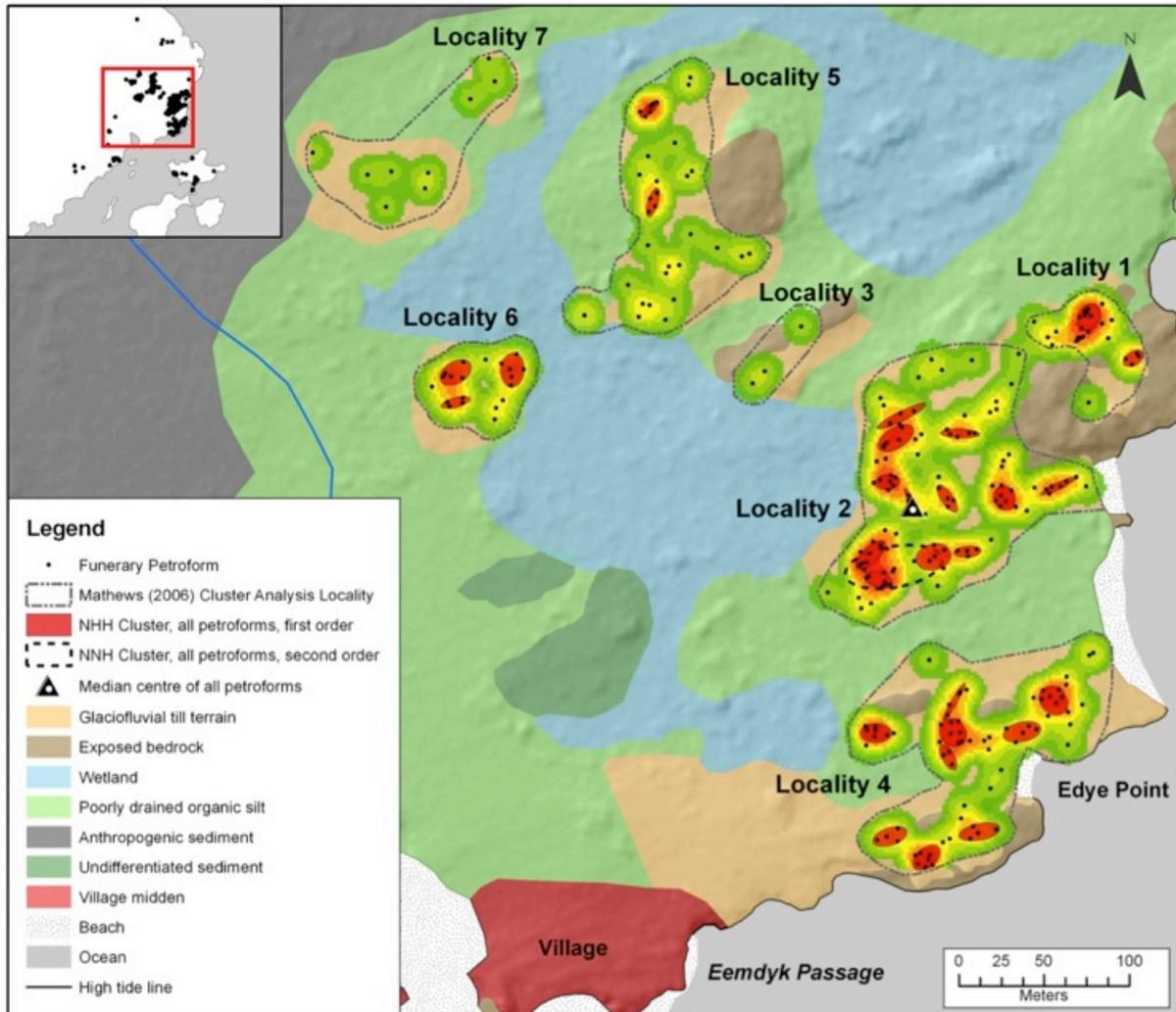


Figure 65: Edge Point NNH analysis results (First and Second order clusters) using all funerary petroforms, with a 99.9% confidence level. Spatial hierarchical cluster analysis (Mathews 2006) results superimposed upon the kernel density analysis (grading from green to orange with increasing density).

These results are congruent with the multiscale aggregation identified by the  $K$ -function analysis results for all funerary petroforms at the Edye Point cemetery. Clear clusters of funerary petroforms are evident within the cemetery, consisting of many small clusters of funerary petroforms interconnected by lower densities of burials that do not form separate clusters, but do

connect these clusters together. The sometimes sinuous nature of the kernel density/NNH map is partly produced by the first order effects of geography, with funerary petroforms concentrated on the till flats that punctuate the landscape. Burials also avoid wetlands, poorly drained areas, and even undifferentiated terrain (primarily moderately drained and mostly silt substrate). They also avoid larger bedrock outcroppings. But even considering these environmental factors (which are themselves cultural dispositions), within the otherwise homogenous terrain of the till flats, *K*-function indicates that features are clustered together in varying intensities and sometimes at multiple scales. Each of these clusters may be distinct areas of funerary practice, perhaps related to different ritual communities of practice, or social categories of people (e.g., kinship, houses, classes). It is important to remember that these may also be temporally distinctive, a spatial sequencing of funerary ritual through time. Few clusters, however, are completely isolated; rather most are inseparable from their neighbours and are connected by lower density distributions of burials that tie them together, producing a network of burials (and hence relationships) that extends across much of the Edye Point cemetery. The spatial hierarchical cluster analysis indicates potential places where there may be edges to the distribution of funerary petroforms; while there are interconnected networks and clusters of burials, there are also discrete areas within this cemetery defined by spaces between burials. The second order cluster in the centre of the site is a particularly dense aggregation of clusters at Locality 2. This area is the median geographic centre of the funerary petroform distribution.

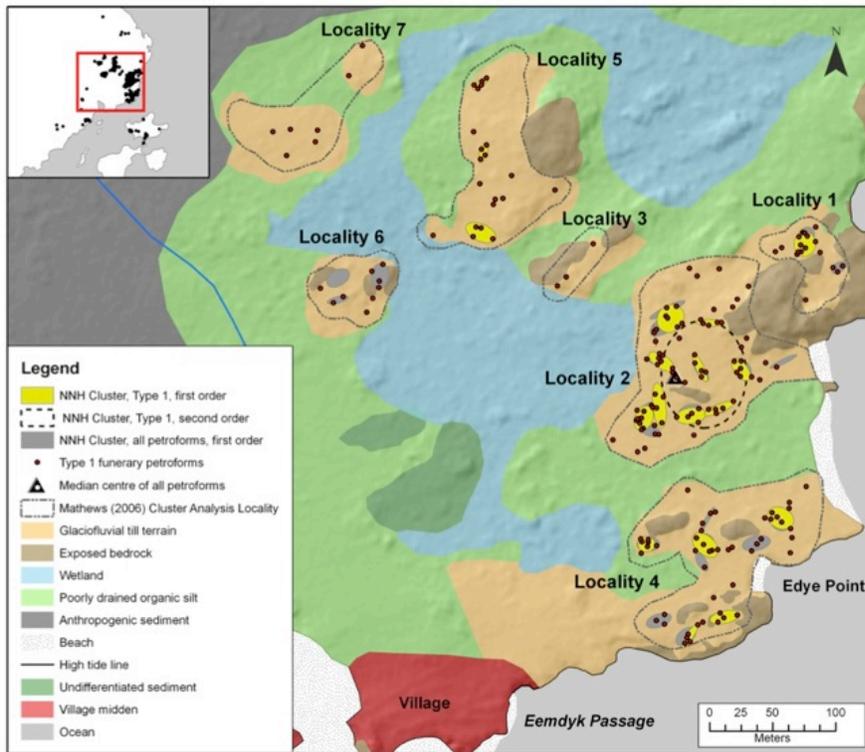
I further explore the composition of the NNH clusters in several ways. First, I conduct an NNH analysis for Dispositional Types 1, 2 and 3 and display them relative to the overall NNH clusters. This sets the overall NNH clusters as a control group, to see where clusters of each type occur relative to the overall pattern of clustering. I then calculate the frequency of different dispositional types within each of the first-order NNH clusters, as well as spatial cluster analysis localities, to illustrate the composition of each aggregation of funerary petroforms. This process builds upon the *K*-Function results, geographically locating the clusters within each cemetery, and provides an entry point in which to consider the way that different types of features cluster at Edye Point.

**Edye Point Type 1 features:** Type 1 features—small and medium-sized curvilinear mostly stone petroforms—account for 70% of the funerary petroforms at Edye Point, and are distributed throughout the entire cemetery, thereby driving much of the overall feature clustering

in the cemetery. The NNH results substantiate the  $K$ -function results that indicated multiscale aggregation at distances greater than 1m (Figure 66). The 1 m level of dispersion is likely the intra-centroid distance between funerary petroforms and is therefore an artifact of analysis rather than ritual practice. Significant aggregation of Type 1 features, however, occurs at two scales in the cemetery. First in the form of many small clusters distributed throughout the cemetery, as well as a large second order cluster of funerary petroforms located in the centre of Locality 2 (and the median centre of the Edye Point funerary petroform distribution). While Type 1 features are distributed throughout all other localities at Edye Point, when they do form clusters, they are dispersed. This is in contrast to Locality 2, where these NNH-identified clusters of Type 1 features form a concentrated focal point of cairn building.

**Edye Point Type 2 features:** The Type 2 NNH clusters are significantly larger than the first order Type 1 clusters, although they do not form clusters at larger scales. The multiple intensity approaches I utilize together identify a complex spatial process for Type 2 features. While seemingly contradictory, the NNA results identified Type 2 features as dispersed, while  $K$ -function defined them as aggregated at about 40 m. The NNH analysis reconciles this to some extent, illustrating that while these small and medium-sized mostly irregular features do form four significant clusters (each approximately 40 m long), these clusters are either random or dispersed in their intensity. Those Type 2 features that occur outside of the NNH ellipses may also be dispersed (supported by the NNA results), although  $K$ -function suggests their intensity is random.

**Edye Point Type 3 features:** These small- to medium-sized straight-sided funerary petroforms are significantly aggregated, with  $K$ -function indicating this clustering occurs between 5-50 m. After 50m and within the Monte Carlo simulated envelope,  $K$ -function identified the intensity of Type 3 features as dispersed, although not significantly so (Figure 66). There are two small clusters of Type 3 features, one in Locality 2 and the other in Locality 4, that are closest to the seaward edge of the cemetery. In both cases, these clusters are conspicuous groupings of straight-sided features that were observed in the field. The cluster of Type 3 features in Locality 4 is also adjacent to Feature DbRv-3:C144 (Figure 47), the large rectilinear Type 6 petroform. These two small aggregations of straight-sided features are in contrast to the other Type 3 features that either form larger NNH clusters of more widely spaced features, or are distributed outside of the ellipses.

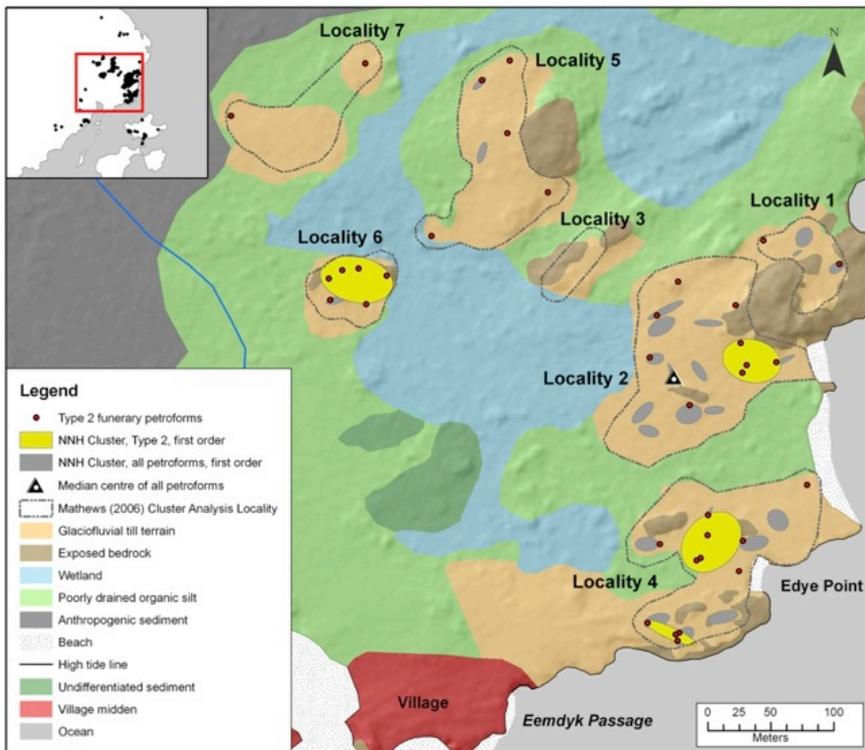


### Edge Point Type 1 NNH analysis results

**NNA results:**  
Aggregated.

**K-function results:**  
Multiscalar  
aggregation at > 1  
m

**Interpretation:**  
Many small clusters  
throughout the  
Edge Point  
cemetery, including  
one large second  
order cluster in  
Locality 2, at the  
centre of the site.

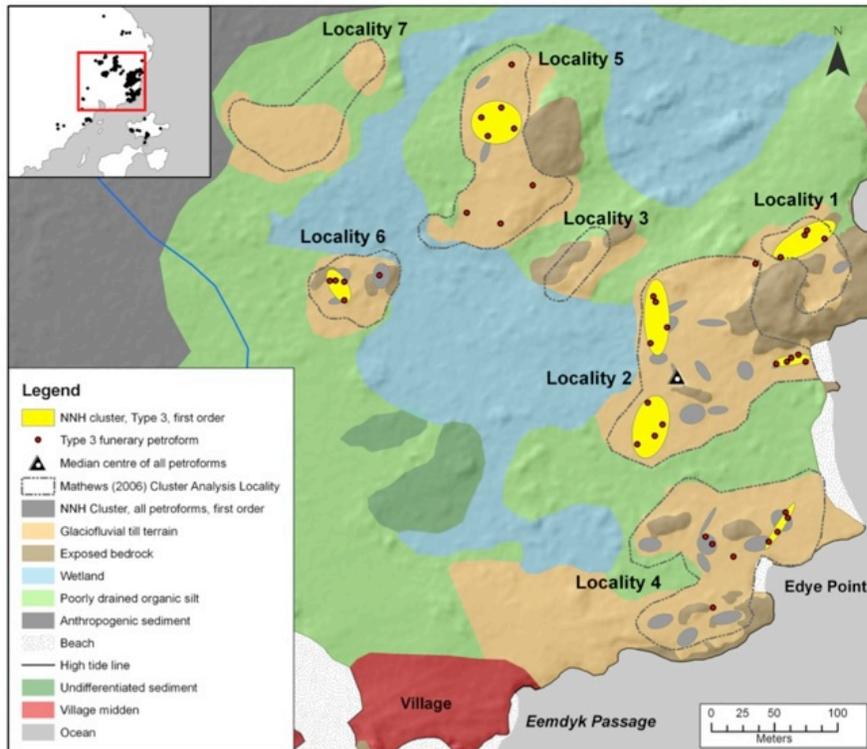


### Edge Point Type 2 NNH analysis results

**NNA results:**  
Dispersed.

**K-function results:**  
Aggregated at 40  
m.

**Interpretation:**  
Larger clusters  
about 40 m long,  
with features  
outside of these  
clusters either  
randomly separated  
or dispersed  
throughout the  
width of the Edge  
Point cemetery.



### Edge Point Type 3 NNH analysis results

**NNA results:**  
Aggregated.

**K-function results:**  
Significantly  
aggregated  
between 5-50 m.

**Interpretation:**  
Larger clusters up  
to about 50 m long,  
dispersed from each  
other (although not  
significantly so).  
They do not form  
second order  
clusters.

**Figure 66: NNH analysis results for Edge Point Type 1, 2 and 3 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group.**

### Proportions of Funerary Petroforms within The Edge Point Cemetery

Having identified spatial clusters of funerary petroforms at the Edge Point cemetery, are the relative proportions of types of funerary petroforms within one spatial cluster the same as the relative proportions of funerary petroform types in different spatial clusters? In other words, are there similar proportions of the same kinds of funerary petroforms within each cluster across the cemetery?

This is accomplished by comparing frequencies and proportions of funerary petroforms within both the seven slightly larger-scale localities identified by agglomerative hierarchical cluster analysis and the smaller and more numerous NNH-identified ellipses. In this sense, I am considering two scales within the cemetery, the microscale of very small aggregations of features and the mesoscale of intra-cemetery space.

First I consider the seven larger-scale spatial hierarchical cluster analysis localities by examining the proportions of different dispositional types within each of the localities as a means of comparing the composition of different places in the cemetery to each other. As the number of

features and the size of the clusters are variable, the comparison is made using proportions (Table 12).

What emerges from this analysis is a general division in the proportion of different dispositional types between the southeastern (Localities 1, 2 and 4) and northwest (Localities 5, 6 and 7) halves of the site. The site is bisected by a low-lying wetland that divides the Edye Point cemetery, with Locality 3 located on a high point in the centre of this wetland. On the southeastern side of the marsh, there is remarkable consistency in the proportions of Type 1 features between Localities 1, 2 and 4. Types 2 and 3 are also comparable between these localities. Neighbouring Localities 1 and 2 are particularly comparable across all dispositional types, suggesting these two parts of the cemetery may share similar dispositional and depositional ideas and practices. The northwestern part of the cemetery is primarily differentiated from the southeast by having more rectilinear Type 3 features and generally more of the irregular Type 2 funerary petroforms. Localities 5 and 6 also have fewer small and medium sized curvilinear Type 1 features, while Locality 7 is actually comparable with those localities on the eastside side of the wetland (Table 13).

**Table 13: Distribution of Dispositional Types Within Localities at Edye Point.**

		Southeast of wetland		Wetland	Southeast	Northwest of wetland		
		Locality 1	Locality 2	Locality 3	Locality 4	Locality 5	Locality 6	Locality 7
Type 1	Percentage	75%	76.9%	100%	70.4%	61.8%	45%	77.8%
	Frequency	18	80	3	50	21	9	7
Type 2	Percentage	8.3%	8.6%	0%	16.9%	14.7%	30%	22.2%
	Frequency	2	9	0	12	5	6	2
Type 3	Percentage	16.7%	13.5%	0%	11.3%	23.5%	25%	0%
	Frequency	4	14	0	8	8	5	0
Type 5	Percentage	0%	0%	0%	1.4%	0%	0%	0%
	Frequency	0	0	0	1	0	0	0
Type 6	Percentage	0%	0.1%	0%	0%	0%	0%	0%
	Frequency	0	1	0	0	0	0	0
Total Percent		100%	100%	100%	100%	100%	100%	100%
Total Frequency		24	104	3	71	34	20	9

To test this possible bifurcation of the Edye Point cemetery, I compared the proportion of funerary petroform dispositional Types 1, 2 and 3 between the southeastern localities (1, 2, and 4) and northwestern ones (5, 6, and 7) using a chi square ( $\chi^2$ ) test. The observed frequency of each type of funerary petroform, when comparing variation between the southeastern and

northwestern localities, differed significantly from what would be expected from chance alone,  $\chi^2(2, N=253) = 6.331, p \leq 0.005$ . With a problem  $\chi^2$  of 6.331 and a critical  $\chi^2(0.005, 2)$  of 5.991, the variation of Type 1, 2 and 3 features between the southeastern and northwestern halves of the Edye Point cemetery is too great to be explained by chance alone. Therefore, we must reject the null hypothesis that  $H_0$ —the variation of frequencies of Type 1, 2 and 3 features between the southeast and northwest sides of the Edye Point cemetery are random—and accept  $H_1$ , that this variation is not random. The strength of this significance, based on a Cramer's V coefficient of 0.156, is within the acceptable threshold of significance for suggesting a substantial variability of type proportions between the two sides of the Edye Point cemetery.

While the analysis of the hierarchical cluster analysis spatial localities highlights the larger scale patterns in the distribution of dispositional types, the map of dispositional type proportions for each of the NNH clusters illustrates a smaller scale proportionality of feature types (Figure 67). There is a consistent distribution of Type 1 features across Edye Point. In particular; however, there is a clear concentration of four clusters composed exclusively of Type 1 features ( $n=16$  features) in the median centre of feature distribution (Locality 2). Some adjacent clusters are mostly Type 1 features as well. This area was identified, during the NNH cluster analysis as the location for a second order cluster of Type 1 features. What the mapping of type proportionality within the NNH cluster reveals is the predominance of Type 1 features in this area, revealing a kind of homogeneity lacking in most other parts of the Edye Point cemetery (with the exception of Clusters 14 and 30 in Locality 5).

In only four cases do Type 1 Features account for 50% or less of the feature proportions: Clusters 15, 17, 23 and 28. Cluster 15 and 23 are distinctive in that they are composed primarily of the small to medium rectilinear Type 3 dispositional types. Since the funerary petroforms on the northwest side of the marsh form much fewer NNH clusters than those on the southwest side, it is difficult to compare proportions of types between these two areas. The intra-locality level mapping of the NNH proportions teases apart these larger aggregations, demonstrating both similarity within each locality and across the site, but that some small scale variability exists—homogeneity in the centre of the cemetery (and in some small pockets throughout the cemetery), with greater variability in the co-occurrence of different proportional types elsewhere (Figure 67).

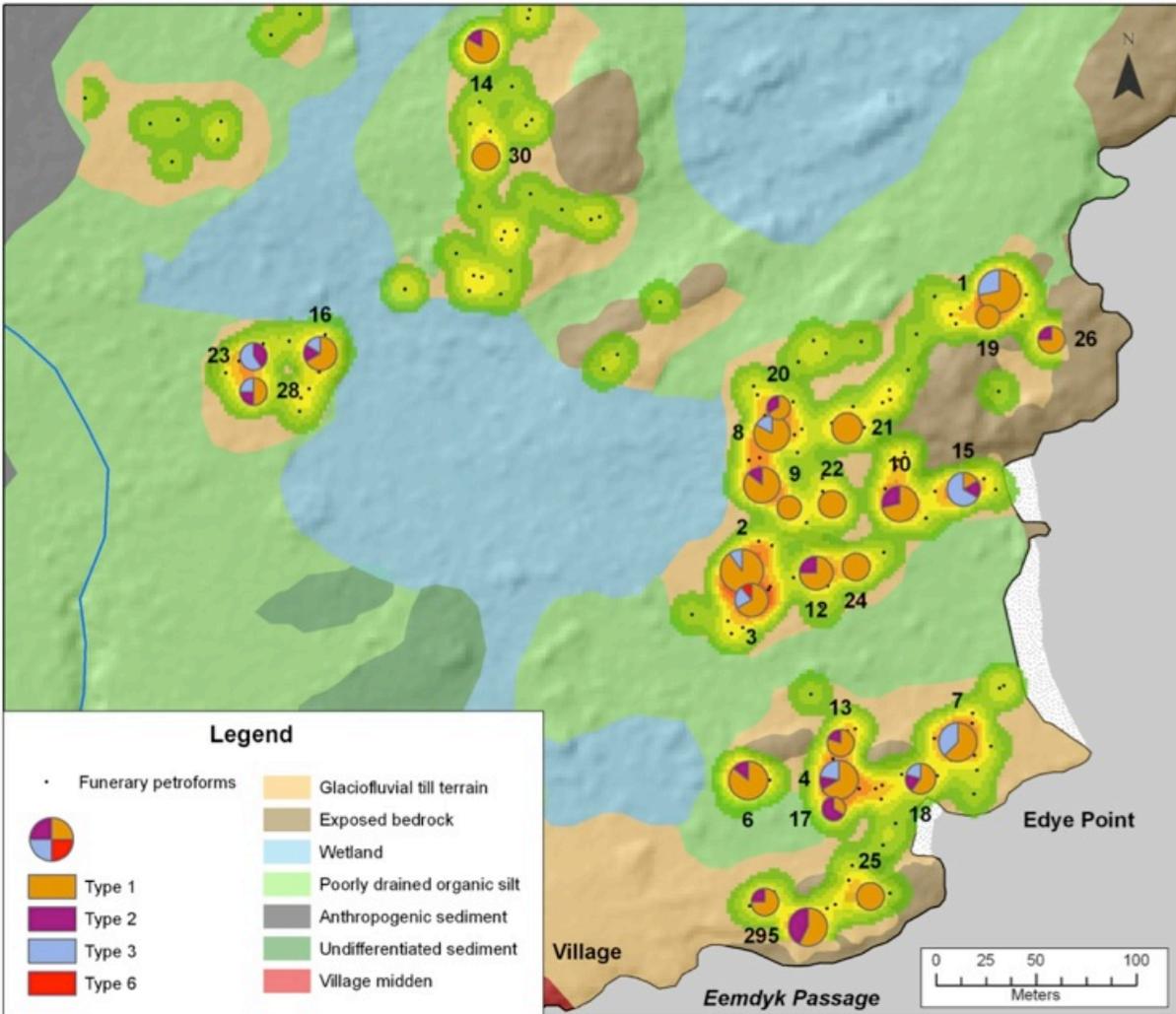


Figure 67: Edge Point feature type frequency, expressed as a pie chart, for each of the 99% NNH-derived spatial clusters. Relative circle size represents the number of features per spatial cluster. Superimposed on the kernel density analysis results.

### Edge Point Volume Classes by NNH Ellipses and Hierarchical Cluster Analysis Localities

Having explored the composition of spatial clusters at several scales in the Edge Point cemetery by dispositional types, I next turn to consider the composition of these same clusters according to the volume of the features. Volume, as a proxy measure of feature size, is implicated in ideas of monumentality. While it contributes to the determination of the dispositional types, it is worth considering volume on its own since this attribute is theoretically important and may be masked to some extent by the dispositional types. The *K*-function analysis indicated that the smallest class of features (less than 1.2 m<sup>3</sup>) are aggregated, so it is likely these small features form many of the clusters, whereas the next two largest classes formed significant clusters only at

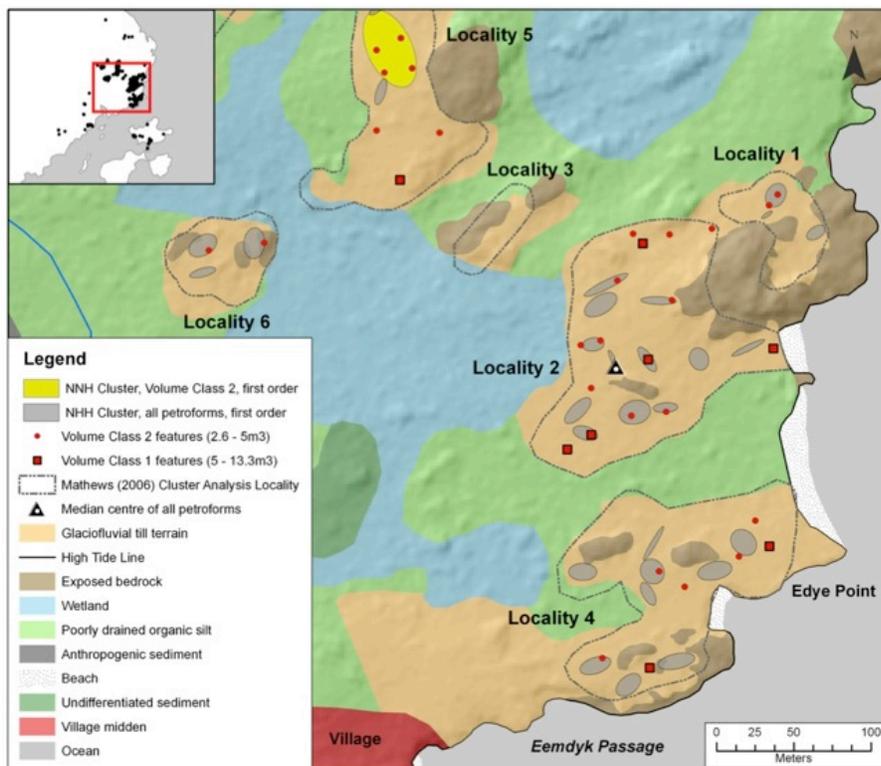
distances between about 30-60 m. The largest features, according to NNA analysis, do not aggregate. As such, I am particularly interested in where the small and medium-sized features cluster and how the largest features relate spatially to these three smaller classes of funerary petroforms.

**Edye Point Volume Class 1 and 2:** There are too few features in Volume Class 1 (5–13 m<sup>3</sup>) to form NNH clusters (or to provide valid *K*-function analysis results). NNA analysis identifies the point process of these largest features as dispersed in their intensity. For the second largest features, Volume Class 2 (2.6–5.0 m<sup>3</sup>), NNA identified these features as dispersed, while *K*-function determined they are significantly aggregated between 47–60 m, but otherwise random in their intensity. In the NNH analysis, Volume Class 2 features form only one ellipse (Figure 68). Although the results cannot be substantiated by a Monte Carlo test, Volume Class 2 features may be dispersed between 0-22 m, a much greater initial dispersion than the other two smaller volume classes and too large to explain simply as the inter-centroid distance between the centre points of funerary petroforms. This may explain, to some degree, why this size of feature only forms one cluster. The point pattern process for the largest features at Edye Point, between about 2.6-13 m<sup>3</sup> in volume (Volume Class 1 and 2), ones that fall outside this one NNH cluster, seem to be dispersed in their intensity at scales of up to 20 m, repelling each other at this scale. Beyond the point at which Volume Class 2 forms an NNH cluster, these largest features then approach the Poisson distribution, being randomly distributed. As I discuss below, there may be other cultural factors structuring the intensity of Volume Class 1 features: their proximity to clusters of smaller features; their visibility on the landscape; and the intervisibility between funerary petroforms.

**Edye Point Volume Class 3:** This group of funerary petroforms, measuring between 1.2–2.6 m<sup>3</sup> in volume, form five significant NNH clusters (Figure 68). NNA identified these features as dispersed, whereas *K*-function indicated that they are aggregated between 30–52m (so forming larger clusters), but otherwise random in their intensity. Visually, the five Volume Class 3 NNH clusters appear to be dispersed, whereas the features outside of the NNH ellipses appear random. So there may be a very complex pattern of intensity happening for this size of funerary petroform: forming clusters of aggregated features that repel each other, with other features dispersed randomly between these clusters.

**Edge Point Volume Class 4:** These very small features (0.08–1.2 m<sup>3</sup> in volume) are aggregated, forming both many small first order NNH clusters and one large central second order cluster in Locality 2 (Figure 68). This size of feature, while common throughout Edge Point, forms much fewer clusters outside of the core Locality 2/4 area of the cemetery.

Examining the proportion of each funerary petroform volume class at the locality level (as defined by the spatial hierarchical cluster analysis), we see that Localities 1, 2 and 4, all on the southeast side of the wetland that divides the site, are quite comparable in their proportions of volume classes (Table 14). Neighbouring Localities 2 and 4 follow a similar trend: small numbers of unusually large funerary petroforms that are dispersed from one another, in contrast to much greater numbers of smaller funerary petroforms that aggregate together.

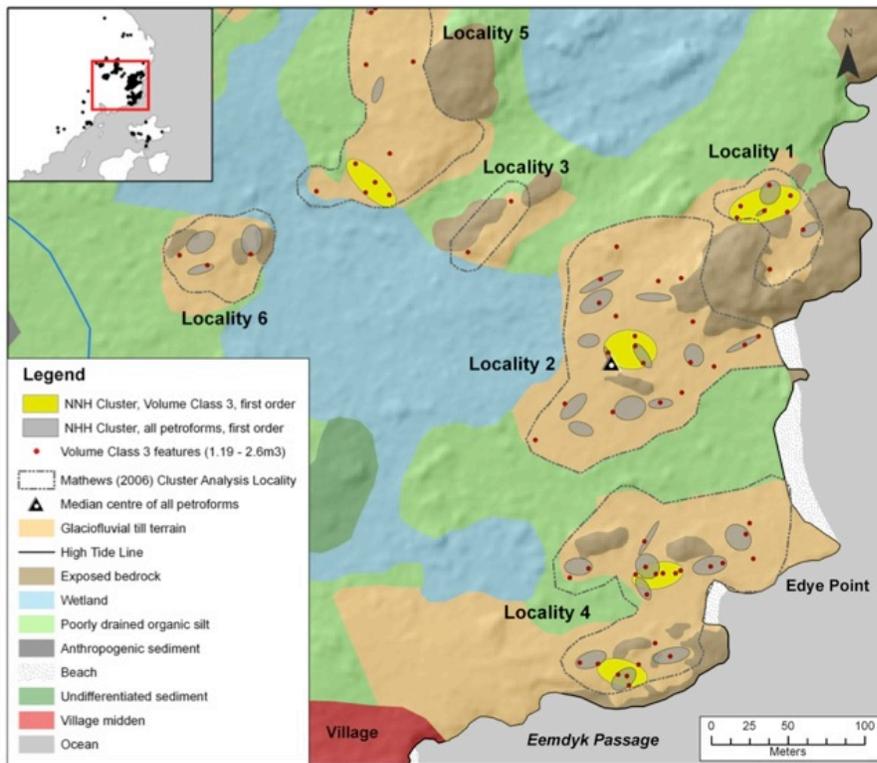


**Edge Point Volume Class 2 (5-2.6 m<sup>3</sup>) NNH analysis**

**NNA results:**  
Dispersed.

**K-function results:**  
Significantly aggregated between 47-60 m, otherwise random intensity.

**Interpretation:**  
Forms one larger significant cluster. Features of Volume Class 1 and 2 otherwise random/dispersed.

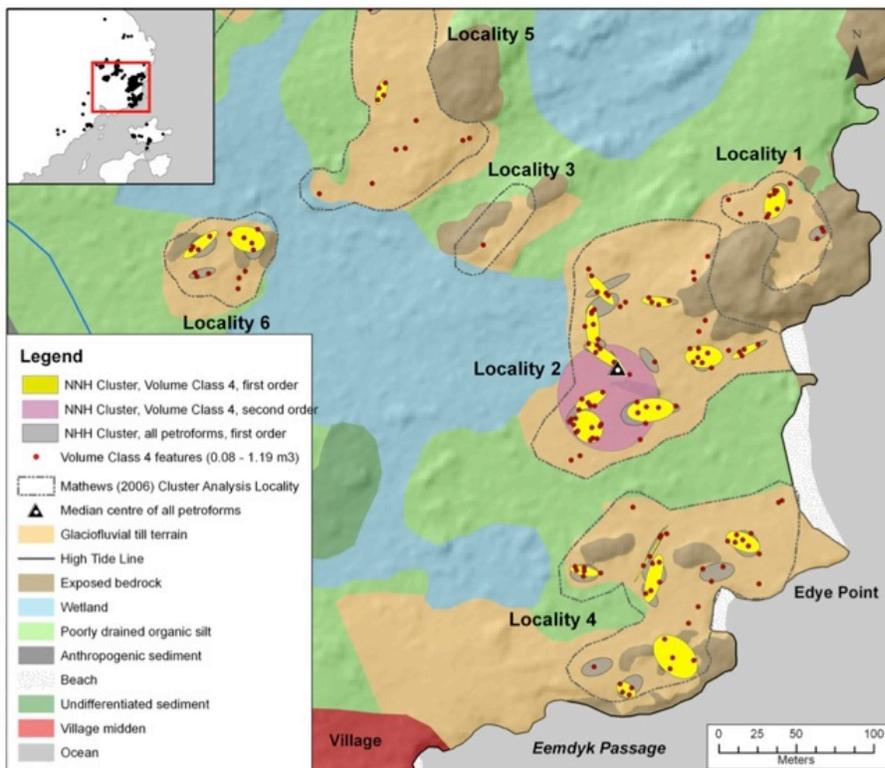


**Edge Point Volume Class 3 (2.6 – 1.2 m<sup>3</sup>) NNH analysis**

**NNA results:**  
Dispersed.

**K-function results:**  
Significantly aggregated between 30-52 m, but otherwise random intensity.

**Interpretation:**  
Forms five significant clusters, otherwise random/dispersed in their intensity.



**Edge Point Volume Class 4 (1.2 – 0.08 m<sup>3</sup>) NNH analysis**

**NNA results:**  
Aggregated.

**K-function results:**  
Multiscalar aggregation at > 1 m.

**Interpretation:**  
Multiscalar clustering of features concentrated largely in the centre of the cemetery.

Figure 68: NNH analysis results for Edge Point Volume Class 2, 3 and 4 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group. Volume Class 1 is expressed as point data.

**Table 14: Distribution of Volume Classes Within Localities at Edye Point.**

		Southeast of wetland		Wetland	Southeast	Northwest of wetland		
		Locality 1	Locality 2	Locality 3	Locality 4	Locality 5	Locality 6	Locality 7
Volume Class 1	Percentage Frequency	0%	4.8%	0%	2.8%	3.3%	0%	0%
		0	5	0	2	1	0	0
Volume Class 2	Percentage Frequency	8.4%	9.6%	0%	7%	20.6%	10%	22.2%
		2	10	0	5	7	2	2
Volume Class 3	Percentage Frequency	33.3%	19.2%	66.7%	32.4%	38.2%	15%	44.4%
		8	20	2	23	13	3	4
Volume Class 4	Percentage Frequency	58.3%	66.3%	33.3%	57.8%	38.2%	75%	33.3%
		14	69	1	41	13	15	3
Total Percent		100%	100%	100%	100%	100%	100%	100%
Total Frequency		24	104	3	71	34	20	9

Locality 1, to the immediate north of Locality 2/4 is also comparable, but lacks any of the largest Volume Class 1 features. Localities 5 and 6, on the opposite side of the wetland, are different. While Locality 5 has a comparable proportion of the largest funerary petroforms to Localities 2/4, the overall proportion of features seems to be slightly larger in this locality northeast of the wetland. Both Locality 5 and 7 have double the proportions of Volume Class 2 features than those localities southeast of the wetland and significantly fewer of the smallest Volume Class 4 features. Locality 6, also on the northwest side of the marsh, however, has a volume class profile very much like those on the opposite side of the wetland.

To explore the possible differentiation of feature volume on the two sides of the dividing wetland, I conducted a chi square ( $\chi^2$ ) test of the funerary petroform volume class, comparing the proportion of funerary petroform volume classes between the southeastern localities (1, 2, and 4) and northwestern ones (5 and 7) using a. I excluded Locality 6, as it appears to have a volume pattern more in line with that on the opposite side of the wetland. The observed frequency of each type of volume class, when comparing variation between the southeastern and northwestern localities, differed significantly from what would be expected from chance alone,  $\chi^2 (3, N=253) = 11.287, p \leq 0.005$ . With a problem  $\chi^2$  of 11.487 and a critical  $\chi^2 (0.005, 3)$  of 7.815, the variation of volume Classes 1 through 4 between the southeastern and northwestern halves of the Edye Point cemetery is too great to be explained by chance alone. Therefore, we must reject the null hypothesis that  $H_0$  (the variation of proportions of volume classes between the southeast and northwest sides of the Edye Point Cemetery are random) and accept  $H_1$ , that this variation is not

random. The strength of this significance, based on a Cramer's V coefficient of 0.218, is moderate and within the acceptable threshold of significance for suggesting a substantial variability of volume class proportions between the two sides of the Edey Point cemetery (excluding Locality 6).

In general, the results of both the dispositional type and volume class analyses point to differential structured depositional practices between the southeast and northwest sides of the Edey Point cemetery. While both the proportions of dispositional types and volume classes are comparable amongst Localities 1, 2, and 4 on the southeast side of the wetland, these proportions are more variable on the northwest side.

Having examined the way that funerary petroforms, both by dispositional type and by volume, are situated throughout the Edey Point cemetery, I next examine the spatial relationship between the largest funerary petroforms and the aggregations of funerary petroforms. The theoretical model suggests that larger funerary petroforms, as monumental burials, may pattern differently than other smaller ones. To explore this possibility, I used Jenk's optimal method (Conolly and Lake 2006:142; Jenks 1967) to find natural breaks in the data to create volume classes that are internally coherent but distinctive from other classes, and produce five different volume classes of funerary petroforms. Plotted with all other funerary petroforms, the NNH-derived clusters of funerary petroforms, and the kernel density analysis results (Figure 69), the largest class of features, with few exceptions, appear to be built along the peripheries or well outside of the NNH clusters of other burials. The exceptions to this possible pattern occur only in the centre of the site, within Locality 2.

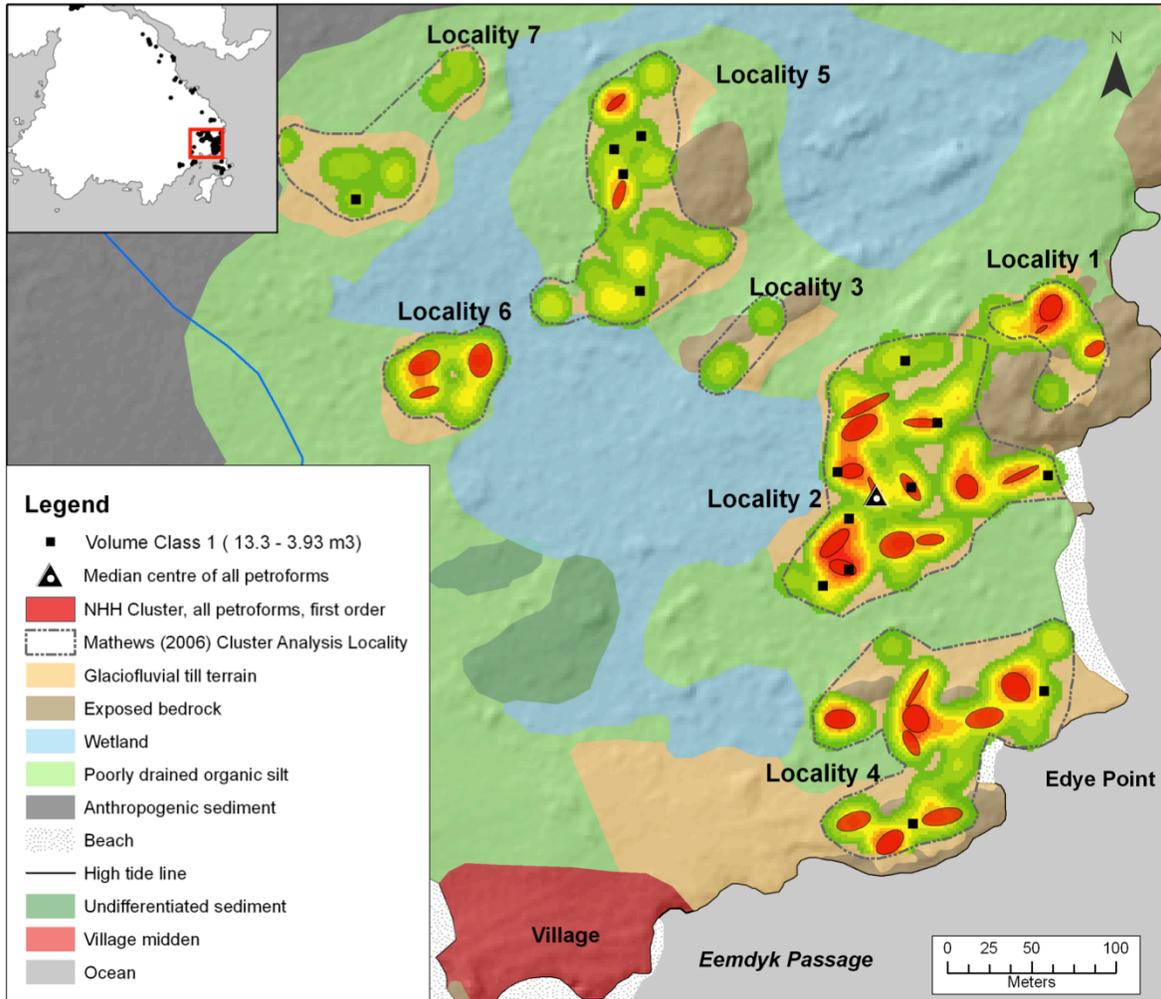


Figure 69: Edye Point funerary petroform 99% NNH-derived spatial clusters and the largest funerary petroforms superimposed on the kernel density analysis results.

The distribution of the five volume classes by locality suggests that Volume Class 1 features differ in the proportion of features located outside of the NNH-derived clusters (Table 15). Overall, features smaller than 3.9 m<sup>3</sup> occur somewhat more often inside of NNH clusters, whereas only 21% of Volume Class 1 features occur in such clusters 21%.

**Table 15: Distribution of Volume Classes Inside and Outside of NNH clusters at Edge Point.**

Locality	Volume Class 1 13.3 - 3.93 m <sup>3</sup>		Volume Class 2 3.93 - 1.5 m <sup>3</sup>		Volume Class 3 1.5 - 0.87 m <sup>3</sup>		Volume Class 4 0.87 - 0.71 m <sup>3</sup>		Volume Class 5 0.71 - 0.08 m <sup>3</sup>		Vol. classes 2-5 3.93 - 0.08 m <sup>3</sup>	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Locality 1	0	0	5	3	2	4	0	0	7	3	14	10
Locality 2	3	5	10	9	6	7	6	7	23	17	93	40
Locality 4	0	2	15	7	12	12	8	1	13	8	48	28
Locality 5	0	4	4	10	2	4	1	1	2	6	9	21
Locality 6	0	0	3	1	3	0	4	1	4	4	14	6
Percent Freq.	21.4%	78.6%	55.2%	44.8%	48.1%	51.9%	65.5%	34.5%	56.3%	43.7%	55.3%	44.7%
	14		67		52		29		87		235	

To test this possible spatial pattern of the largest features occurring more frequently outside of NNH clusters than other sizes of features, I conducted a chi square test of the funerary petroform volume class, comparing the proportion of Volume Class 1 funerary petroforms inside and outside of NNH clusters with the proportions of all other sizes of funerary petroforms, using a chi square ( $\chi^2$ ) test (Table 16).

**Table 16: Contingency table for the Distribution of Volume Classes Inside and Outside of NNH clusters at Edge Point.**

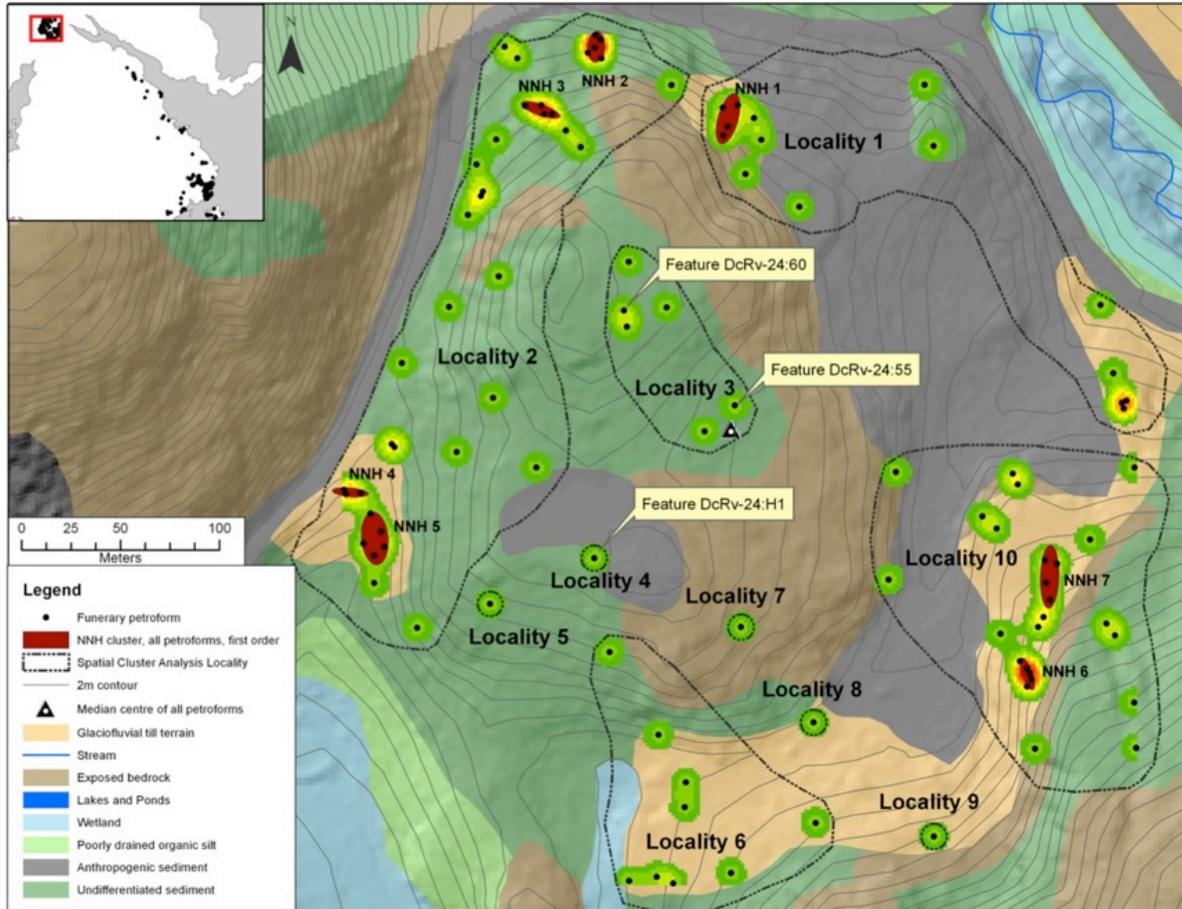
Volume Classes	Inside NNH cluster		Outside NNH cluster		Total
	Observed	Expected	Observed	Expected	
Volume Class 1	3	9	11	5	14
Volume Classes 2-4	178	172	105	111	283
Total	181	181	116	116	297

Variation between the frequency of the largest funerary petroforms in Volume Class 1 found inside and outside of the NNH clusters, and the combined Volume Classes of the remaining features smaller than 3.9 m<sup>3</sup> found inside and outside of the NNH clusters, differed significantly from what would be expected from chance alone,  $\chi^2 (1, N=297) = 9.638, p \leq 0.005$ . With a problem  $\chi^2$  of 9.638 and a critical  $\chi^2 (0.005, 1)$  of 3.841, the variation of the frequency of the numbers of Volume Class 1 features found inside and outside of NNH clusters, when compared against all other sizes of features, is too great to be explained by chance alone. Therefore, we must reject the null hypothesis  $H_0$  (that the variation of proportions of Volume 1

classes inside and outside of NNH clusters compared to all other sizes of features inside and outside of NNH clusters is random) and accept  $H_1$ , that this variation is not random. The strength of this significance, based on a Cramer's-V coefficient of 0.180, is weak but within the acceptable threshold of significance. These results suggest that the largest funerary petroforms at Edye Point are significantly located outside of clusters of other smaller features; they are repelled by, or mutually repel, aggregations of smaller features.

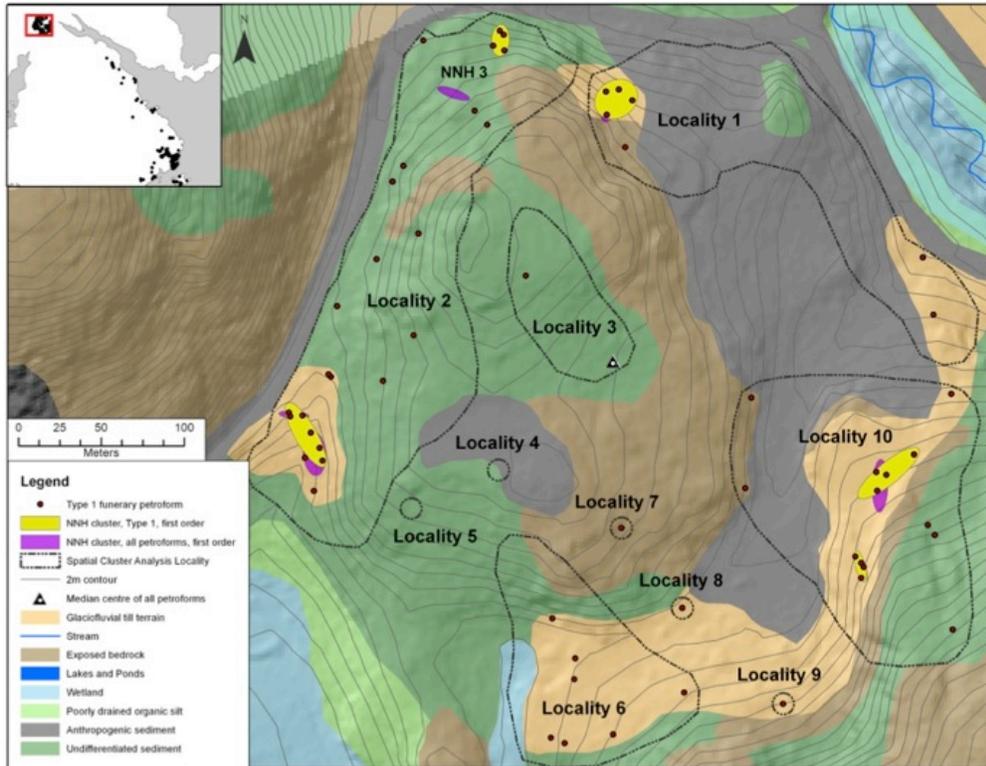
### **The Clustering of Dispositional Types at the Yates Cemetery**

Having explored the spatial patterning of funerary petroforms, both by dispositional type and by volume at the Edye Point cemetery, the same methods are applied to the Yates Cemetery at the north end of the Rocky Point study area. Spatial clusters were identified using NNH, as well as a hierarchical cluster analysis of all funerary petroforms. This process produced seven NNH clusters and ten spatial hierarchical cluster localities (Figure 70). Unlike the Edye Point cemetery, which exhibits a high degree of aggregation of funerary petroforms, Yates Cemetery burials only form NNH clusters along the lower sides and bottoms of the two ravines that enclose a large central hill. Only two hierarchical cluster analysis localities, Localities 3 and 4, are situated at the top of this central hill. I return to the significance of these localities below. Unlike Edye Point, the Yates Cemetery also has individual features that form their own localities because they are somewhat spatially isolated from clusters of other funerary petroforms.



**Figure 70: Yates Cemetery NNH analysis results (First Order clusters) using all funerary petroforms, with a 99.9% confidence level. Also illustrated are spatial hierarchical agglomerative cluster analysis localities. Results superimposed upon the kernel density analysis (grading from green to orange with increasing density).**

It is only the dispositional Type 1 features that have enough points to conduct NNH analysis. The  $K$ -function analysis indicates that Type 1 features at the Yates Cemetery cluster at two intra-cemetery scales (between 8-25 m and 35-62 m). While the NNH analysis did not identify second order clustering, it produced five first order ellipses that vary in size within the ranges specified by the  $K$ -function results (Figure 71). All the Type 1 NNH clusters are situated on the lower sides of the two ravines that define both the north and southeast sides of the cemetery (Figure 71). Those Type 1 features that fall outside NNH ellipses appear to be random in their intensity, as the results of the NNA indicated. The Type 1 ellipses encompass all one of the original NNH clusters except ellipse NNH 3 (Figure 71).



**Yates Cemetery  
Type 1 NNH  
analysis results**

**NNA results:**  
Random.

**K-function  
results:** Two  
significant levels of  
aggregation, first  
between 8-25m  
and second at 35-  
62m.

**Interpretation:**  
Aggregation  
producing five first  
order clusters.

Figure 71: NNH analysis results for Yates Cemetery Type 1 funerary petroforms (first and second order clusters with a 99.9% confidence level), using the NNH clusters for all funerary petroforms as a control group.

Examining the proportion of dispositional types for each of the 99% NNH-derived spatial clusters (Figure 72), ellipse NNH 3 is composed primarily of dispositional Type 8 features (three out of nine of this type). Even though NNA identified their overall intensity as random, this one small cluster of hybrid boulder-crevice petroforms forms a significant cluster at Edge Point. The more numerous Type 1 features mirror this pattern: small aggregations amongst otherwise random intensity.

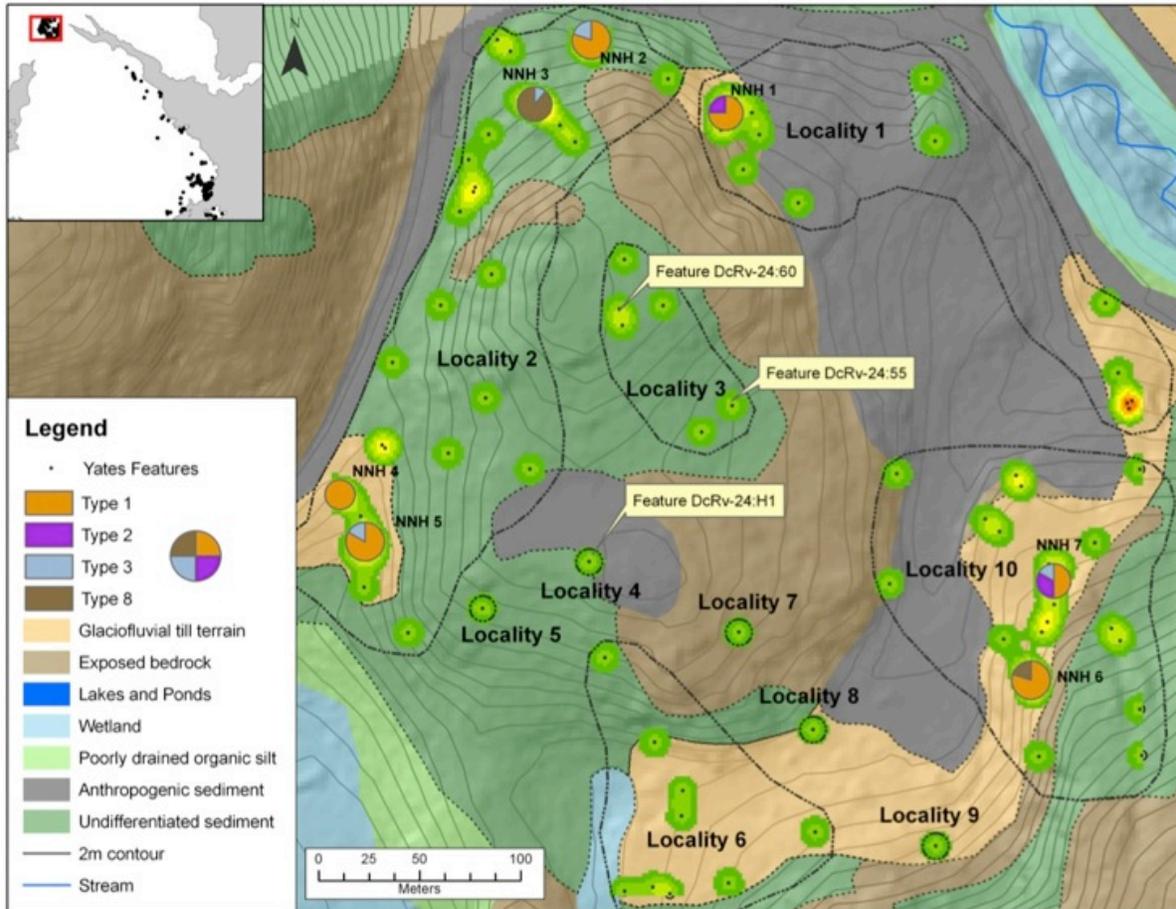


Figure 72: Yates Cemetery feature type frequency, expressed as a pie chart, for each of the 99% NNH-derived spatial clusters. Relative circle size represents the number of features per spatial cluster. Superimposed on the kernel density analysis results.

Considering the distribution of dispositional types at a slightly larger scale using the hierarchical cluster analysis localities, the most significant pattern that emerges is the proportion of Type 4 features within Locality 3 (Table 17). An isolated Type 4 feature also comprises Locality 4. These, the largest funerary petroforms at Rocky Point comparable to the largest mounds found at Scowlitz and other cemeteries around the Salish Sea and Fraser River Valley, are spatially isolated on the top and sides of the central hill at the Yates Cemetery. Locality 5 is also comprised of a single funerary petroform, feature DcRv-24:52. This large feature, like the largest funerary petroform at Edge Point, is one of two dispositional Type 6 features. Unlike at Edge Point, however, where feature DbRv-3:C82 is located within both first and second order NNH clusters (mostly of small Type 1 features), its counterpart at the Yates Cemetery is isolated from other burials and is located on the southern side of the central hill, just below the crest of

the hilltop. In this way it is both spatially isolated from other types and clusters of smaller features, but also excluded from the hilltop and the larger Type 4 funerary petroforms.

**Table 17: Distribution of Dispositional Types Within Localities at the Yates Cemetery.**

		Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc. 5	Loc. 6	Loc. 7	Loc. 8	Loc. 9	Loc. 10
<b>Type 1</b>	Percentage	46.7%	74%	14.3%	0%	0%	81.8%	100%	100%	100%	69.4%
	Frequency	7	37	1	0	0	9	1	1	1	25
<b>Type 2</b>	Percentage	26.6%	2%	0%	0%	0%	0%	0%	0%	0%	13.9%
	Frequency	4	1	0	0	0	0	0	0	0	5
<b>Type 3</b>	Percentage	13.3%	10%	14.3%	0%	0%	18.2%	0%	0%	0%	5.6%
	Frequency	2	5	1	0	0	2	0	0	0	2
<b>Type 4</b>	Percentage	6.7%	2%	57.1%	100%	0%	0%	0%	0%	0%	0%
	Frequency	1	1	4	1	0	0	0	0	0	0
<b>Type 6</b>	Percentage	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
	Frequency	0	0	0	0	1	0	0	0	0	0
<b>Type 7</b>	Percentage	0%	4%	14.3%	0%	0%	0%	0%	0%	0%	0%
	Frequency	0	2	1	0	0	0	0	0	0	0
<b>Type 8</b>	Percentage	6.7%	8%	0%	0%	0%	0%	0%	0%	0%	11.1%
	Frequency	1	4	0	0	0	0	0	0	0	4
Total Percent		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Frequency		15	50	7	1	1	11	1	1	1	36

Type 1 features (the most numerous type) are absent on the upper sides and top of the central hill, with one exception. This funerary petroform, DcRv-24:60A, is a small oval stone and soil mound-like feature that intersects part of the perimeter trench around the very large Type 4 feature DcRv-24:60 (Figure 73). While it was captured by the morphological cluster analysis as a Type 1 feature, feature DcRv-24:60A shares a compelling spatial association with its larger neighbour (Figure 73). While they have been typologically categorized as different, they may be more like larger and smaller versions of one another.



**Figure 73: Feature DcRv-24:60A (foreground) and DcRv-24:60 (background).**

This possibility is evident in feature DcRv-24:61 (Figure 74). This feature, 10 m<sup>3</sup> in volume, is only about 10% of the volume of Feature DcRv-24:55 (Figure 74), but morphologically is very similar: a rectilinear stone base surrounded by an excavated trench that provided the rounded dome of sediment that covers the funerary petroform.



**Figure 74: DcRv-24:61 (left) and DcRv-24:55 (right), smaller and larger versions of Dispositional Type 4 funerary petroforms on the central hill at the Yates Cemetery.**

Dispositional Type 3 features (small and medium-sized rectilinear petroforms) are evenly distributed throughout the largest localities at the Yates Cemetery, as they are at the Edye Point Cemetery.

## Yates Cemetery Volume Classes by NNH Ellipses and Hierarchical Cluster Analysis

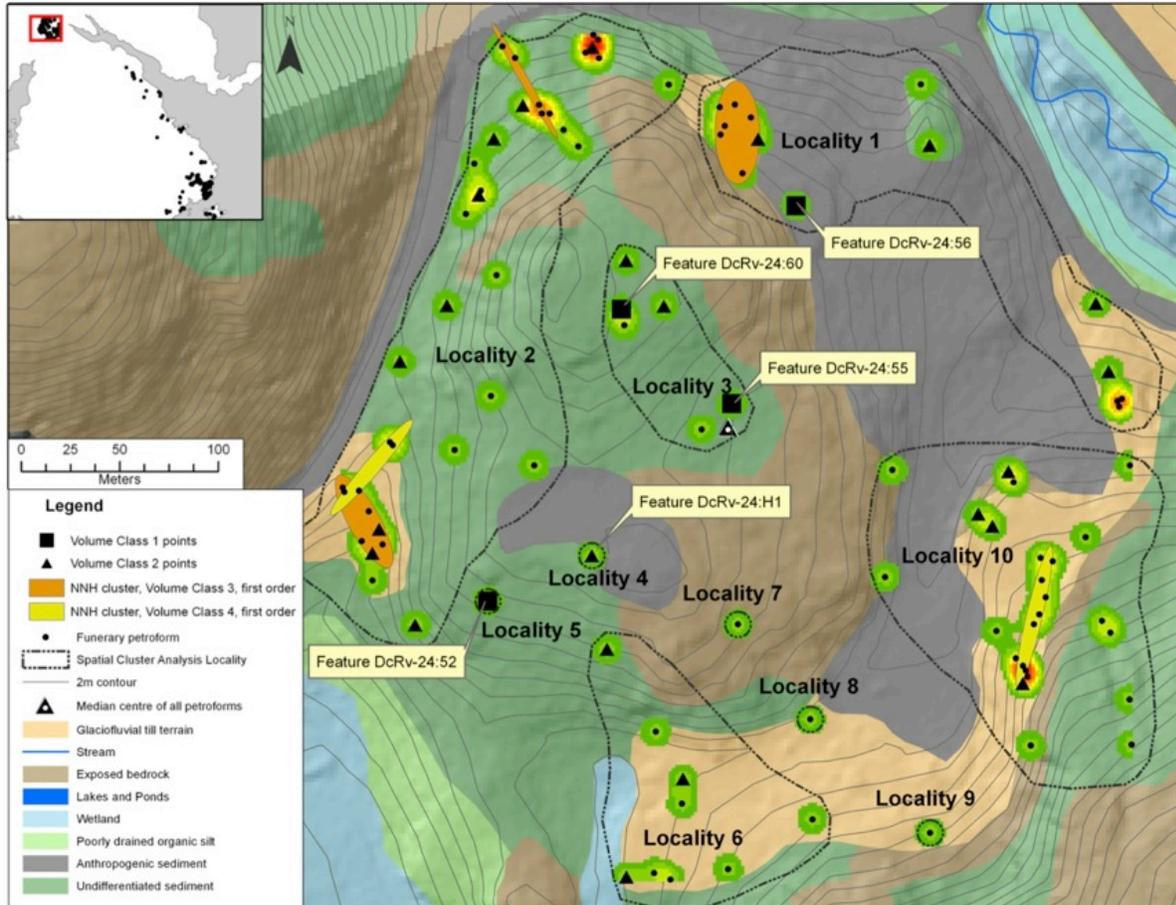
### Localities

Having identified the location of aggregations of dispositional types, I next consider the location of clusters of different sizes of funerary petroforms. Using four classes of feature volume, classified by the geometric intervals method. I used the Jenks Method for Edye Point, to identify natural breaks in the volume of funerary petroforms there. Since the volume of funerary petroforms at the Yates Cemetery are strongly skewed, with a few of the features increasing almost exponentially in volume from the median feature volume, I use geometric intervals which account for this skewness to provide a representative classification of feature volume (Conolly and Lake 2006:142-3).

There appear to be two simultaneous patterns in the placement of the smallest and largest features at the Yates Cemetery. The largest features are located along the base, sides, and top of the central hill in the cemetery. The smallest features are located along the base of the hill and the bottoms of the two parallel ravines to the northwest and southeast of this hill.

Volume Class 3 at the Yates Cemetery has a complex intensity. Considered independently of landscape variables, *K*-function identified their intensity as random, but within the simulated envelope they do aggregate between about 10–40 m and again from 40 m onwards, suggesting the possibility of multi scalar clustering. NNA identified them as dispersed. And NNH produced two large clusters of Volume Class 3 features around 50 m long each. This is a complex intensity and it appears as though this size of feature may both aggregate in two places and is otherwise random or dispersed in its intensity.

Looking at the smallest scale of aggregation, the NNH clusters of Volume Class 3 and 4 features (Figure 75) are situated along the base of this central hill, such as those in Locality 1 and 2, or in clusters on the opposite side of the southeast ravine, opposite the central hill (in a landform colloquially called “the Ramp”). Volume Class 1 (22–102 m<sup>3</sup>) and Volume Class 2 (5–22 m<sup>3</sup>) features do not have enough points to form NNH clusters. NNA analysis identified Volume Class 2 features as dispersed and *K*-function described their intensity as random, but with non-significant dispersion between 60–75 m (Figure 64). Looking at Figure 75, it is difficult to assess the intensity of these features when considering them as part of smaller NNH clusters.



**Figure 75: Yates Cemetery Volume Class Intensity for Volume Classes, using 99% NNH-derived spatial clusters. Volume Classes 1 and 2, which do not form NNH clusters, are expressed as data points.**

Examining the proportion of different volume classes by hierarchical cluster analysis locality (Table 18), Localities 1 and 2—the most populous localities—have very comparable proportions of features. The exception is one Volume Class 1 feature (DcRv-24:56) in Locality 1. This feature, however, is isolated from other features and is part way up the side of the central hill, located on a small break-in-slope. Localities 6 and 10, situated along the southeast side of the central hill and opposing ravine slope, are similar in the composition of feature volumes to Localities 1 and 2, except Locality 6 has a slightly higher proportion of larger features, whereas Locality 10 has somewhat smaller features overall. While there is some difference in the proportions of sizes of funerary petroforms on opposite sides of the central hill, the most significant difference in the proportions of feature size occurs on the top of the hill itself. Locality 3 on the top of the hill is equally composed of features in Volume Classes 1, 2 and 3, while

neighbouring Localities 4 and 5 are each composed of a single Volume Class 2 and 1 feature, respectively.

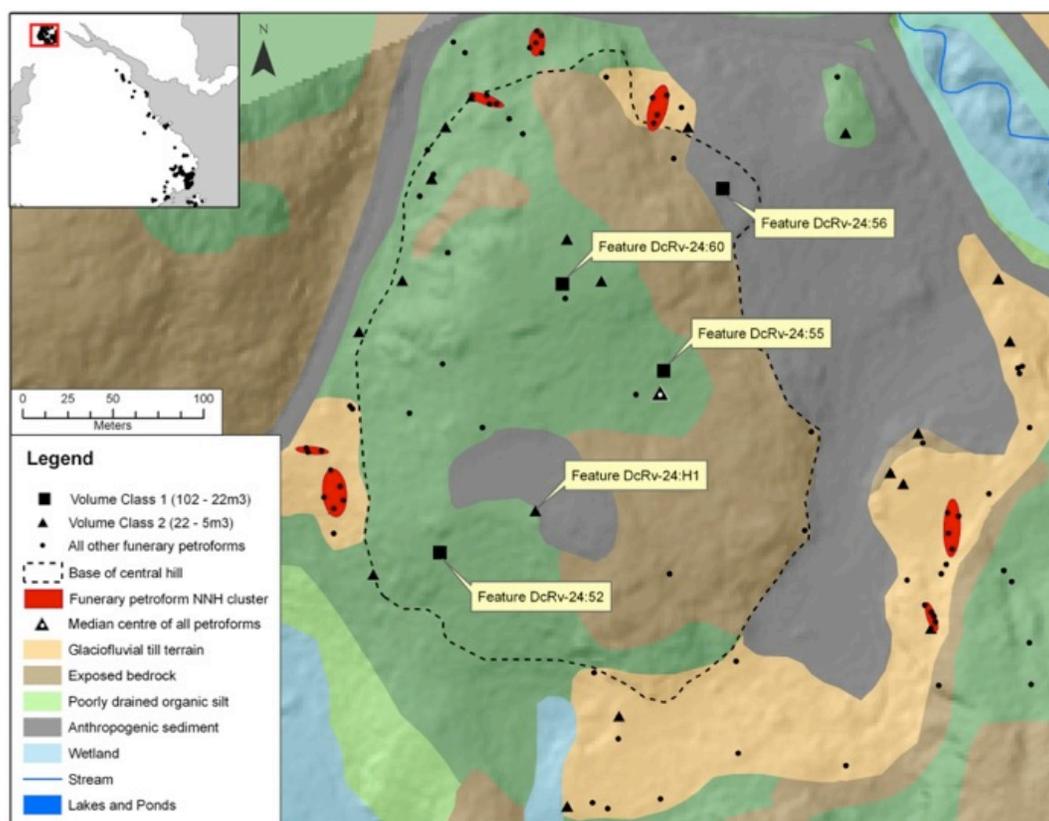
**Table 18: Distribution of Volume Classes Within Localities at the Yates Cemetery.**

<b>Volume Class (VC)</b>		<b>Loc. 1</b>	<b>Loc. 2</b>	<b>Loc. 3</b>	<b>Loc. 4</b>	<b>Loc. 5</b>	<b>Loc. 6</b>	<b>Loc. 7</b>	<b>Loc. 8</b>	<b>Loc. 9</b>	<b>Loc. 10</b>
<b>VC 1</b>	Percentage	6.7%	0%	33.3%	0%	100%	0%	0%	0%	0%	0%
	Frequency	1	0	2	0	1	0	0	0	0	0
<b>VC 2</b>	Percentage	26.7%	24.3%	33.3%	100%	0%	33.3%	0%	0%	0%	16%
	Frequency	4	9	2	1	0	3	0	0	0	4
<b>VC 3</b>	Percentage	33.3%	43.2%	33.3%	0%	0%	44.4%	100%	100%	100%	48%
	Frequency	5	16	2	0	0	4	1	1	1	12
<b>VC 4</b>	Percentage	33.3%	32.4%	0%	0%	0%	22.2%	0%	0%	0%	36%
	Frequency	5	12	0	0	0	2	0	0	0	9
Total Percent		100%	100%	99.9%	100%	100%	99.9%	100%	100%	100%	100%
Total Frequency		15	37	6	1	1	9	1	1	1	25

By considering the location of the volume-based NNH clusters and the proportions of feature volume by locality, what emerges is a potential spatial pattern undetected by any of the intensity analyses. There is a potential spatial segregation, based on feature type and volume, between features that were, and were not, built on the top of the central hill at the Yates Cemetery.

Looking at the spatial relationship of the Volume Classes to the base of the central hill (Figure 76), it appears as though the Volume Class 3 and 4 features are generally built at the base of the central hill or further away. Volume Class 2 features (5-22 m<sup>3</sup>), which are significantly larger than Type 3 and 4 features, appear to behave differently with regard to their intensity and placement. While they are situated along the base of the central hill, they generally avoid each other, and appear to be either dispersed or random in their intensity. Two of these features also appear on top of the central hill, where all four of the largest funerary petroforms at the Yates Cemetery (and indeed the entire Rocky Point study area) are situated. These largest Volume Class 1 features also appear dispersed in their intensity, potentially repelling each other and at a greater distance than Volume Class 2 funerary petroforms. While the centre hill accounts for about 65% of the entire cemetery space, it has only about 33% of all the funerary petroforms, most of which are situated along the base of the hill. There is significant bedrock exposure along the east side of the hill that was not conducive to building funerary petroforms on (following the apparent disposition of avoiding building funerary petroforms on exposed bedrock), the remainder of the hill is both well-drained and with ample stones with which to build funerary

petroforms. This landform may be playing a factor in determining feature intensity at the Yates Cemetery, attracting the very largest features (which then repel each other within this defined space), as well as excluding most other funerary petroforms in all other Volume Classes. Those features concentrated on the top and sides of the central hill are also both large and smaller versions of dispositional Type 4 features, which are unique in the study area to this specific landform.



**Figure 76: The spatial relationship between the largest funerary petroforms (Volume Classes 1 and 2), the central hill, and the NNH-derived clusters of funerary petroforms at the Yates Cemetery.**

This chapter has emphasized the iterative approach necessary for the identification of the dispositional positioning of funerary petroforms. The key challenges were to define a study area so that the funerary petroforms within it conformed to the prerequisites of point pattern analysis (e.g., stationarity), and to correct for edge effects statistically where necessary. Accounting for the heterogeneity of the landscape required only considering environmental homogenous sub-regions. Furthermore, to adequately characterize the clustering of funerary petroforms, analyses had to be sensitive to detecting patterns at different spatial scales (e.g., Bevan and Conolly 2006:232). Finally, consideration of other cultural second order factors must be taken into

consideration—factors that are historically, culturally or materially contingent to the case and study. For funerary petroforms, this may be the question of visibility, which remains to be addressed.

Differences in both volumes and dispositional types of features, both by NNH cluster and locality suggest differential use of space within each cemetery—that specific areas were reserved for specific kinds of ritual practices and possibly different individuals based on ideas of power, kinship, personhood, and so forth.

Having identified the spatial intensity of funerary petroforms at the Edye Point and Yates cemeteries, both by dispositional type and by volume, what emerges was a picture in which smaller features, primarily the curvilinear Type 1 features, aggregate together. Conversely, the largest features (Type 4 at the Yates Cemetery and generally Type 3 at Edye Point) not only repelled one another, but also repelled, or were repelled by, clusters of other funerary petroforms. The intensity analyses also highlight that there are both comparable processes and dispositions producing funerary petroforms and placing them on the landscape relative to one another, but that there are also potential differences the ways that social action shaped deposition processes and transformed space into places for their dead. Present at the Yates Cemetery and missing from Edye Point, for example, are the hybrid boulder-crevice features (Type 8), small mound-like Type 4 features, and the very large Qithyil-like mounds (Chapter 4). Missing from Yates Cemetery are the rectilinear Type 5 features, such as the one from Edye Point, although this feature may crosscut dispositions, as it resembles the internal structure of the Scowlitz mounds or may be a product of site formation processes. Only one Type 6 feature was found at each of the two largest cemeteries. At Edye Point, this Type 6 funerary petroform is the largest feature (DbRv-3:C82) and it is not only situated within an NNH cluster, but is also within a second order cluster of clusters. This is in contrast to the Type 6 feature (DcRv-24:52) at the Yates Cemetery, which was spatially isolated on the crest of the Central Hill.

During the intensity analyses, I corrected for landscape heterogeneity in terms of surface cover, availability of stone, drainage, and so forth—in other words removing intra-cemetery areas that lack the geographic prerequisites for building funerary petroforms. Geography at the Yates Cemetery in particular appears to affect both the kind and placement of certain funerary petroforms. Counter to the ideas of monumentality, at the Yates Cemetery, the very largest of the Type 4 features are located on the top of the central hill. Presumably, as people in the past

traveled overland between Pedder and Becher Bays (possibly between the villages located at the heads of each bay), they passed through the Yates Cemetery. This provokes questions concerning both the movement of people within and through these cemeteries, as well as the nature of funerary petroform visibility, to which I turn in the next chapter.

## **Chapter 10: Movement and Visibility within the Edye Point and Yates Cemeteries**

### **Theme 4: Trails Have Biographies of Movement**

Based on the people, events and places associated with trails, movement endows routes with cultural significance that is often entangled in relations of power.

*Assuming there were trails through the two largest cemeteries at Rocky Point, how might people have moved within or around these cemeteries in both ritual contexts and the day-to-day travel between other places?*

In this chapter I use a variety of analyses to identify possible networks of movement and consider visibility as an actant in the placing of funerary petroforms. The Coast Salish dead were powerful, present, and liminal beings (Chapter 6), and as such, I am curious how ritualized practices of deposition placed the dead relative to potential overland and near shore wayfaring routes of the living.

I have argued throughout this dissertation that there was a performative improvisation in funerary practice, but practice was founded upon shared principles upon which people improvised during the ritual process (Chapter 2). These shared dispositions, practiced both by specialists and communities of ritual practice, and may have produced patterns in the use of spaces and materials to bury the dead across the Rocky Point landscape. As ritual actions, it is implied that relations of power may inhere in the placing of the dead relative to routes travelled by the living (Chapter 2). Such routes may be demarcated in one of two ways, depending perhaps upon the context of travel. First is travel in the mundane context of moving from one place to another, such as between villages, which may follow routes that are generally the shortest distances and most direct way. Factors such as current, slope, or what Mackie (2001) calls spatial constraints to mobility practice, also factor into how people move over landscapes and seascapes. And it may be that as people move between places, they are predisposed to travel along routes that either seek out or avoid specific, and perhaps powerful places and beings on the landscape. Second, people may move in highly ritualized contexts, such as funeral processions, moving from the village to the cemetery. It may be that in this ritual context, linear networks of funerary petroforms (such as the often sinuous clusters of burials identified in Chapter 9), formed routes that were only followed during funerals and under the protective expertise of ritual experts. Moving through cemeteries in this way may be referential to earlier burials (Chapter 2).

People were certainly moving within and between the Rocky Point cemeteries during funerals at least, and likely in mundane contexts as well since both cemeteries were built close to their respective villages, are quite large, and are positioned in places through which people likely *had to* move. The Yates and Edye Point Cemeteries are two different cemeteries, with two different kinds of every-day movement between places on either side of them. At Edye Point, people could both walk overland through the cemetery (and therefore pass in very close proximity to hundreds of funerary petroforms), or paddle by canoe past it along Eemdyk Passage and through the bottleneck created by Edye Point and Bentinck Island. Considered at a larger scale, this Eemdyk Passage route was likely the principle canoe route at the southernmost point of Vancouver Island. Avoiding Eemdyk Passage by paddling along the outside edge of Bentinck Island is both a longer trip and requires paddling through the treacherous currents of Race Passage. At the Yates Cemetery, people may have been traversing the place on foot to get from one village to the next. The Yates Cemetery encompasses the bottom and sides of a narrow and steep sided valley that connects the neighbouring villages at the heads of Pedder and Becher Bays. Avoiding this cemetery means either traversing steep and rocky side-slopes and ridges, or paddling almost 13 km around the entire Rocky Point landform. While both of these are possibilities, I recognize that considering movement as simply the minimization of the cost of effort is reductionist; there is a balance between understanding that there are easier and harder ways to move through the landscape and the complex dispositional variables that conditions peoples' engagement with place, particularly in ritualized contexts such as funerary processions.

As I introduced in Chapter 1, the Rocky Point data has a conflated temporality, meaning there is a palimpsest quality to the process of cemetery construction and the making of places and histories. This also means that the perceptual aspects of the landscape were similarly evolving with each subsequent funeral. What we have today is the final footprint of the cemeteries, not the ways in which they developed over time. As funerary petroforms were built over hundreds of years, the configuration of the points on the landscape would have been different at different temporal intervals. At the Yates Cemetery, as I will demonstrate shortly, "natural" routes through the site may have channelled movement in the quotidian context of walking from one village to another. It is around these topographically defined corridors that funerary petroforms were built over time. At the Edye Point Cemetery, there are also naturally defined routes in parts of the cemetery, but it was likely that over hundreds of years and hundreds of funerals, that

pathways came to be established in a more negotiated and organic process. There may have been marked gradual changes in the movement and placement of the dead through time, as the corpora of previous rituals came to constitute and define subsequent ones. This underscores the repeated aspect of ritual and depositional practices at Rocky Point. I lack the data to consider a cairn-by-cairn synchronic approach, and therefore expand the analysis of the scale of the landscape, where embodied ritual actions worked to coordinate movement through time, to produce and reproduce histories, cosmological models, and material and spatial relationality at scales from the individual to the landscape.

When archaeologists consider movement, they are largely concerned with how that movement might have happened, exploring pathways using network analyses such as least-cost paths (e.g., Bell and Lock 2000; Taliaferro, et al. 2010). While there is benefit to these approaches, they do not address evidence for the nature of the movement itself, and despite the intention of subjectivity, they are also methodologically problematic because they fail to replicate known routes or follow routes that are unlikely (Conolly and Lake 2006:252).

### **Pathways and Alignments of Funerary Petroforms at Edye Point**

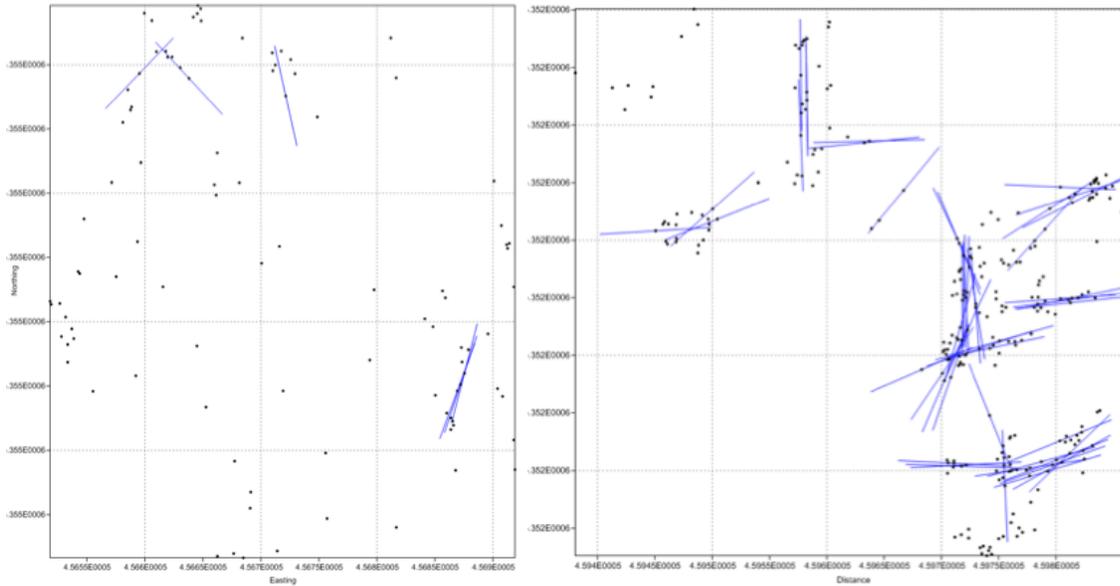
A promising line of evidence for defining movement, particularly ritual movement through cemeteries, is to identify networks of points that form sinuous or linear arrangements of burial features.

The results of the spatial intensity and cluster analyses indicate the nature and location of spatial concentrations of burials. At Edye Point, the cemetery is segmented into discrete clusters by a combination of first order factors such as till flats and desire to avoid areas that might be water saturated. But within these first order spaces there is second order clustering of features independent of landscape influence. One way that this second order clustering might occur is in linear arrangements of features. The ethnographic model suggests that there is a possibility for small scale patterning of burials, possibly in family or house-based clusters, or clusters of clusters. The ethnographic and social model also suggests that people may have been moving through these cemeteries in formal kinds of movement, such as funeral processions. If so, these movements were likely formalized and based on traditions and dispositions about what constituted the appropriate ways through these liminal places. It is likely that burials were placed along paths, which would produce linear arrangements of burial features. Identifying linear arrangements of graves allude to the approximate directionality of the paths themselves.

The orientation of long axes of the ellipses formed during the nearest neighbour hierarchical cluster analysis give some sense of the overall directionality of the distribution of the burial features (Levine 2007). What is needed, however, is a more rigorous identification of possible linearity within the point cloud of burial features. The detection of alignments in a set of point positions has been recently used in geology to explore point features such as volcanic cones and earthquake epicenters that may reflect underlying features such as faults and joints (Hammer 2009). Applied at a much smaller scale, these same point-pattern principles can be used to detect linear arrangements of burials that might be the result of social practice (recognizing this linearity may have evolved from hundreds of years of ritual practice). The *continuous sector method*, as defined by Hammer (2009) and implemented in the PAST spatial statistics software package (Hammer, et al. 2001), proceeds from a user-defined scale parameter which defines the radius of circles centered on every given point. To avoid boundary effects, a guard region is imposed by only considering points at a distance larger than the radius from the closest boundary. Within each circle, the orientations of the vectors pointing from the central point to all other points are computed and these orientations are converted to directions. These directions are then tested against the Rayleigh test, which is a standard procedure in directional statistics for testing the null hypothesis of circular-uniform distribution against a circular-normal distribution. If circular-uniform distribution is rejected at the selected significance level, it is assumed that an alignment has been detected. The direction of the line is then computed as the angular mean of the points.

I conducted a continuous sector analysis of the funerary petroform data at the Yates Cemetery and Edye Point (Figure 77), using a 48.4 m boundary, as recommended by the PAST program, to avoid edge effects. I used a 0.01 significance level and a dispersion filter, which disables alignments with uneven distribution of points along the line. I did not factor environmental heterogeneity into this analysis, under the assumption that if the linear arrangements of features represent pathways, then these paths will cross heterogeneous landforms, going from one till flat to another through low-lying or possibly wetland areas.

The results of the intensity analyses indicate that the Yates Cemetery feature distribution is much more dispersed or random than at Edye Point, and continuous sector analysis at that site resulted in only three significant point alignments (Figure 77). The most significant alignment in the southeast corner of the site parallels a distinctive landform informally referred to as The Ramp, which I will talk about in the visibility analysis, below.



**Figure 77: Continuous Sector Analysis results for the Yates Cemetery (left) and the Edge Point Cemetery (right).**

The Edge Point continuous sector analysis identified many significant alignments of features running parallel to each other (Figure 77 and Figure 78). In ArcInfo 10, I applied a linear kernel density estimation (LKDE), which calculates the density of linear features in a neighbourhood around those features, like Kernel Density Analysis does for point data (Chapter 9). This produced a graded intensity surface illustrating “hot spots” where multiple continuous sector lines overlap, which I interpret to be the most like centre line along which a trail might have followed (Figure 79). Interestingly, the alignments produced by continuous sector analysis echo the phenomenological results I observed in my masters thesis (Mathews 2006b:214-216), where movement of the field crew was monitored with GPS as crews moved through the landscape (Figure 80), often from one cluster of burials to the next, habitually following trails that we defined over the course of the fieldwork. The consistency between these two independently derived approaches is very good, remembering that both are based on interpolated linear processes derived from point data. Walking through the cemetery with the intention of sighting and interacting with many funerary petroforms is a linear process of moving from village (and the parked car) overland and through the cemetery along routes that intersect funerary petroforms while avoiding topographical obstacles like wetlands and bedrock outcrops. In this way, it follows one or more of the potential routes that funerary processions may have taken from the village to the various parts of the cemetery.

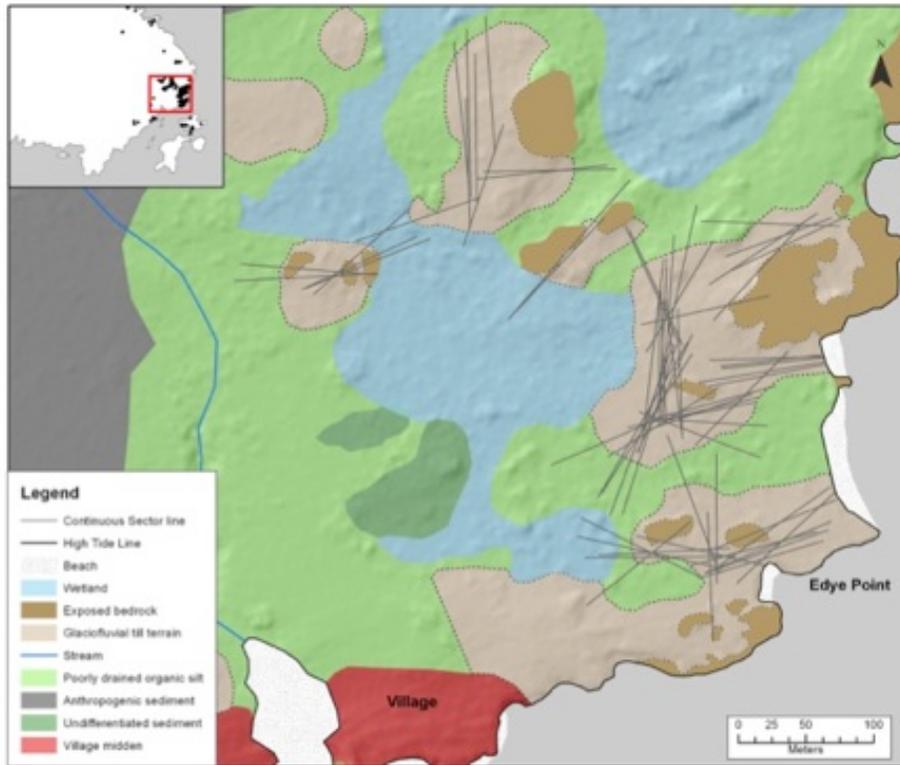


Figure 78: Results of the Edye Point Continuous Sector Analysis superimposed on terrain units.

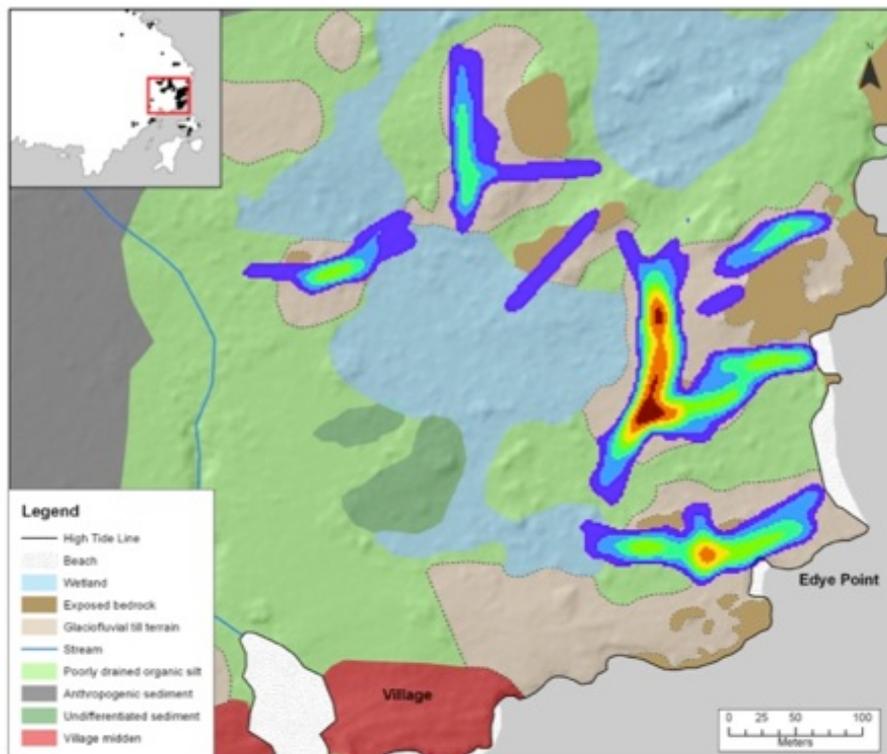


Figure 79: Results of the Linear Kernel Density Analysis for the continuous sector data.

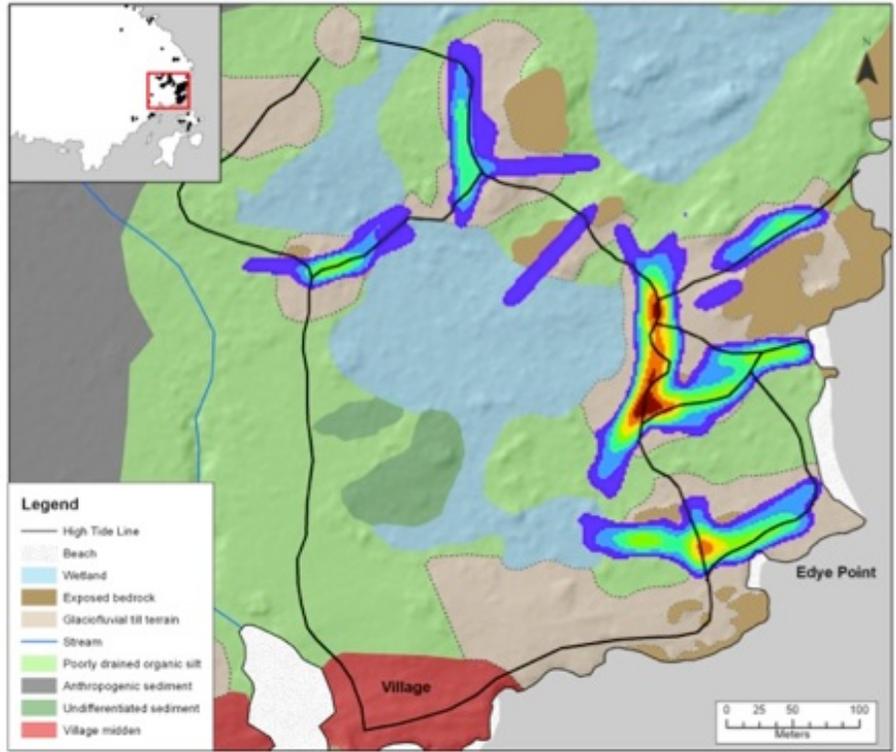


Figure 80: Linear kernel density analysis of continuous sector analysis results with field observed pathways (Mathews 2006) superimposed.

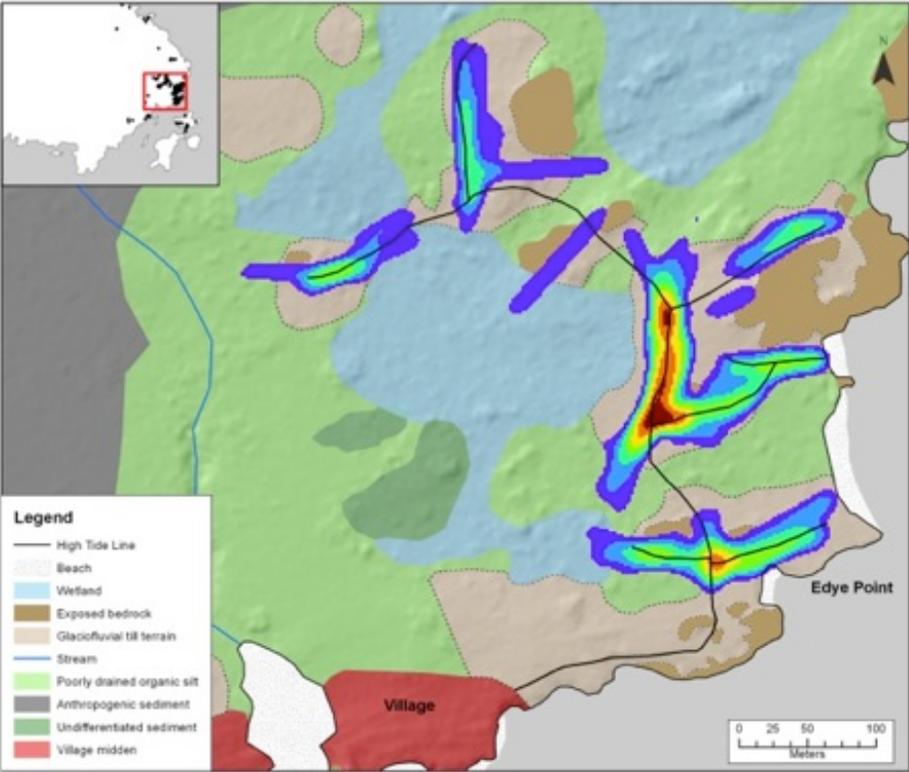


Figure 81: Linear kernel density analysis of continuous sector analysis results with simplified pathways.

Simplifying the phenomenological trail, informed by the continuous sector/LKDE results, produces a single line that represents what may have been a very general trend in linear movement through the cemetery (Figure 81). There were likely other ways and routes through this landscape, but the alignment of the point data indicate a strong directionality in how these features were placed. In some places, these alignments are at least partially the result of features being constrained by landscape features such as bedrock outcrops, but in larger open places, such as the centre of the cemetery, there are few constraining micro-landforms, yet still very strong alignments of burials.

Overlaying the Continuous Sector Analysis results with the first order ellipses derived from the Nearest Neighbour Hierarchical Cluster Analysis results (Figure 82) suggests a possible linear network through clusters of funerary petroforms. Furthermore, the orientations of the long axes of many of the NNH ellipses also indicate linear patterning in feature placement. While these results are derived from the same burial feature point data, using different methods (set at a very high level of statistical significance), combining methods this way allows us to consider not just clusters of funerary petroforms, but how these clusters in turn might point to the presence of linear networks. We know that funerary processions moved from the village to the family cemetery during the ethnohistoric period (Chapter 6). It may be that the linear arrangements of funerary petroforms at the Edye Point Cemetery, punctuated by concentrations of burial features, may be spatial and material evidence for this kind of processional or ritual movement during the preceding Late Pacific period. If this is the case, it perhaps funerary petroforms were meant to be seen, at least in the context of moving through the cemetery, and were arranged with this in mind. This provokes questions about the nature of visibility both inside and around the outside of the Rocky Point cemeteries, as people moved through these places.

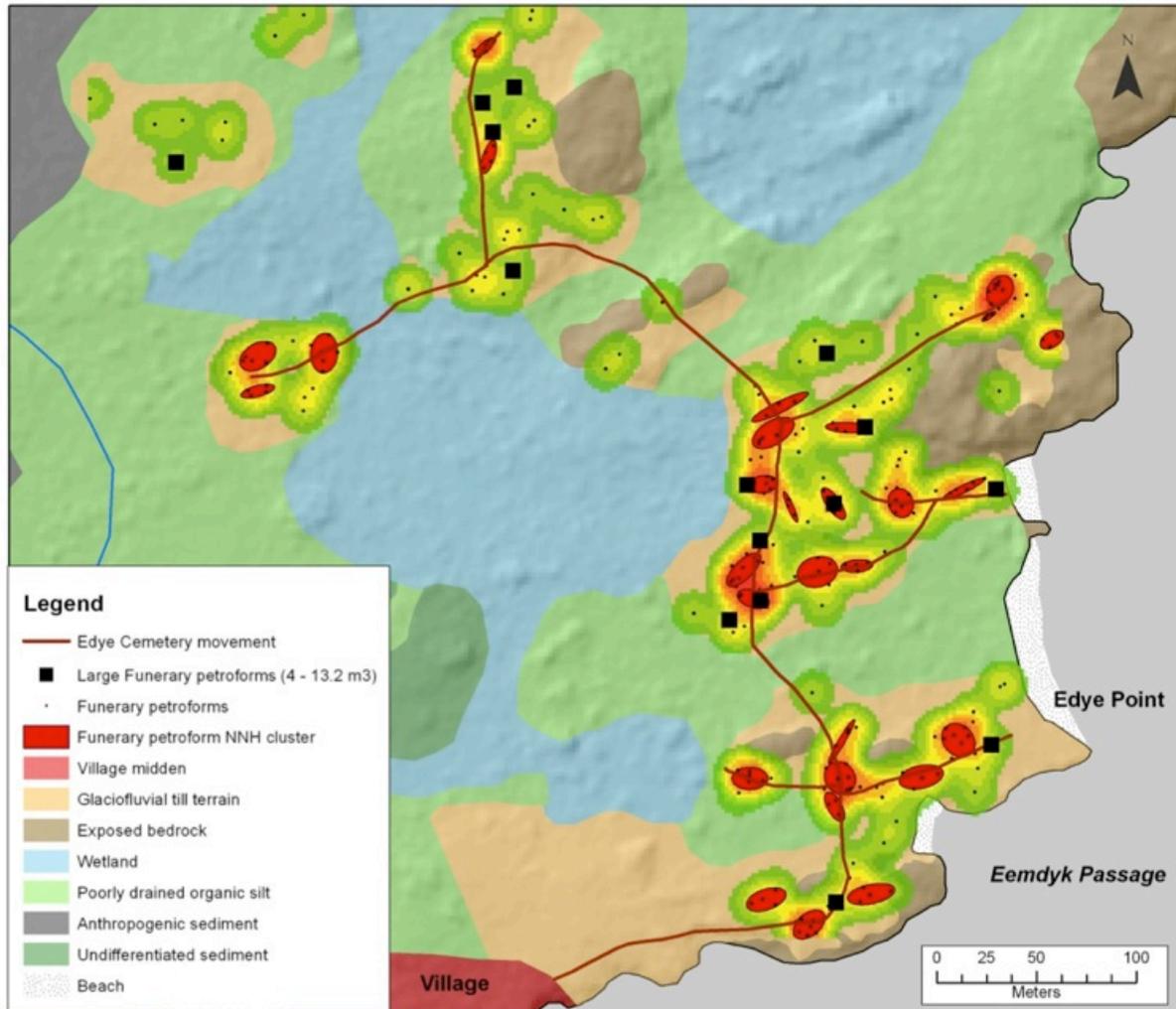
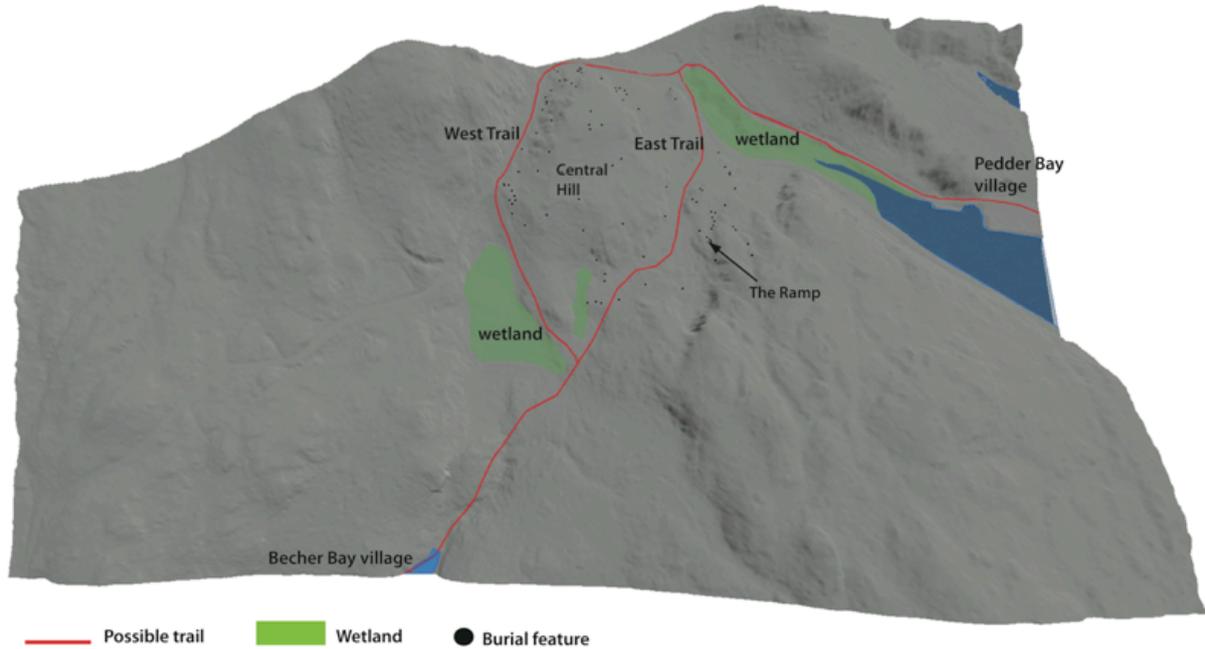


Figure 82: Possible Edge Point cemetery pathway with funerary petroform 99% NNH-derived spatial clusters and the largest funerary petroforms superimposed on the kernel density analysis results.

### Pathways and Alignments of Funerary Petroforms at the Yates Cemetery

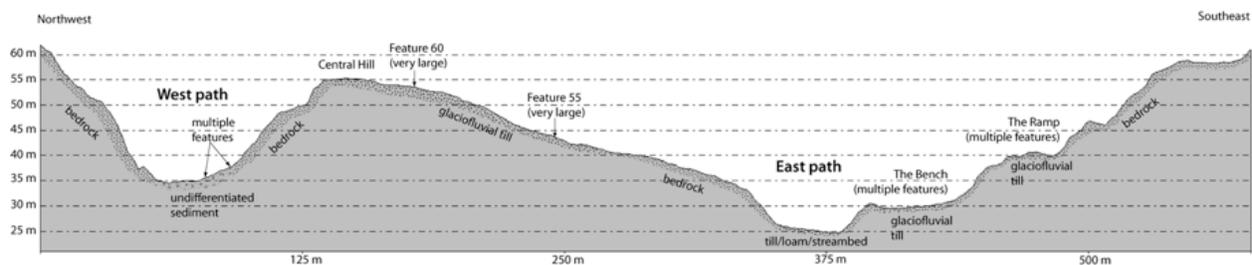
The continuous sector analysis of the Yates Cemetery did not identify significant linear arrangements of funerary petroforms as it did at Edge Point. Only one linear arrangement of features was found at the Yates Cemetery, a small landform colloquially called ‘The Ramp’ that extends from the bottom of the ravine on the southeast side of the central hill up to a small bench at the base of the ravine opposite the hill (Figure 77 and Figure 83). It is not just the intensity of point patterns that differentiate the Yates Cemetery from Edge Point; they are geographically and topographically very different places. While Edge Point is relatively low-lying and flat, punctuated by low bedrock outcrops, the Yates Cemetery is situated along the top and sides of a

central hill located between two parallel ravines. The ravines run along the northwest and southeast side of the central hill, converging into a single ravine on the Becher Bay side of the hill.



**Figure 83: Oblique hill-shaded GIS-rendered image of the Yates Cemetery, with places and possible path locations discussed in the text.**

Travelling overland from Pedder Bay to Becher Bay, walking through the bottom of one of these ravines offers the path of least resistance. While walking up and over the hill is certainly possible (and not overly difficult), the ravines offer a logical route. These were the ways commonly traversed during fieldwork walking for the north to south ends of the survey area. Viewing the terrain in cross-section (Figure 84) also indicates the ravine bottoms are relatively level. I propose that there may have been two main paths through the Yates Cemetery, one following the west ravine and one following the east ravine.



**Figure 84: Cross section of the Yates Cemetery drawn obliquely through the largest features, with generalized surficial geology, informal landform names, and possible path locations.**

## **Theme 5: Visibility and Movement Are Foundational to Producing Ritualized Bodies**

*Were funerary petroforms at the Ede Point and Yates cemeteries visible in the day-to-day context of traveling around or past them?*

Visibility is implicated in the discourse of power relationships and ideas of monumentality understand visible burials as markers inscribing landscape with the fields of power, influencing the spatial movements, orientation and interaction of peoples (Chapter 2).

Pathways through and around the Rocky Point cemeteries traverse places where the dead dwell. The living move through these cemeteries, giving rise to the kind of consciousness that emphasizes the "lived relationships" with the place and the dead buried there, and it is through these kinds of relationships that space acquires meaning (Basso 1996:55). As liminal places, cemeteries evoke emotion and memory and may be places of reflection and sentiment. Walking these trails through the world of the dead transitions the walker from the flow of everyday life to the geography of the dead. Each person traversing this landscape likely had some level of knowledge about who was buried where and therefore an acknowledgement of ancestral connections to that place. As such, visibility and perception play a role in the structuring of place. In the Coast Salish sense, visibility may have had a central and particularly powerful structuring role in how place came into being. Specifically, the ethnographic information (Chapter 5) suggests a tension between public and private, or what was prominent and what was hidden and the context in which the seeing or not seeing happened.

The visual appearance and structuring of space has a significant impact on people's sense of a place; it embodies and structures movement, feelings, dispositions, and power relationships. In the same way that Bell (1992) approached ritualizing as a strategic practice, the nature of the visibility of both ritual practice and its spatial and material outcomes is a vital part of the realization of that strategic practice.

The transition from below ground midden inhumation to above ground features built of stone and soil that occurred during the transitional Middle-Late Pacific period marks a significant change in the visibility of the dead. As such, considering visibility in the analysis of funerary petroforms is critical to understanding the relationality between the living and the dead at Rocky Point. The task for archaeologists is how to recognize and characterize these strategies of visibility. Once recognized, these strategies can be related, via the body of social theory (Chapter 2), the archaeological context (Chapter 4), and the ethnographic synthesis (Chapter 6),

to ideas concerning the coexistence of the living and the dead and of the implications of this visual relationality for historical social practices and structures.

To do this we must understand the context in which this viewing happened and how viewsapes might have shaped movement. The visibility analysis I conduct is focused on visibility within and immediately around the two largest cemeteries. While acknowledging that the acts of *seeing* and *looking* differ from determining what is visible or hidden, it is methodologically possible to test the latter, the results of which might lend some insights into the former. A dwelling perspective, based on many years of walking on and paddling around this landscape and seascape, indicate that very few of these features are visible, even when within 20 or less metres of them. This is part in due to the relatively small size of most funerary petroforms; but more so, it is because they also appear to be placed in locations on the landscape that offer some measure of concealment, such as behind small bedrock outcroppings. There is an often-paradoxical need to maintain both accessibility and inaccessibility in space, which either enables or contain social interactions. In a cemetery, it is reasonable to suspect that these are associated with practices of both inclusiveness and exclusiveness. Without erecting walls, such as those between and within houses, I contend that space in cemeteries can be similarly bifurcated through controlling visibility and the context in which certain burials or places can or cannot be observed. Concepts of “visible” and “hidden” are useful heuristics, but difficult to operationalize. Testing these phenomenological field observations using Geographic Information Systems (GIS) allow for the calculation of line-of-sight products from digital models of surface topography. A GIS-derived visibility analysis allows archaeologists to determine the precise area of land visible from a given point on the landscape or potential lines-of-sight between different points on the landscape (Wheatley and Gillings 2002:201).

Much of published work relating to visibility studies and cemeteries comes from studies on Neolithic and Bronze Age Europe, where concepts of monumentality suggest that features such as funerary petroforms are typically built to be seen often along particular sight lines or vantages. These studies take two basic approaches. First are the field-of-view studies looking from a fixed position (such as from one monument to another) or intervisibility (the totalized lines-of-sight between features). This includes, for example, the idea that monumental tombs were sited to delineate discrete territories in the wider landscape or markers of family territory (e.g., Renfrew 1976; Winter-Livneh, et al. 2012). There are also the embodied approaches:

considering bodily movement within and through monuments and landscapes (e.g., Bender, et al. 2007; Tilley 1994). In these studies, “viewsheds” are replaced by narrative sequences of visual cues from physical movement through landscapes. The principle problem with this approach, however, is a lack of formal methodology. It relies on thick description and often-anecdotal results that are largely untestable. These approaches are not mutually exclusive. Combining these approaches produces a more rigorous analysis of movement that considers the changing nature of the visual perception of landscapes as one moves through it.

There is incongruence in landscape archaeology between our knowledge *of the world* as it is experienced and embodied and our knowledge *about the world* as it approached by mapping and analyzing it with spatial methods (Thomas 2004). This leaves a substantial middle ground between phenomenological and empirical approaches to landscape. The possibility of a middle ground exists, that despite our modernist (distant and analytical) position, we can access some aspect of people's experience in the past. Central to the difficulty of taking an interpretive approach to landscape archaeology is devising methods derived from theoretical sources (Llobera 2012:498). In this research, I take a middle way, understanding that my experiences of place are embodied and phenomenological and that an empirical means of exploring these experiences can be undertaken. I am not proposing naive empathy, but an experientially-informed and embodied experience of these places over the course of several years of fieldwork, an experience of topography, hydrology, tidal currents, and so on. But beyond geographic knowledge, comes an understanding of the nature of movement and perception both on land and by canoe. Central to this is the privileging of types of information in the archaeological interpretation of space and place. Experiential and embodied movement and perception over the Rocky Point landscape, especially one born out over extended time and seasons, opens avenues for the creation of research hypotheses and enriches the interpretive potential of archaeological research. Further, cross-cultural understandings built through collaboration with many years of working with Coast Salish ritual experts is not merely a consequence of fieldwork, but has preconditioned and shaped my experiences of place and working with both the Coast Salish ritual experts and the remains of their ancestors. These experiences influence research design, the kinds of questions I consider, and the ways in which I propose to answer them.

The visibility analysis I conducted derived its hypothesis from embodied experienced observation: that funerary petroforms, contrary to ideas of monumentality, are not placed on the

most visible places of the landscape. To explore these issues of visibility in a systematic way, I employ several visibility analyses, including determining whether one point is visible from another (intervisibility analysis); predicting the total area which is visible from a single point (viewshed analysis; and the logical union of multiple viewshed maps (multiple viewshed analysis). Viewshed analysis has seen increasingly widespread use in archaeology (Conolly and Lake 2006; Wheatley and Gillings 2000, 2002). A GIS is used to calculate those areas that can theoretically be seen from a given viewing location, calculated from the digital elevation model (a digital model or 3D representation of a terrain's surface), augmented by a thematic layer from which you determine the viewshed (e.g. trails) and a layer for which you are testing visibility (e.g., funerary petroforms).

The visibility analyses I conduct include:

- A viewshed analysis of funerary petroforms at 50 m intervals along the length of the trails identified by the Continuous Sector Analysis (simulating movement along these trails);
- A viewshed analysis of funerary petroforms off of these hypothetical trails;
- A viewshed analysis of funerary petroforms situated at the threshold of visibility;
- The intervisibility of clusters of funerary petroforms; and
- Multiple viewshed analysis from each trail to determine if some areas of a cemetery are never visible from routes of movement.

The approach I take is novel for several reasons. First, I am testing for three types of visibility: visible, invisible/hidden, and liminal. This last category acknowledges the historically and culturally contingent Coast Salish concept of the liminality of the ancestral dead and whether the dead were placed specifically at the threshold of visibility. Furthermore, while most visibility analyses happen at the landscape scale (e.g., Wheatley and Gillings 2000; Witcher 1999), the approach I take is at a much smaller intra-cemetery scale. In other words, rather than consider visibility between places, I am considering visibility within places. Most visibility analyses are done over the distance of tens of kilometres; my view-shed analysis is done over the distance of hundreds of meters. Lastly, I consider visibility as something contingent upon the context of movement. Many viewshed studies consider the intervisibility between two fixed points, whereas I consider the visibility of many burials from many places, both on and off of pathways, recognizing that visibility and movement are often dynamic, dependent, and co-occurring. I also consider different social context of movement. The Yates and Edye Point

Cemeteries are two different places both geographically and topographically with different kinds of every-day movement. At the Yates Cemetery, people were likely traversing the cemetery, walking overland between two villages. At Edye Point, people had the choice to bypass the cemetery by canoe. I also consider ritual movement, such as funerary processions, that perhaps moved in a more prescribed and symbolic way.

There may be some confounding factors regarding the viewshed analysis at the Yates Cemetery. Both the east and the West routes are adjacent to disturbed areas. The west path runs along a roadbed, but there are no indications along the immediate roadbed that funerary petroforms were present. None are visible along the west side of the road, although this is mostly the base of a large bluff (it is probable that crevice burials are located along the base, however this area was not investigated). There is also historic disturbance along the east trail. Most disturbances, however, are limited to a house site (Wilson 1990), which did not have funerary petroforms on it (John Homer<sup>24</sup>, personal communication, Oct. 8, 2009). The bottom of the east trail follows a small winter-flowing stream, fed by numerous small artesian springs and seeps around the bedrock (which drain water from the bedrock). This bottom-most part of the east trail is a mix of glaciofluvial till and loam and was ploughed. It is unlikely that funerary were located along the bottom of this small valley, as it is saturated and silty, despite a buried strata of glaciofluvial till visible along the streambed. This landform is very passable by foot (no standing water or wetlands) but likely too wet for burials (following the rule observed elsewhere in the study area).

### **The Visibility Analysis Data and Methods**

For this kind of visibility analysis to be possible, highly detailed and precise 3-dimensional data is required. Feature provenience was collected with a decimeter-accuracy GPS (Appendix 3). LiDAR (Light Detection and Ranging) data is now commonly accepted as a powerful source of data for terrain mapping, using a laser to measure the distance between the sensor, normally airborne, and the ground surface. This produces highly accurate terrain maps suitable for 3D visualization and modeling. The LiDAR data and the resulting high-resolution digital elevation model (DEM) I used in this analysis was acquired in 2007, during leaf-off conditions and

---

<sup>24</sup> Most of the Yates Cemetery is on Mr. Homer's property. He grew up on the property, is well aware of all the funerary petroforms there, and is knowledgeable of the history of the area.

referenced to the Canadian Hydrographic Service Lowest Low Water at Low Tide vertical datum and to the WGS84 horizontal datum (James, et al. 2010). The resulting DEM is at a 2x2 m resolution.

The LiDAR-derived DEM was integrated into the Global Mapper 12 and ArcGIS 10.1, Geographic Information Systems (GIS) for analysis and interpretation. The DEM was used, in conjunction with a specified transmitter location (the place the view shed is calculated from), the height of the transmitter, and a viewshed radius. The view shed was done in Global Mapper, with the transmitter elevation set at 1.6 m, approximate eye-level height of an adult male and at the top end of the normal range for women (Ramsey and Sleeper 2008) and the receiver level set at ground level (since many features are less than 30 cm high). The view shed radius was set at 2 km. Considering the Straits Salish ideas of keeping the dead close but hidden, rather than selecting the visible areas on the landscape, I set the GIS to select those places where there was no clear line of sight to the transmitter. This means that the GIS calculated those places on the landscape from a given spot that a standing person could not see. These hidden areas are shaded in the accompanying maps. The resulting viewshed vectors were imported into ArcGIS for mapping purposes.

Tall vegetation can have a significant effect on view shed analyses (Wheatley and Gillings 2000). Rocky Point was described around 1850 as “a fine open prairie extending nearly across to Becher Bay...interspersed with oak trees” (Grant 1857). As I outlined in Chapter 7, this open landscape was the result of proscribed burning by the Rocky Point peoples. With the cessation of aboriginal burning at the Yates and Edye Point Cemeteries, there has been dramatic conifer encroachment. Introduced annual grasses at Rocky Point have significantly changed the nature of feature visibility at Rocky Point and for much of the spring and summer months, most funerary petroforms are not visible. Prior to European contact and the introduction of invasive species, however, coastal parts of Rocky Point were likely open savannah resulting from the prescribed use of fire (Gedalof, et al. 2006). Historic photographs of the nearby Cadboro Bay/Uplands cemetery in Victoria provide a visual analogy of the short grass prairie-like landscape produced by aboriginal burning, and later maintained by historic animal grazing (Figure 85).



**Figure 85: A visual analogy: American Museum of Natural History photograph by Harlan Smith (negative 42786, originally numbered 497), taken during the Jesup North Pacific Expedition excavations at Cadboro Bay.**

Taken October 1897, this photograph of the Cadboro Bay/Uplands cemetery is about 55 years after Euro Canadian arrival. Numerous funerary petroforms are clearly visible. Coast Salish burning likely contributed to keeping this cemetery open savannah, but since this was not practiced for some time before these photographs were taken, the area would have been more overgrown if not for livestock grazing from the Todd farm in the 1850-60s period and later the B.C. Cattle Company (Grant Keddie, personal communication, Oct. 24, 2013). Livestock grazing replaced aboriginal burning at both Cadboro Bay and Rocky Point, thus perpetuating the savannah environment and consequent open sightlines evident in Figure 85.

This is not unproblematic, however, as a historical ecology perspective to long-term landscape management at Rocky Point must recognize that the practice of burning and other land management practices may have been episodic and localized at times. This means that in some years, the amount of brush and small trees may have begun to grow before being burned (and thus affecting visibility). However, the relative lack of undisturbed funerary petroforms at Rocky Point suggests that trees never took root for more than a few years before being burned off. Intentional burning may have also been an aspect of caretaking at the cemetery. The trees that are growing through and around the funerary petroforms today are the result of the post European-contact cessation of burning (both natural and cultural) at Rocky Point. Thus, the cumulative effects of vegetation impairing visibility over the past millennia have likely been

episodic and minimal. The use of fire in shaping the environment—and the viewscape—was likely a profound and sustained landscape transformation. Considering the effects of anthropogenic burning, therefore, I am assuming that the LiDAR-based bare earth model, without further consideration of vegetation, is appropriate for visibility studies at Rocky Point.

In total, 77 viewsheds were calculated for the Yates Cemetery (Figure 86), and 81 for Edge Point. The hidden view shed analysis was conducted from the main travel routes through each cemetery: the eastern and western trails through the Yates Cemetery and both near shore further offshore canoe routes Edge Point. View sheds were calculated in GlobalMapper 12 along each trail in systematic 50 m intervals, from the north end of the site to the south end (Figure 86). Along the East Trail, 13 viewsheds were calculated, and 16 along the slightly longer West Trail.

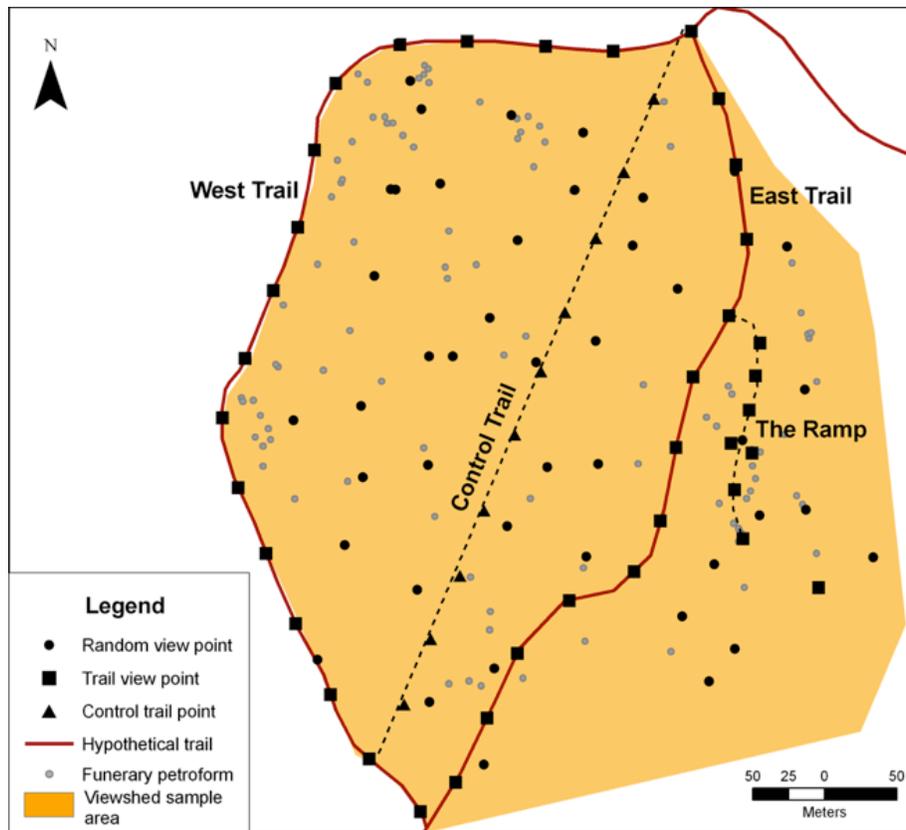


Figure 86: Yates Cemetery viewshed viewpoints.

View sheds were calculated as areas not visible from each viewpoint, in other words areas hidden from view along each trail. A 200 m radius from each viewpoint bracketed the viewsheds (Figure 86). Funerary petroforms outside this threshold of visibility were excluded from analysis,

as this is the conservative estimated limit at which funerary petroforms can be seen at a distance. The resulting vector layer was imported into ArcInfo 10.1.

At the edge of each view-shed polygon, I created a 2 m buffer, a conservative threshold at the edge of visibility and invisibility (Figure 87). The centre point of any feature within this 2 m buffer was tallied as liminal, situated on the threshold of visibility and invisibility. Counts of those numbers of features within each of the three resulting zones (visible, invisible, and liminal) were made, with the centroid of each feature used as the basis for zone inclusion.

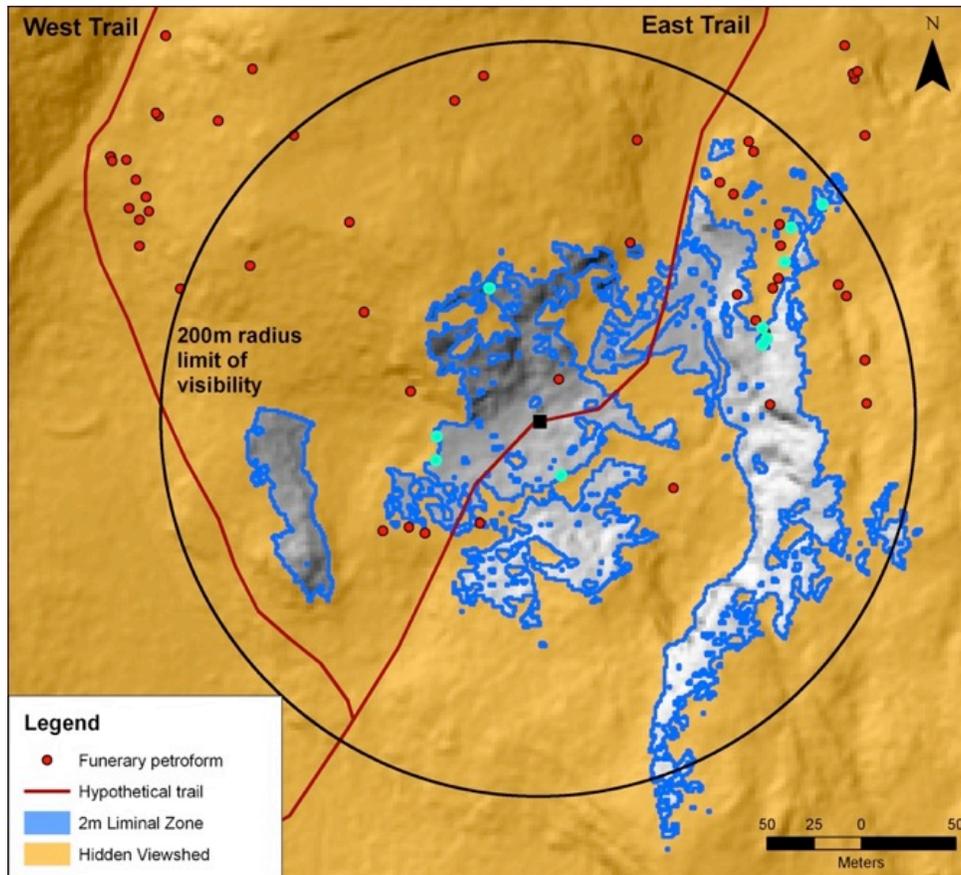


Figure 87: Example of a viewshed from the East Trail (450m south of beginning), showing the three visibility zones. Those features within the orange zone are not visible and those funerary petroforms highlighted in blue fall within the 2m liminal buffer. Features outside of these two layers are visible from the viewpoint (black square in centre of the 200 m viewpoint radius).

The results of the trail view sheds were compared against two control samples: a straight-line control trail running through the centre of the site from the north end to the south end of the cemetery (and over the top of Central Hill). A second control sample of 40 random viewsheds within the cemetery boundary was also generated in ArcGIS. Determining a representative number of random view sheds deferred to the *Central Limit Theorem*, which states that regardless of

the distribution of the actual population, the sample means will follow normal distribution if the sample size is large enough. This "large enough" has been statistically accepted to be 30, meaning that for sample sizes of 30 or more, the sample means will follow a normal distribution, irrespective of how random the original population was. I settled on a sample of 40 viewsheds to ensure that I approaching a normal distribution of viewpoints within the Yates Cemetery sample area.

For the Yates Cemetery, the results of the viewsheds were then analyzed using chi square test to determine if there is a statistically significant relationship in the proportion of the different view shed zones for each trail, compared to the two different control types. The strength of each chi-square test was assessed using Cramer's V (Cramér 1999).

Two additional visibility analyses were then conducted. A viewshed analysis from each of the NNH-derived clusters was done to examine the nature of visibility between the different clusters within the two largest cemeteries. Viewsheds were calculated as above (excluding the liminal buffer) from the centre-point of each of the NNH clusters.

The final visibility analysis was a multiple view shed analysis for determining which areas of each large cemetery are *never* visible. In other words, the idea was to identify areas that are the most hidden within the cemetery. For the Yates Cemetery, the multiple viewsheds from the east and west trails were superimposed to identify areas that were not visible from any point along a trail.

### **The Yates Cemetery: Visibility Analysis from Intervillage Trails**

In this section, I compare the proportions of visible, invisible and peripherally visible features along the hypothetical East and West Trails. Looking at the percentages of each of these three zones by trail and control types (Table 19), it appears as though the percentage of invisible features across both trails and both view shed controls is comparable, suggesting that the 200 m radius is capturing a similar number of relative features across the site, both on and off the trails. There is, however, a significant difference between the level of visibility between the trails and the controls and those proportions of features within the 2 m liminal band (Table 19).

There is an inverse relationship with the trails having significantly fewer visible features and significantly more features within the 2 m liminal buffer, whereas the controls have more visible features and fewer features within the liminal zone (Table 19).

**Table 19: Percentage of features at the Yates Cemetery within the three visibility zones by trails and control type.**

	Percent Visible	Percent Hidden	Percent 2 m liminal	Total Percent
East Trail	4	74	22	100
West Trail	7	79	14	100
Random Sample	18	74	7	100
Control Trail	28	64	7	100

To test the statistical significance of this difference of proportions, I conducted a chi square test for each trail and each of the two viewshed controls. To then test the strength of any significance, I used Cramer's V test.

### **East Trail/Control Trail Viewshed Chi Square Test**

Comparing the proportion of observed and expected values for the East Trail against the Control Trail, the visibility of funerary petroforms along the east trail is significantly less than expected, whereas the number of features within the 2 m liminal zones is somewhat greater than expected (Table 20). The inverse of this pattern is evident for the Control Trail. The expected and observed values for invisible features for both the East Trail and the Control Trail are comparable.

**Table 20: East trail/control trail expected and observed values for the three visibility zones.**

	Visible		Invisible		2m Liminal		Total
	observed	expected	observed	expected	observed	expected	
<b>East Trail</b>	16	71	301	279	89	56	406
<b>Control Trail</b>	144	89	326	348	37	70	507
<b>Total</b>	160	160	627	627	126	126	913

In comparing the proportions of visible, invisible and liminal features of the East Trail against a the systematic sample of viewshed along the control line through the centre of the cemetery by chi-square, the difference between the three visibility zones for the trail and the random sample is highly significant,  $\chi^2$  (DF 2, N=913) = 115.09,  $p \leq 0.005$ . The strength of the association is very strong, Cramer's V = 0.355.

### **East Trail/Random Viewshed Chi Square Test**

Comparing the proportion of observed and expected values for the East Trail against the random viewshed sample, the visibility of funerary petroforms along the east trail is significantly less than expected, whereas the number of features within the 2m liminal zones is significantly greater than expected (Table 21). The inverse of this pattern is evident for the Control Trail. The

expected and observed values for invisible features for both the East Trail and the Control Trail are comparable.

**Table 21: East Trail/random sample expected and observed values for the three visibility zones.**

	Visible		invisible		2m liminal		Total
	observed	expected	observed	expected	observed	expected	
<b>East Trail</b>	16	64	301	302	89	40	406
<b>Random sample</b>	318	270	1285	1284	123	172	1726
<b>Total</b>	334	334	1586	1586	212	212	2132

In comparing the proportions of visible, invisible and liminal features of the East Trail against a random sample by chi-square, the difference between the three visibility zones for the trail and the random sample is highly significant,  $\chi^2$  (DF 2, N=2132) = 116.36,  $p \leq 0.005$ . The strength of the association is moderate but acceptable, Cramer's V = 0.234.

### **West Trail/Control Trail Viewshed Chi Square Test**

Comparing the proportion of observed and expected values for the West Trail against the Control Trail viewshed sample, the visibility of funerary petroforms along the West Trail is significantly less than expected, whereas the number of features within the 2m liminal zones is somewhat greater than expected (Table 22). The inverse of this pattern is evident for the Control Trail. The expected and observed values for invisible features for both the East Trail and the Control Trail are comparable.

**Table 22: West Trail/Control Trail sample expected and observed values for the three visibility zones.**

	Visible		invisible		2m Liminal		Total
	observed	expected	observed	expected	observed	expected	
<b>West Trail</b>	35	89	392	355	69	52	496
<b>Control Trail</b>	144	90	326	363	37	54	507
<b>Total</b>	179	179	718	718	106	106	1003

In comparing the proportions of visible, invisible and liminal features of the West Trail against the systematic sample of viewsheds calculated along the control line through the centre of the cemetery by chi-square, the difference between the three visibility zones for the trail and the control line is highly significant,  $\chi^2$  (DF 2, N=1003) = 81.99,  $p \leq 0.005$ . The strength of the association is moderately strong, Cramer's V = 0.286.

### **West Trail/Random Viewshed Chi Square Test**

Comparing the proportion of observed and expected values for the West Trail against the random viewshed sample, the visibility of funerary petroforms along the West Trail is

significantly less than expected, whereas the number of features within the 2 m liminal zones is somewhat greater than expected (Table 23). The inverse of this pattern is evident for the Control Trail. The expected and observed values for invisible features for both the East Trail and the Control Trail are comparable.

**Table 23: West Trail/random sample viewshed expected and observed values for the three visibility zones.**

	Visible		Invisible		2m Liminal		Total
	observed	expected	observed	expected	observed	expected	
<b>West Trail</b>	35	79	392	374	69	43	496
<b>Random sample</b>	318	274	1285	1303	123	149	1726
<b>Total</b>	353	353	1677	1677	192	192	2222

In comparing the proportions of visible, invisible and liminal features of the West Trail against a random sample by chi-square, the difference between the three visibility zones for the trail and the random sample is highly significant,  $\chi^2$  (DF 2, N=2222) = 52.93,  $p \leq 0.005$ . The strength of the association, however, is weak and only minimally acceptable, Cramer's V = 0.154.

The East Trail has the lowest proportion of visible features and the highest proportion of features within the 2 m liminal buffers. The strength of this relationship is very strong compared against both the control trail and the random viewshed sample. Similarly, the West Trail has the second lowest proportion of visible features and the second highest proportion of features within the 2 m liminal buffer. The strength of this relationship is not as strong as the East Trail, but it still has a moderate to strong significance. The Control Trail has a higher proportion of visible features than the intervillage trails and a low number of features within the 2 m liminal buffer. At the beginning and end of the control line, where it gets closest to the hypothetical trails, visibility characteristics approach those of the hypothetical intervillage trails. The random viewshed sample has the highest proportion of visible features and like the control trail, has a low proportion of features within the liminal zone. Both the control trail and the random viewshed samples have the inverse visibility properties of the intervillage trails.

These results are counterintuitive to expectations if one approaches the visibility of funerary petroforms from the concept of monumentality, which suggests that features made of durable and visible materials memorializing the dead are placed where they are most visible and thereby referenced as a socially structured and structuring part of the landscape. The proportion of invisible features is consistent between the intervillage trails and the viewshed controls, meaning that the 200 m radius seems to be capturing a consistent number of features regardless

of trail or random point on the landscape. This consistency underscores the resulting difference where the proportions of visible and invisible features, as well as that proportion of features that fall within the conservative 2 m liminal zone between them. Analytically speaking, along the intervillage trails, particularly the East Trail, features are moving from the pool of visible features into the pool of liminal ones significantly more so than the viewshed control samples. This underscores the fact that, along the intervillage trails and particularly the East Trail, funerary petroforms tend to be located along the thresholds of visibility rather than in areas where they can be easily viewed. The evidence suggests, in other words, that funerary petroforms at the Yates Cemetery, even as visible monuments, were not meant to be seen, at least from the day-to-day context of the intervillage trails.

So why build visible monuments, many requiring considerable effort, and built in such specific shapes and styles, when they are not easily seen? I offer three possibilities. First, they were quite powerful places that needed to be avoided. Second, rather than privileging of product over process (*sensu* Ingold 1993:161), it could be that the process of building these burials during the earlier stages of a longer funerary ritual was an end unto itself. The important thing was bringing mourners, ritualists and witnesses together (Pauketat and Alt 2004). In other words, the process of building these features was more important than sighting these burials later on. Last is the possibility that there were different contexts in which visibility, or remaining out of sight, were important. Based on the Yates Cemetery intervillage visibility analysis, I have made a case that features were purposely built in places where they would not be seen in a mundane context. Perhaps it was unsafe to view them in the quotidian contexts of the everyday. In Straits Salish epistemologies, the dead are always near, powerful, and to be avoided. Yet paradoxically, as outlined in Chapter 6, the ancestors are also the basis for the intangible assets of their descendants (inherited songs, names, rituals knowledge, etc.). As such, perhaps funerary petroforms were only meant to be seen in ritual contexts, by crossing the liminal threshold into the landscape of the dead. The rest of the time they remained at the edge of visibility and out of the corner of your eye.

Leaving the trail, the dead come into view. Based on the results of the Control Trail and the random viewsheds, more features than expected become visible compared to the intervillage trails. But there are also distinctive landforms, close to the trails, that exhibit very different visibility properties. A good example is the small landform on the east side of the Yates

Cemetery, colloquially called The Ramp: a small narrow landform parallel to and close to the East Trail. This landform is less than 50 m away from the East Trail, and only 2-6 m higher, but in leaving the East Trail and walking up this small landform, the dead quickly shift in and out of view even over short distances. But this shifting seems liminal, and in no place tested by visibility analysis, or observed in the field, do large numbers of burials ever come into view (even though there may be dozens a minute or two away).

### **Edye Point Hidden Visibility Analysis from Eemdyk Passage**

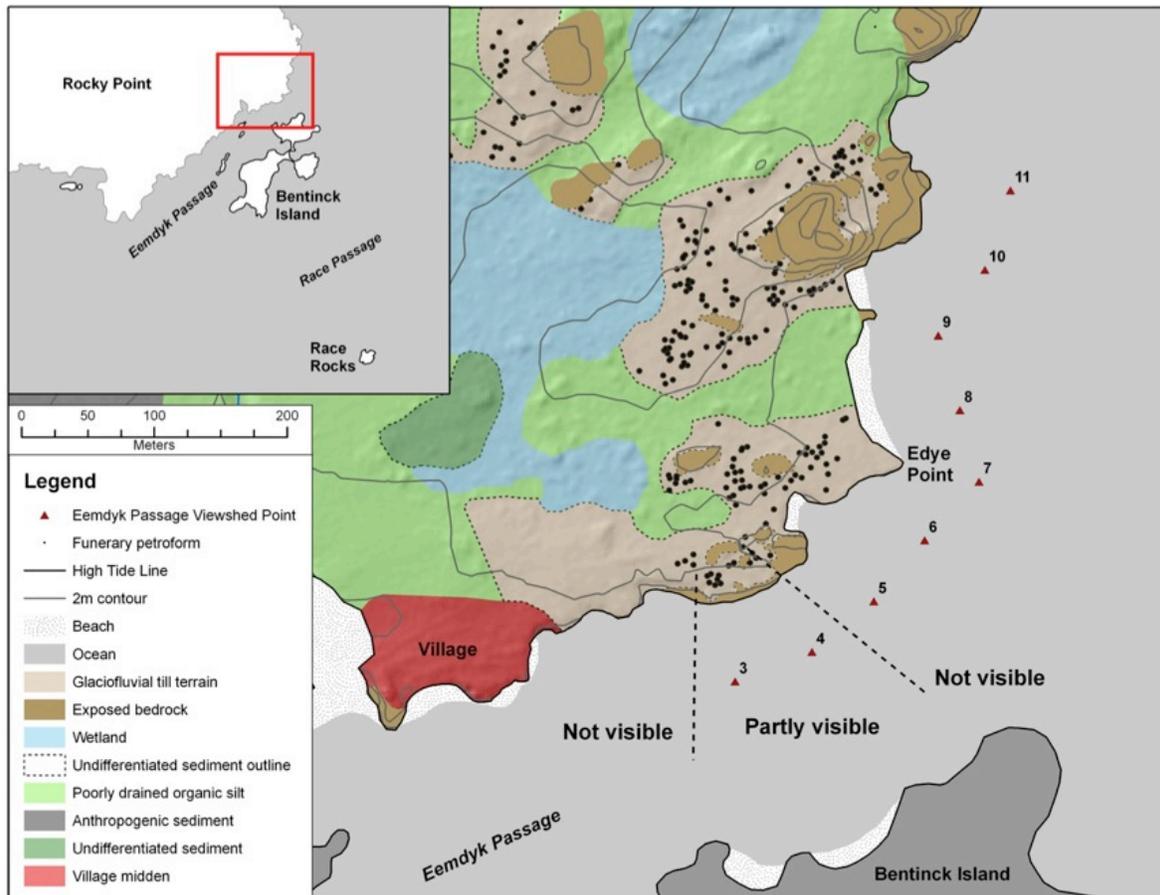
People travelling by boat along the southern tip of Rocky Point (and by extension the southernmost tip of Vancouver Island) paddled directly by Edye Point. It is much less likely that people often risked travelling the outside route of Bentinck Island and Race Passage, as this waterway is not only a longer trip, but also treacherous, with strong currents, eddies, reefs and rocks (Chapter 7). Paddling the inside passage through Eemdyk Passage brings canoes through a narrow bottleneck between Edye Point and Bentinck Island that is about 100 m wide at low tide and 150 m wide at high tide (Figure 88). Both sides of Eemdyk Passage also have many shallow rocks and reefs so paddling through the middle of the channel, at about 50 m from either shore, is ideal.



**Figure 88: The constricted “bottleneck” of Eemdyk Passage, looking north from shoreline fronting the Bentinck Island cemetery, to the Edye Point cemetery.**

Having traversed Eemdyk Passage by canoe many times through different tides and seasons, funerary petroforms are generally not visible from canoe. To test this phenomenological observation, I used the same methods as I did for the Yates Cemetery and performed a viewshed analysis along the length of Eemdyk Passage, 50 m offshore, with viewsheds calculated every 50

m. Calculated at mid tide, the results are congruent with the phenomenological observation: funerary petroforms are not visible on the shoreline, except within the first 100 m of the site. At vantage points 3 and 4 (Figure 89), a small group of funerary petroforms are within the threshold of visibility, although these are only 29% of funerary petroforms potentially visible within the 200 m viewing radius.



**Figure 89: Looking from viewshed vantage points along Eemdyk Passage to funerary petroforms at the Edge Point cemetery, illustrating and zones of partial visibility and lack of visibility.**

Comparing the observed and expected values for Vantage Points 2 and 3, funerary petroforms are more visible than expected in this small area of shoreline, while fewer features than expected are visible beyond this point. No funerary petroforms are visible along the remainder of canoe travel along the length of the cemetery (Table 24). In other words, funerary petroforms appear to be situated at the edge of visibility within the first few minutes of approaching the cemetery from the village, but quickly disappear from that point on as one moves away from the village and farther along the shoreline fronting the cemetery.

**Table 24: Observed and expected values for visible and not visible funerary petroforms at Edye Point when viewed from canoe in Eemdyk Passage.**

Vantage	Visible		Not Visible	
	Observed	Expected	Observed	Expected
3	8	5	8	11
4	8	4	7	11
5	0	2	6	4
6	0	1	4	3
7	0	0	0	0
8	0	1	3	2
9	0	2	8	6
10	0	1	2	1
11	0	1	2	1
<b>Totals</b>	16	16	40	40

### **Theme 6: Visual Differentiation of the Dead**

*As privacy is central to distinguishing social groups (and these clusters may in fact be house groups), are clusters of funerary petroforms intervisible within the largest cemeteries?*

To examine inter-funerary petroform visibility, I next conduct a viewshed analysis between each of the Nearest Neighbour hierarchical clusters at the Yates and Edye Point Cemeteries.

#### **Intervisibility Between Clusters of Funerary Petroforms at the Yates Cemetery**

I generated a viewshed for each NNH-derived cluster and mapped the extent of visibility for each cluster in a 200 m radius with a generalized ellipse. The intersection of ellipses is the extent of intervisibility between neighbouring clusters of funerary petroforms (Figure 90).

As expressed in Figure 90, most clusters at the Yates Cemetery do not share intervisibility with the exception of clusters to the east that share partial intervisibility. The Yates Cemetery is partitioned by the variable topography of the large central hill, opposing ravines, and numerous low bedrock outcrops. This produces a landscape with little intervisibility around the edges of the central hill. Thus the lack of intervisibility between the NNH-derived clusters may result from environmental heterogeneity. Considering the hidden nature of the funerary petroforms when viewed from the two trails, however, visually isolating clusters of features from one another is congruent with this emerging theme of privacy and prohibitions against placing the dead in places too visible. It may be that the living took advantage of these natural visibility

characteristics to define separate clusters for their dead-producing private spaces among a shared larger cemetery.

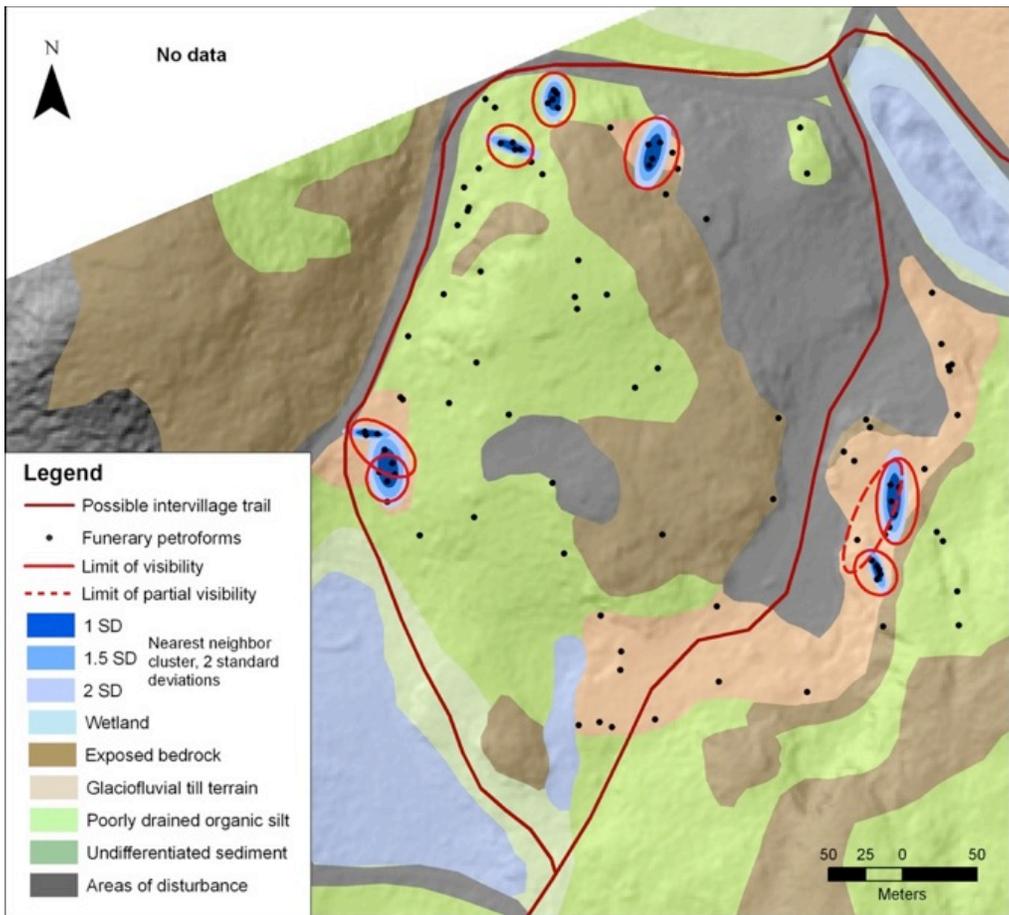


Figure 90: Yates Cemetery intervisibility analysis between NNH clusters of funerary petroforms.

### Visual Differentiation of the Dead: Yates Cemetery Multiple Viewshed Analysis

The lack of intervisibility between clusters of funerary petroforms at the Yates Cemetery provokes another question:

*Are there areas within the Yates Cemetery that are significantly less visible than others?*

To test this, I produced a multiple viewshed by overlapping all of the East and West Trail viewshed analysis results, which identifies those areas not visible from any point along either of the trails (Figure 91). Not unexpectedly, the top of Central Hill is not visible. The monumental Type 4 features, mostly confined to the top of Central Hill, are situated either completely out of view or at the edges of visibility.

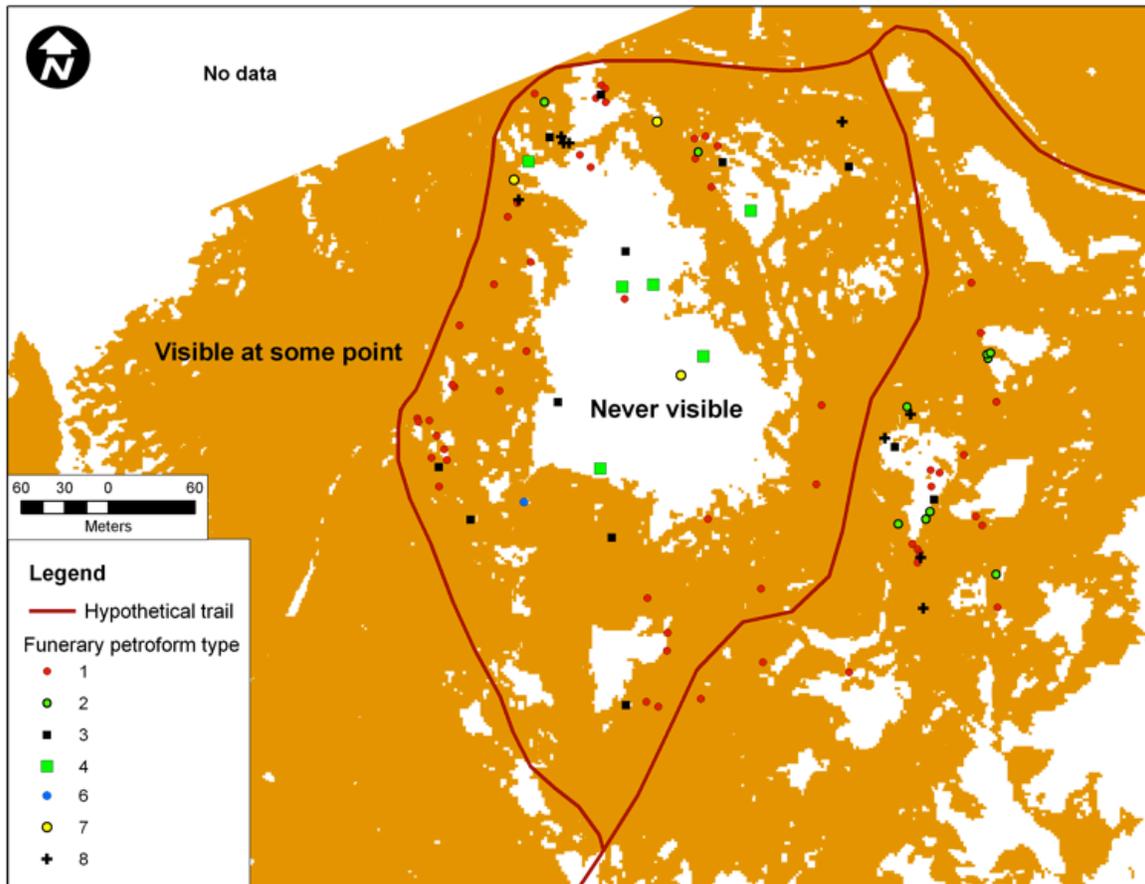


Figure 91: Yates Cemetery multiple viewshed analysis showing funerary petroform types and areas that are never visible from either intervillage trail.

To determine if they are the least visible of all feature types at the Yates Cemetery, I conducted a chi square test, considering the variation between the frequency of the Type 4 funerary and the rest of the funerary petroform types found inside and outside of the multiple viewshed layer. This differed significantly from what would be expected from chance alone,  $\chi^2(1, N=97) = 15.369, p \leq 0.005$ . With a problem  $\chi^2$  of 15.369 and a critical  $\chi^2(0.005, 1)$  of 3.841, the variation of the frequency of the numbers of Type 4 features found inside and outside multiple viewshed layer, when compared against all other features, is too great to be explained by chance alone. Therefore, we must reject the null hypothesis  $H_0$  (that the variation of the frequency of Type 4 features inside and outside of the multiple viewshed layer, compared to all other funerary petroforms inside and outside of the multiple viewshed layer is random) and accept  $H_1$  (that this variation is not random). The strength of this significance, based on a

Cramer's-V coefficient of 0.398, is very strong and within the acceptable threshold of significance. These results indicate that Type 4 features at the Yates Cemetery are located out of view from any point along either of the pathways through the cemetery, significantly more so than any other kind of funerary petroform.

### **Intervisibility Between Clusters of Funerary Petroforms at the Edye Point Cemetery**

Analysis of the intervisibility of NNH-derived clusters at the Yates Cemetery indicates a landscape punctuated by visually discrete areas in which clusters of funerary petroforms are not intervisible. Conducting the same analysis at Edye Point yielded comparable results (Figure 92). Most clusters have a very limited extent of visibility. Viewshed analysis centred on each NNH-derived cluster indicates that most clusters are visually isolated, even from closely neighbouring ones. Central Hill, as well as smaller topographic features (e.g., bedrock exposures) visually segments the Yates Cemetery. At the Edye Point Cemetery, which has less topographic variability, the intervisibility of the landscape is partitioned by smaller outcrops of bedrock that, despite their relatively small size compared to those at the Yates Cemetery, still visually parse the landscape. At Edye Point, people built concentrations of funerary petroforms on opposing sides of low bedrock exposures, in many cases within 50 m of each other, yet visually isolated from one another (Figure 92).

It appears as though people may have taken advantage of these visibility characteristics to define separate clusters for their dead-private spaces among a shared larger cemetery. In the centre of the cemetery, there is a larger area of partial intervisibility. This area of visual overlap encompasses Localities 2 and 4, which the spatial analysis indicated had significant congruence in terms of the relative proportions of different dispositional types of funerary petroforms, as well as volume classes of features. Combined with the at least partial intervisibility, this pattern hints at a somewhat less structured sense of spatial segregation between these two central parts of the cemetery.

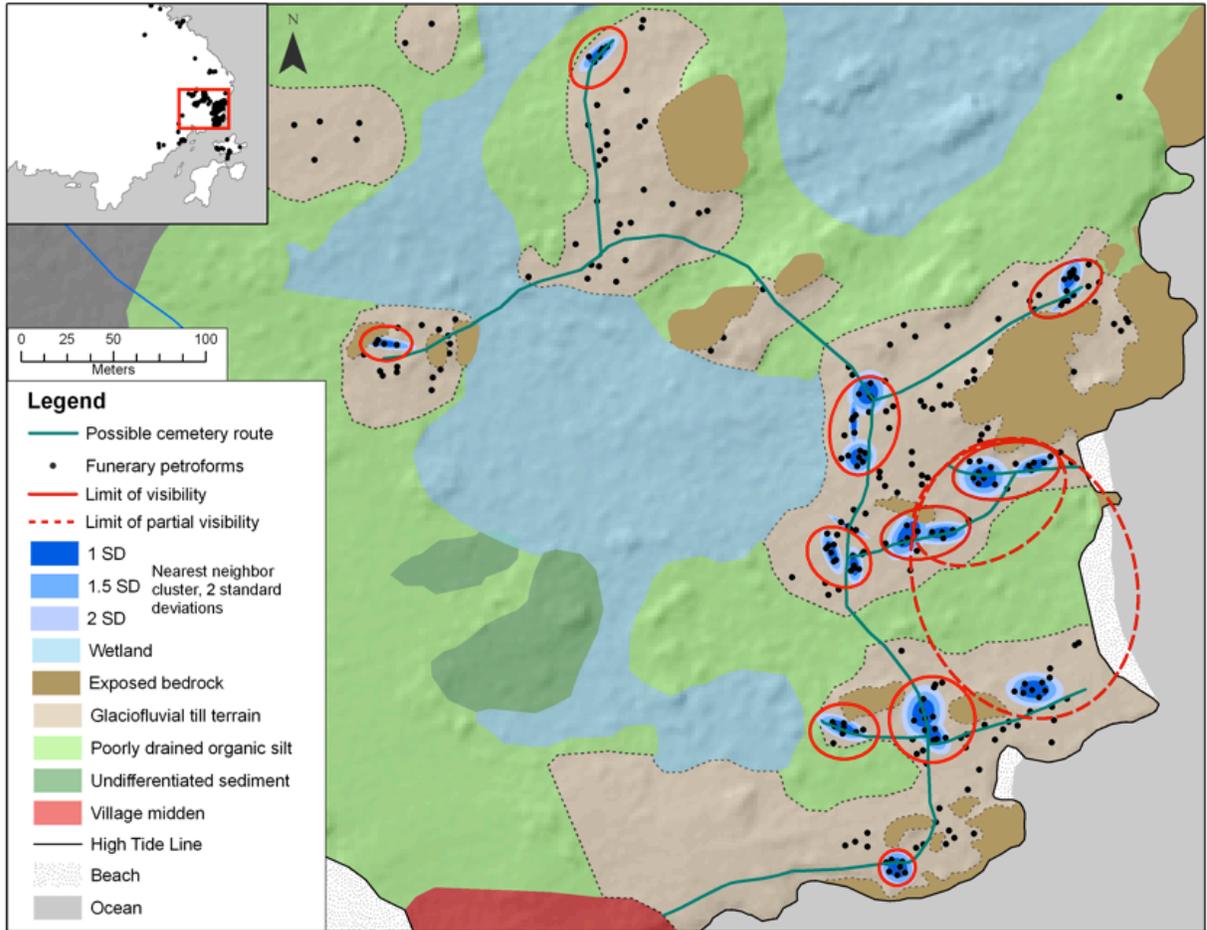


Figure 92: Limits of visibility around each of the NNH-derived clusters at the Edge Point Cemetery.

### Visual Differentiation of the Dead: The Edge Point Cemetery Multiple Viewshed Analysis

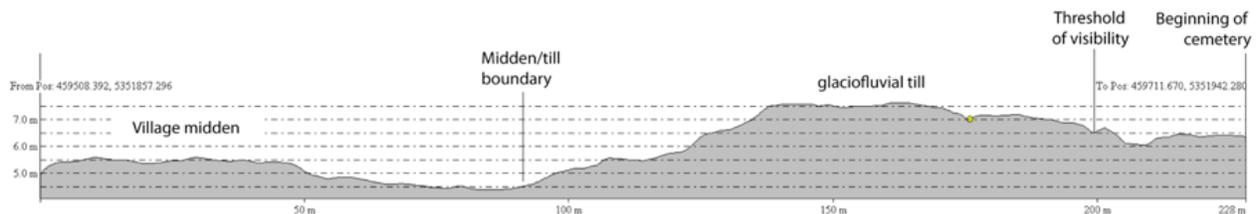
As with the Yates Cemetery, I conducted multiple viewshed analyses at Edge Point at 50 m intervals along the trail derived from Continuous Sector Analysis. I then produced a multiple viewshed by overlapping these layers. Unlike at the Yates Cemetery—which has much more vertical relief—no parts of the Edge Point Cemetery are completely hidden from any point along the trail.

### Visual Differentiation between the Living and the Dead at Edge Point

While there are no completely hidden areas *within* the Edge Point Cemetery, unlike the Yates Cemetery, people at Edge Point lived in very close proximity to this cemetery. While the Yates Cemetery was visually isolated from the village at the head of Pedder Bay by a large ridge (Chapter 7), the village and cemetery at Edge Point are only separated by 200 m and have a

seemingly unobstructed line of site between one another. It is possible to avoid seeing funerary petroforms while walking from one village to another through the Yates Cemetery; in fact I argue that this was intentionally the case. But considering the proximity of Edye Point Village to the cemetery, how visible was the cemetery and the funerary petroforms from the village?

A cross-section of the terrain (derived from the digital elevation model) indicates that there is only about a 1 m difference in elevation between the village and the beginning of the cemetery (Figure 93), although a small rise in the terrain seems to block direct line of sight between the village and any funerary petroforms.

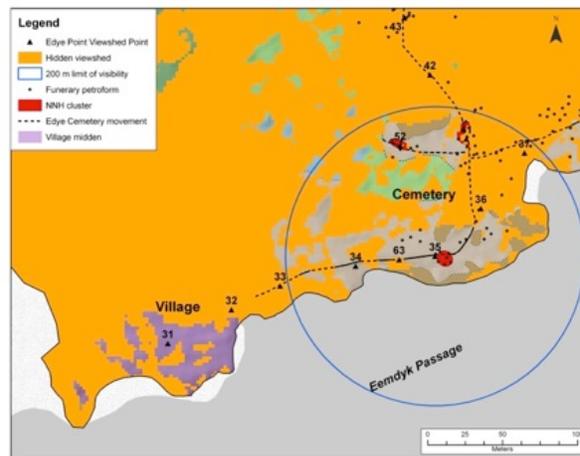
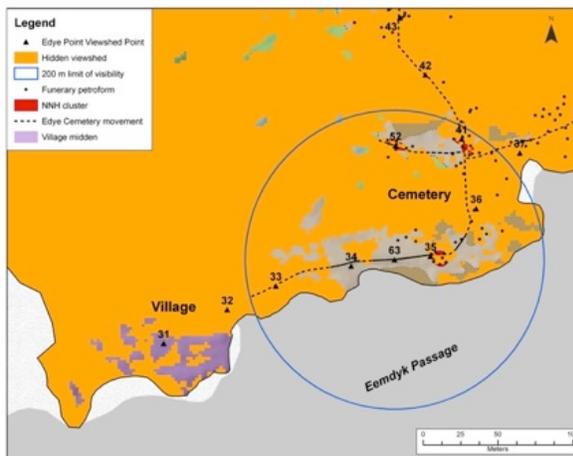
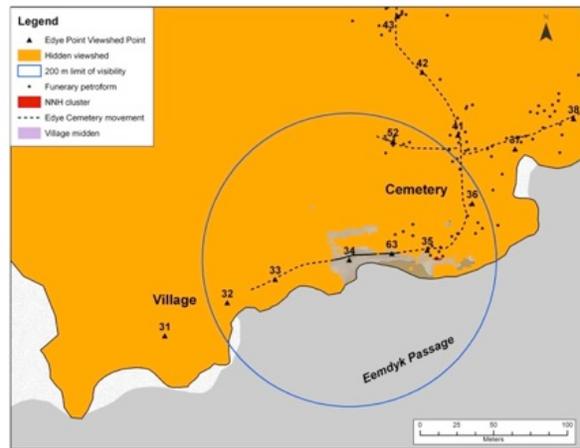
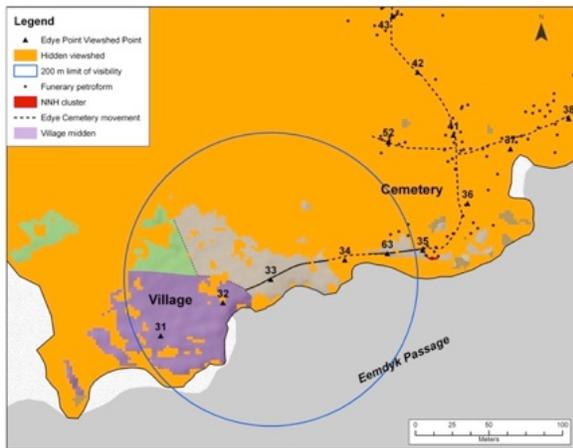
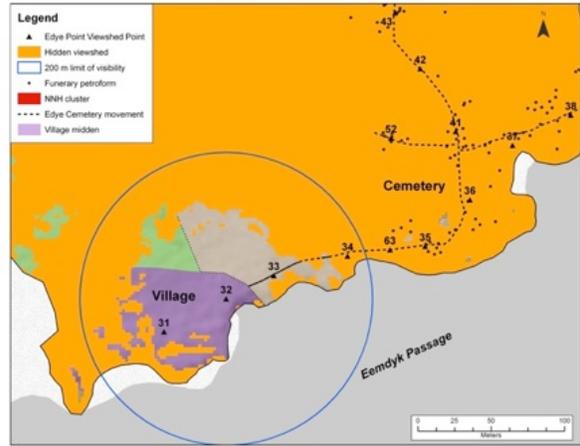
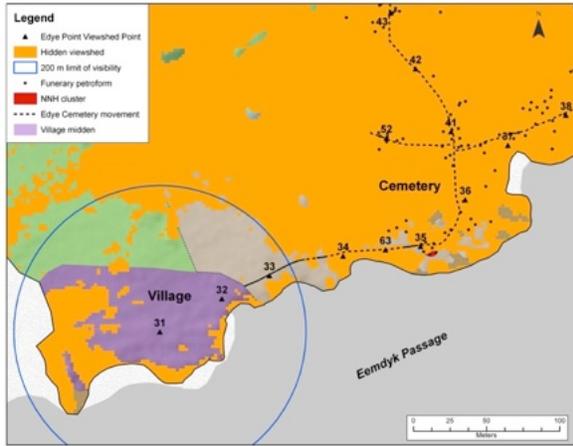


**Figure 93: Cross-section of terrain from the Edye Point village, east (right) to the beginning of the funerary petroform cemetery.**

To test the unfolding visibility as one walks east from the village towards the cemetery, I conducted a viewshed analysis using the same parameters as those for the Yates Cemetery. Viewsheds were calculated in 50 m intervals from the centre of the village to the beginning of the derived trail at the southwestern corner of the cemetery (Figure 94). This is the kind of movement that would have occurred during funerary processions from village to cemetery.

In Figure 94 below, visibility was calculated from the centre of the village, moving east towards the cemetery. Orange shading in the sequential viewsheds indicates invisible terrain from the viewpoint, moving east from viewpoint 31 to 36 in 50 m intervals. Viewpoint 63, between viewpoints 34 and 55 is the point at which funerary petroforms begin to come into view. The viewshed results indicate that walking east to the cemetery and past this slight rise the first funerary petroforms do not come into view until about 20-30 m from the edge of the cemetery (Figure 94). These are the same small cluster of funerary petroforms visible from canoe. The glaciofluvial till terrain that most funerary petroforms are built on at Edye Point extends well west of the edge of the cemetery, almost to the village, meaning there is ample granodiorite stone with which to build funerary petroforms, and the terrain is well drained. These prerequisites for funerary petroforms are met outside the southwestern extent of the cemetery, yet the funerary petroforms distinctly end at a point on the landscape where a slight change in elevation creates a

crest along which the funerary petroforms end, not quite overlooking the village, but again seemingly on the threshold of doing so. It is only in the last few moments before entering the cemetery that the funerary petroforms become visible. This is congruent with actually walking and looking along this route from the village to the cemetery.



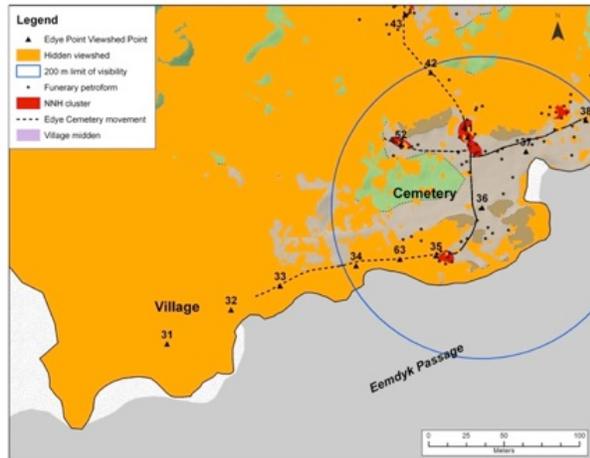


Figure 94: Sequential viewsheds simulating the movement and changing pattern of visibility from the Edge Point village to the cemetery.

### **Visibility Analysis Summation**

Both the Edge Point and Yates Cemeteries occur on landforms that funnel and constrain different kinds of day-to-day movement. At the Yates Cemetery, I propose two possible ravine-bottom paths that traverse either side of a central hill. Accepting that one or both of these may have been trails in the past, viewshed analysis indicates that funerary petroforms are rarely visible from either trail. Rather, they are located on a part of the landscape outside of view. This does not mean they are far from either trail—in fact they are often very close, but concealed on the back side of a small bedrock exposure, or on the topside of a small break-in-slope close to and overlooking the trail. A significant number of these funerary petroforms are situated within a 2 m threshold at the edge of visibility, situated such that they are never fully visible nor fully hidden. This is a pattern that repeats along the length of both trails. At no point along either trail is the top of the central hill at the Yates Cemetery ever visible. While this is not unexpected or compelling in itself, the fact that the largest funerary petroforms in the entire Rocky Point study area are concentrated on this hill (remembering that the dispositional typology was derived by cluster analysis, based on observable aspects of depositional practice and independent of spatial data). These large features, contrary to traditional concepts of monumentality, are the least visible features in either large cemetery. There is also little intervisibility between clusters of funerary petroforms at the Yates Cemetery. Overall, there is a pattern of concealment, with the dead hidden from daily view and groups of the dead further concealed from each other. One category of the dead, those buried in Type 4 features, are the most concealed if all—both on a

landscape not visible from the mundane world, but also within funerary structures that conceal the corpse within both unusually large and complex layers of stone and soil.

At the Edye Point cemetery, there are different kinds of movement than those outlined for the Yates Cemetery. Using Continuous Sector Analysis, I developed a possible route of ritual movement based on funerary petroforms that form both individual clusters and linear or sinuous networks. While terrain defines this pattern to some extent, it does not tell the whole story. Rather, it is within these spaces of till flats bisected by low-lying areas, shallow and perennial wetland, low-bedrock and other microlandforms, that people interred the dead, perhaps using these subtle aspects of the terrain to great effect. People moving by canoe through Eemdyk Passage and traversing the narrow channel between Bentinck Island and Edye Point, could not see the funerary petroforms, even though the dead were lining both shores. Aside from a small group of funerary petroforms visible at the edge of the cemetery, closest to the village (yet not visible from the village), no other funerary petroforms are visible along the length of this shoreline. Although this is a different kind of movement through terrain different from that of the Yates Cemetery, the pattern of the dead hidden—often at the threshold of perception—holds for Edye Point as well.

Considering movement and visibility within the Edye Point Cemetery, the clusters of funerary petroforms, like at the Yates Cemetery, are usually visually isolated from one another, which is significant considering both the much greater density of features at Edye Point and the much less topographically variable nature of till flats and intervening (although often barely perceptible) lower and less well-drained areas. Both within and travelling around the Edye Point cemetery by canoe, this place does not seem to have the same kind of liminality as evident at the Yates Cemetery, or it is expressed in different ways. When viewed from the village, the individual funerary petroforms at Edye Point are not visible, and not visible until walking within about 30 m of the cemetery. This may be a kind of liminal effect, in that unlike the Yates Cemetery which is completely concealed from that village by a large ridge, at Edye Point the cemetery is both very close to the village and not concealed behind an obvious landform. Rather, the living and the dead are separated by about 150 m and a gentle rise, only about 2 m higher than the village and the cemetery. Consequently, the dead are both only a few minutes walk away and just out of sight, situated beyond the threshold of direct viewing from the houses of the living.

## **Summary of the Analyses: Distinguishing Ritual Practices through the Analysis of Depositional Practice**

Concluding the morphological, spatial, and visibility analyses, I return to the first dissertation question:

*How did Rocky Point peoples make distinctions between different kinds of funerary practices, through their use of space and materials, in the burial of their dead?*

In many ways this research is a story of two neighbouring villages, separated by 5 km of shoreline, which both produced individual funerary petroforms and cemeteries for their dead. Analysis indicates that there are both similarities in practices of ritualized deposition between these cemeteries, as well as local-level innovations and novel approaches to burying their dead. The living and their ancestral dead were entangled in scales of relationships ranging from the individual body, to the house, the community, and throughout the larger Salish Sea. These were also relationships that extended both across time and across thresholds of living and dying. The burial of the dead is fully implicated in ideas of personhood, history, memory, place and power.

The cemeteries and funerary petroforms within them are products of a genealogy of practice that were powerful cues, both shaped by past practices and maintaining and producing new ones. It is the relationship between groups of materials and how they are distributed that was meaningful to peoples in the past. The ways in which funerary petroforms were built and where they were built was a process of creating a new relationality of materials at multiple scales, ranging from the individual stones and soil within a funerary petroform, to that of neighbouring burials and cemeteries both near and far. Funerary petroforms, when considered as products of depositional practice, offer insights into dynamics of ritual practices at Rocky Point. The building of these features was an orchestration between mourners, ritualists, the ancestral dead, and people both witnessing and assisting with the collection and moving of materials. These actions were engaged with places and the materiality of stone and soil, and the multiplicity of significance and meaning that these had to the Coast Salish people. Building funerary petroforms was a ritualized process within a sensuous and vital landscape, a geographic space of different materials and vistas, as well as a place rich with social and economic relationships, ancestral presence, spirits, and other agents.

In “following the stones” through morphological, spatial, and visibility analyses, I considered the process by which materials that constitute a funerary petroform moved from the landscape to the corpse. This has revealed a process in which specific places were selected for

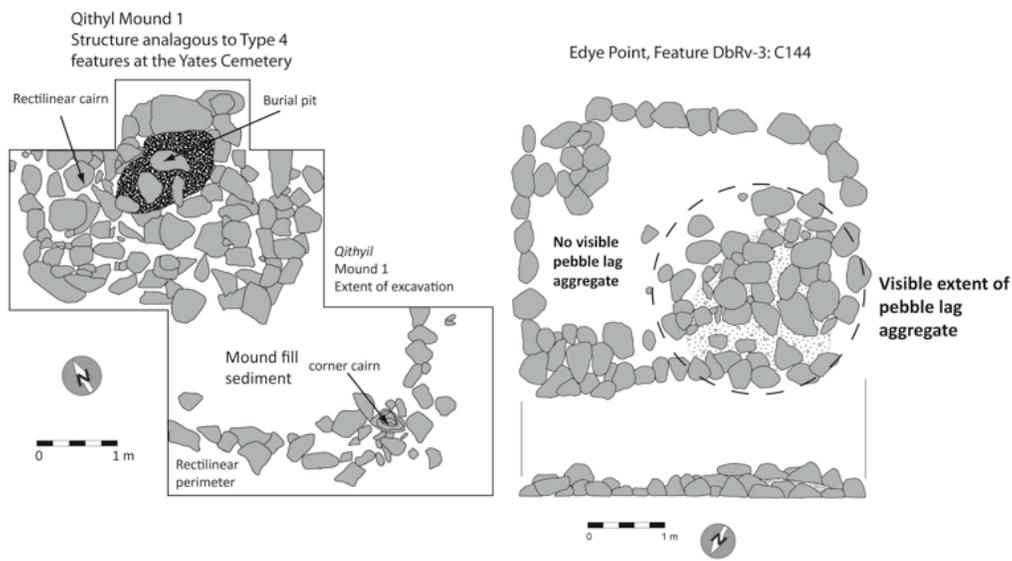
certain kinds of funerary petroforms, producing a kind of spatial grammar. I have earlier addressed the first-order aspects of terrain at Rocky Point that constitute appropriate places for the dead (often well-drained prominent coastal or inland landforms that are rocky with till flats and bedrock exposures) and conversely places and microtopography inappropriate for the dead (on exposed bedrock and other areas that are potentially saturated at any time of the year, or places too close to the daily movements and perception of the living). The analysis identified that a second order spatial syntax also exists independent of the environment, one in which different groups of the dead were treated in different ways, a point to which I return below.

The identification of patterns in depositional practice—in regard to both construction and placement—holds significance in relation to historically and culturally contingent Coast Salish ritualization. These include tradition, ritual professionalism, class structure, and vertical versus horizontal status differentiation.

Emerging patterns in both similarity and dissimilarity are compelling when considering these distinctions as outcomes of practices and actions both produced by and producing relationships of power among the living. I conclude that the transformation from corpse to ancestor begins with the building of the funerary petroform, and the decisions and dispositions evident in their construction speak to the kinds of relationships that the living wished to extend to their ancestral dead. But this process occurred within fields of power negotiated during the selection of materials and their placement. The difficulty for archaeologists is finding a means by which to disentangle enough of the materiality of funerary petroforms to identify the structure of deposition, without completely cleaving what is likely a continuum of practices.

The cluster analysis results contain broad continuities in structure, such as the Type 1 features (small to medium-sized curvilinear stone and soil features) that include the majority of the funerary petroforms at Rocky Point. But it also distinguishes a smaller demographic of funerary petroforms that diverge from the common tropes evident in Type 1 features. Type 3 features are very similar in most ways, with the distinction of having straight sides rather than curving ones and being somewhat larger in volume. While this might seem a minor difference, only 16% of analyzed features at Rocky Point have straight sides, including the monumental Type 4 mound-like features and the rectilinear petroform Type 5 features. Type 4 features are unique to the Yates Cemetery at Rocky Point, whereas the Type 5 features are located close to the village along Eemdyk Passage (DbRv-3:C144 at the Edye Point Cemetery and DbRv-9:14 at

the Eemdyk Site). Type 5 features may be either deflated versions of Type 4 features or the interior components of Type 4 features without most or the entire covering mound of sediment. While I cannot be certain which at this point, I suspect that only the central cairn within the larger petroform of feature DbRv-3:C144 was ever covered with sediment (Figure 95). This cairn has a lag aggregate of pebbles, suggesting deflation<sup>25</sup>, seemingly confined to the main cairn and absent from other parts of the feature. The internal similarity of DbRv-3:C144 to Mound 1 at Qithyil, and the assumed internal composition of the two largest Type 4 features at the Yates Cemetery (DcRv-24: 55 and 60) is striking and suggests a more conservative and regional level of practice when it comes to at least one class of funerary petroform (Figure 95). But Feature DbRv-3:C144 hints at possible local-level differentiation within this larger regional practice.



**Figure 95: The internal structural similarities between Qithyil Mound 1 (left) and partially deflated funerary petroform DcRv-24:C144 at Rocky Point (right).**

Virtually identical in their construction, there are only two Type 6 features at Rocky Point (medium-sized stone and soil dome-like features), one in each of the large cemeteries. Despite their morphological similarity, however, they are spatially different in their associations with other funerary petroforms. Feature DbRv-3:C82 at Edye Point is near the median centre of the distribution of funerary petroforms, located within a cluster of both medium and smaller features. This cluster is in turn part of a larger scale “cluster of clusters.” Its counterpart, DcRv-24:52 at

<sup>25</sup> Refer back to the site formation section in Chapter 7 for a discussion on the significance of pebble lag aggregate as an indicator of deflation at Rocky Point.

the Yates Cemetery, is somewhat centrally located on the central hill, but is isolated from all other funerary petroforms. It is also situated on the slope just below the crest of the central hill, which is unusual since most funerary petroforms at the Yates Cemetery are confined to the base of the hill or farther away. While Type 6 features are distinctive, uncommon, and both are centrally located within each cemetery, other features interact with them differently in the two cemeteries. At The Yates Cemetery, it behaves spatially more like a larger Type 4 feature. At Edye Point, where Feature DbRv-3:C82 is the largest feature in the cemetery, it seemingly attracts other features (both intermediate and much smaller ones) and behaves unlike almost all other large features at that cemetery. At Edye Point, features with the largest class of volume are dispersed both from one another and from clusters of other features. In other words, they repel other large features as well as groups of much smaller burials. These largest features generally sit at the edges of clusters of smaller and mostly Type 1 features, neither fully part of a cluster, nor completely isolated from them.

There are only three small mounds at Rocky Point, all located in the Yates Cemetery. These Type 7 funerary petroforms are like those that predominate in the Harrison Valley, which account for as much as 86% of the funerary petroforms there (Oakes, et al. 2008). At Rocky Point, these features account for less than 1%. I suspect that there may have been more small mound-like features in both cemeteries, although depending on their proportions of stone and soil may or may not have been clustered together as Type 7 features. At Edye Point and Bentinck Island, for example, there are features in varying stages of deflation and recognizing fully deflated features is very difficult. At Bentinck Island, this was only certain with the presence of fragmented and cremated human remains (Figure 96).



Figure 96: Feature DbRv-35:27 on Bentinck Island, an example of a deflated burial mound.

While the number of Type 7 features may have originally been higher throughout Rocky Point, it is clear that even taking deflated features into consideration, that these kinds of burials are still relatively uncommon compared to their density in the Harrison and Fraser Valleys.

Type 8 funerary petroforms are located only at the Yates Cemetery, situated along the ravine bottoms on either side of the central hill. These are hybrid boulder-crevice/cairn features. This is a broad and not well-defined category of features, but general consists of boulders moved together to create a void space for a corpse. One Type 8 funerary petroform had visible and identifiable human remains (DcRv-24:H14) inside. This diverse group of burials includes Feature DcRv-24:H30, one of the most atypical features in the region. It is a dolmen-like feature comprised of four very large bedrock boulders intentionally set together, creating a large void-space between them. The two largest stones weigh between 7-10 metric tonnes apiece. This void space is filled with small boulders and cobbles and every opening around this feature has been sealed with various sizes and shapes of stones.

The most provocative results come from the visibility analyses, from which I draw the following major conclusions:

- The dead are hidden, but only marginally so and often at the threshold of visibility/hiddenness. They are neither completely hidden nor completely visible.
- Different groups of the dead are visually concealed from one another, even when only separated by short distances and microtopography.
- Different contexts of movement—mundane and ritual—may produce very different visual experiences of the dead.
- The category of funerary petroforms expected to be the most visible—the unusually large straight-sided and sediment domed Type 4 features—are the least visible. This suggests Rocky Point People-specific notions of monumentality.

This pattern of unusually large features segregated from other burials is repeated at Ede Point in a different way than at the Yates Cemetery, with the largest funerary petroforms situated outside of clusters of much smaller features. While the morphological and spatial analysis has focused entirely on the two largest cemeteries, that pattern is also evident at Race Rocks. It is the most geographically isolated cemetery in the study area, if not the entire Salish Sea, yet it is a distinct landform visible from many places on southern Vancouver Island and the other side of the Strait of Juan de Fuca, although often barely visible due both to its small size and distance

out at sea. This small islet also has the largest median funerary petroform volume in the study area. In Chapter 11, I argue that the relatively large size of these funerary petroforms, coupled with the isolation and relative inaccessibility of Race Rocks, has profound interpretive significance.

## **Section IV: Transforming and Anchoring the Dead at Rocky Point**

In this final section, I turn towards producing a history of ritual practice at Rocky Point. This is accomplished by contextualizing Late Pacific period depositional practice evident in the archaeologically detectable use of material and space at Rocky Point, within larger scale temporal and spatial funerary practices throughout the Salish Sea. By "tacking" between scales of analysis and lines of evidence (Gamble, et al. 2001; Wylie 1989), I explore the links between archaeological and ethnographic evidence for funerary practice (Chapters 4 and 6, respectively), results of the funerary petroforms analysis at Rocky Point (Chapters 10 and 11), and articulated by a body of social theory (Chapters 2 and 3). This provides a foothold from which to consider how a relatively synchronic anthropological and ethnological understanding of ritual practice can be expanded through material, space, and time by a diachronic archaeological approach.

### **Chapter 11: Rocky Point Ways of Death**

The results of the depositional and spatial analyses raise important questions concerning the ritual process and the production of ritualized bodies, places, and histories at Rocky Point. In the analysis chapters, I provided the results that allow me to answer the first dissertation question:

*Considering the ritualized use of space and materials within the two largest cemeteries at Rocky Point, how were distinctions between different kinds of funerary practices manifest in Late Pacific period depositional practice?*

Rocky Point has an extraordinarily large and complex mortuary record that I recorded in great detail. This data set called for a theoretical approach weaving together a thematic analysis of both archaeological and ethnographic Coast Salish ritual practices, structured through a body of social theory. This triangulation provided a pathway along which to consider the Coast Salish ways of death over the past four millennia, with the emphasis placed on the depositional and ritualized practices that produced the funerary petroforms of Rocky Point. This approach was greatly informed by my experiences working with Coast Salish ritual experts over fifteen years, as well as many years of working at Rocky Point. Both of these shaped, in no small measure, my appreciation for the strength of Coast Salish ancestral relationships and connections to places evident both in past and present ritual practices by the first peoples living at Rocky Point.

The most provoking result of my analysis is the visibility study, a result that is congruent with and evocative of contemporary Coast Salish relationships with their ancestral dead. The results of the visibility analysis are a culmination of a progression of analyses that first considered

the materiality of funerary petroforms and the depositional practices that produced them. The spatial analysis then considered the ways in which certain kinds of funerary petroforms reacted to one another. The funerary petroforms were not bounded spatial and material structured deposits, they were built within an ongoing and unfolding ritual process over many hundreds of years. In the process of building a funerary petroform, the existing neighbourhood of funerary petroforms served as active agents, cueing both the appropriate kinds of depositional practices and where those practices were performed. The material dispositions of ritual experts and knowledge held by communities of ritual practice also directed the kinds of spatial and material requirements understood as necessary to successfully complete the funerary ritual. For example, small and medium-sized funerary petroforms at Rocky Point are likely to aggregate together, whereas larger features repel one another<sup>26</sup>. Accounting for environmental correlates (e.g., availability of stone, well-drained terrain, etc.), then the reason for this repelling is likely to be socially significant. If funerary petroforms are concerned with containing and transforming the powerful dead, then these burials can be understood as actants, perhaps with different levels of gravitas—and thus two larger funerary petroforms sharing a similar polarity may repel one another. I offer some ideas for this process of repelling and aggregating shortly.

The overarching theme that emerges from the analysis is of the liminality of the dead. Virtually all of the funerary petroforms at both the Edye Point and the Yates Cemeteries conform to an enduring disposition in which the dead were never far from the living, but also existed at the threshold of daily perception. The dead continued to live along the peripheries of village life and the corridors of travel between domestic places. This is a Coast Salish monumentality, in which otherwise visible ritual depositions marking the dead, placed on distinctive and central landscapes, were otherwise hidden from daily view.

Before I discuss the visibility results in detail, I want to briefly touch upon several issues that this dissertation provokes. These are results that inform both local and global approaches to social archaeology method and theory.

---

<sup>26</sup> As outlined in Chapter 8, the term *repel* is from the Point Pattern Analysis literature (e.g., Baddeley 2005; Boots 1988; Diggle 2003; Fortin 2005), and refers to a process of points significantly avoiding one another. In this chapter, I advance the social implications of this point pattern process.

### ***Rocky Point is a Liminal Place***

Hydrology is an important aspect of the Rocky Point landscape and likely has important implications for the physical and metaphorical structuring of the ritual environment. At the micro-scale of the individual funerary petroform, burials are always built on places that are dry year-round. This is in juxtaposition to the larger scale relationship with ground water, in which the two largest cemeteries at Rocky Point are both associated with shallow rock-bound wetlands that surround or bisect these places. Liminal places in the Coast Salish world include marshes and wetlands, mountaintops, springs, and caves. These were sites of permanent liminality and small bodies of water were home to powerful beings ready to steal the soul of the unwary or unprepared, or to bestow spirit power to those strong and brave enough to face them (Suttles 1951:340). The denizens of wetlands—amphibians, salamanders, and snakes—were spirit helpers. Amphibians straddled the liminal gap between the natural and the supernatural, akin to shamans themselves (Carlson 2011). Among the Lekwungen, snakes and frog spirit powers were specifically associated with *x<sup>w</sup>ne'm*, the “doctor powers” of the shaman (Duff 1951). Toads were understood to be an intermediary in the transfer of spirit power and salamanders (called lizards), like their shaman counterparts, were capable of metamorphosis and regeneration. The earliest salamander-like art is present on fragmentary spoon handles at the Pender Canal site and date to about 2500 radiocarbon years (Carlson 1999:42), a time at that place associated with a transition from the literal feeding of the dead with spoons and clamshells, to a symbolical feeding of the dead through burning.

This proximity to wetlands, in addition to the general rockiness of these cemeteries, likely amplified the liminality of these places, thus priming them for the transformation of the dead.

### ***Distinguishing Ritual Practices through the Analysis of Depositional Practice***

The cluster analysis approach I took was a means of identifying how different kinds, sizes, amounts, and proportions of stone and soil came to produce new wholes. While the media of granodiorite till, basalt bedrock, and soil were widely available wherever we find funerary petroforms at Rocky Point, how these materials were brought together distinguished ritual practices. I recognize that any archaeological taxonomy is a blunt instrument, producing breaks where a continuum likely exists. As such, I did not produce a typology per se, but used a taxonomic method in a more heuristic way to identify patterns and dispositions in the way that

stone and soil was assembled through a process of ritual action and bodily movement to produce burials for their dead. In this way, I considered the relationality of stones and soil within an individual funerary petroform with the relationality of individual funerary petroforms to those around them. What emerges is not a neat and perfectly compartmentalized structuring of burials, but a materialized version of the fuzzy dispositions and dynamics of ritualization evident in their construction and the multiple voices and actions of different agents. By considering ritualization in the depositional practice that produced funerary petroforms, we gain some sense of how materials were orchestrated to produce what participants understood to be an appropriate form of burial for the dead. As I argue below, there were long-term social consequences of these burials beyond the immediate funeral.

### ***The Significance of Clustering of Funerary Petroforms within Cemeteries***

There is a recursive and mutually constituting relationship between who and where one is at Rocky Point. Ethnographic information concerning Coast Salish spatial organization of cemeteries is vague, but it is clear that each ethnographic winter village had a cemetery, or *šmalq<sup>w</sup>ela*, located outside of the boundaries of the village. From the ethnographic examples, it is evident that social classes were treated differently in relation to ritual intensity, kinds of materials used, and where these rituals and mortuary practices occurred. The upper class was grouped together, in small but collective funerary structures, such as elevated canoes and grave houses. To my knowledge, no excavated funerary petroforms in the region yielded multiple interments that might suggest sequential burials, as was characteristic of chambered tombs and barrows in Neolithic Europe. The spatial analysis revealed a process in which specific places were selected for certain kinds of funerary petroforms, and a kind of spatial disposition is evident in which small and medium funerary petroforms, most with curved outlines, form multiscale clusters. The larger the feature, the more likely it is to have a straight-sided outline and be predisposed to repel other large features, as well as clusters of smaller funerary petroforms. If we consider the largest funerary petroforms as a demarcation the most powerful people, then it is significant that these are features anchoring individual bodies and that they are dispersed from other similar individuals. This is contrary to the later mortuary practices of aggregating the powerful dead in shared grave houses and canoes. Earlier midden inhumation practices speak of a more generalized ancestral place, while the building of funerary petroforms seems to place emphasis on

the individual. Later still, wooden grave house mausoleums indicate a more corporate aggregation of the powerful dead.

### ***Placemaking and the Spatial Dimensions of Ritual Practice***

The ritual depositional practices producing funerary petroforms at Rocky Point were a process of placemaking and memory work, derived from the ongoing relationships between the ancestral dead and their living kin. The living produced and experienced these places of the dead through the ritual actions and depositional practices of the funeral. Stones and the funerary petroforms they comprise are “pieces of places” (Bradley 2000). As objects they have meaning because of their association with important places, events and ideas. When stones and soil were collected and assembled into new forms and new spatial associations at Rocky Point, novel relationships and meanings are created. Using stones to bury the dead represents an association with the transformation of both the corpse and place. Stones from the landscape were collected and arranged during individual funerals and at specific points in time, to produce a new relationality between them. Stones collected from the landscape take on new meanings when ordered on top of and around the dead, but still retain some connection with earlier meanings and significances. This may be expressed through metaphors of physical attributes (hardness, heaviness), action (transformation, anchoring), and other social or economic contexts (clearing stones of camas fields, using stones to anchor reef nets). This connecting of the dead to the Rocky Point landscape, and the ritual process of transformation from corpse to ancestor, in turn created a new sense of place associated with the timeless ancestors. These were the landscapes of one’s relatives, where the communities of the dead were embodied in the hundreds of funerary petroforms. Ancestral presence extended relationships not only through time, but anchored them to places, such that the dead remained active members of society. These were the places where individual and family identities were created, perpetuated and redefined, with names, knowledge and prerogatives were transmitted through time. Funerary petroforms are the materialization of these negotiated identities, constituting places and producing histories. These are storied landscapes invested not only with personal histories and identities, but places entangled in the shared experiences of many Rocky Point peoples.

The social significance of ritual practice at Rocky Point can be recovered by situating it within a changing sequence of traditions. The dead were spatially removed during the transitional Middle-Late Pacific period, and from this we may infer a deliberate distancing of the

dead, who were moved from places associated with domestic space to specialized ritualized localities. Decisions taken to place the dead further away from the living were historically situated within an existing, traditional relationship of living to dead, such as that highlighted at Pender Canal, False Narrows and other Early and Middle Pacific period sites around the Salish Sea (Chapter 4). When understood in relation to this historical context, what emerges is a changing disposition, worked out through ritualizing, of placing the dead, moving stones, and making places, that emphasize the importance of separating the living and the powerful dead. This implied requirement indicates a shift in dispositions, and more fundamentally a way of being, concerning relationships between the living and the dead.

### ***History making and Memory Work at Rocky Point***

The Rocky Point peoples were engaged in a process of history making, employing the fixity of funerary ritual to create and perpetuate a tradition of power asymmetry rooted in the ancestral past. There is a historical dimension to this as ritualized practices were passed down through generations, creating traditions of practice. Every ritual at Rocky Point contained some percentage of unchanging material, and was situated within a tension between an ideal atemporal order of unchanging structure, incremental change, and innovation. Ritual invests tradition with a sense of legitimacy and continuity with the past—it is this investment that creates the sense of tradition as fixed. Traditions are most effective when subsuming aspects or foundations of practice closely associated with collective images of the past and the values they entail. The continued use of grave pits, ritual burning of food, and other practices, as well as the novel use of stone and soil (also associated with earlier midden inhumations) provided a sense of continuity that legitimated the building of funerary petroforms, despite their novelty and innovation. In this sense, the eventual transition from midden inhumation to funerary petroform was not an overstepping of tradition, but rather a referent to it, encompassing in part, the past values of that practice. This perceived immutability of ritual structure lies in the prestige of tradition and in this prestige is power. The building of funerary petroforms was the very construction of history.

Ritual is a particularly effective form of memory work, since it makes social structures and power asymmetries appear to be timeless, natural and inevitable (Bell 1992; Pader 1982). At Rocky Point, the work of memory making was produced by repeated and patterned social practices in places and with materials. Through this engaging of past memories and the

production of new ones, memory was generated, transmitted and embodied through ritual practices, and thus underlies the reproduction and transformation of those practices through time. Significantly, the spatial and material cuing of memory can operate without the conscious knowledge of the remembering subject (Joyce 2003). Memories are embodied, naturalized and often unconscious, and it is this that makes social memory such an effective means of reproducing the social order. Memory, then, may be an authoritative resource used by powerful interest groups, providing them with the means by which to legitimize and naturalize power asymmetries (sensu Mizoguchi 2005). As I outlined in Chapter 6, Straits Salish society was bifurcated into two fundamental classes, the upper class *siʔém'* or "Those who know their history" (Suttles 1951:302). This is to the exclusion of the lower class, the *stéxəm*, who "suffer the shame of having lost or forgotten their history" (Suttles 1987:6). These are the "worthless" people (Jenness 1955) who "had lost their links with the past and their knowledge of good conduct" (Suttles 1987:9). Upper class status implied that one had knowledge of genealogies and family traditions demonstrating family greatness, and the social capital of a good hereditary name and rights. Wealth was simply a product of and proof for the possession of the intangible assets of immaculate ancestry, ritual knowledge, and the supernatural support of the ancestors and acquired spirit power. The knowledge of proper behaviour and of their heritage were inherited privileges fixed through ritual in life and affirmed in death through the funeral, thereby perpetuating the familial continuity of power and connection to place.

The spatial analysis indicates the existence of differentiated spaces within the two largest cemeteries, an outcome of familial access rights and knowledge stemming from experiences in these different places. The selectivity of funerary petroform burial practices indicates that many of the deceased house members were forgotten or were commemorated in a way that left little archaeological signature. Those interred beneath a funerary petroform, however, were positioned to be remembered. Memory work included both short-term and long-term practices, ranging from burnings for the dead and funerary potlatches within a year of death, to the recycling of names as a house resource through generations. Names are a kind of social persona that have their own historical trajectory, and are at once associated with famed ancestors in the distant past, present-day name holders, and the expectation there will be future holders of the name.

While the building of funerary petroforms may be entangled in memory work in complex ways, they were also implicated in a longer-term process of forgetting. Site formation processes, for example, may have been a form of forgetting. The fundamental components of earth and stone used in the construction of funerary petroforms blur an understanding of what is built and natural (Ashmore 2007; Richards 1996; Stein 1992). While landscape features become socialized, so too do cultural features become naturalized (e.g., Ingold 1986; Morphy 1995). Through time, funerary petroforms recede into the ambient background of the landscape. Through a protracted process of site formation involving deflation of sediment covering funerary petroforms, the settling of heavy stones, and subsequent pedogenesis, these burials slowly merged with the landscape. Much like a slow process of decomposition, the soil of these burials sloughed off to expose the underlying skeletal white granodiorite stones. Ultimately these stones also recede and become buried through time and covered with mosses and lichen. In this sense, the process of site formation itself might be understood as part of the funerary process, a process that continues into the present day. It is also a process of forgetting in which the specific memories associated with individual funeral petroforms faded, and ultimately the practice itself was replaced. In the ethnographic period, there remained an awareness of funerary petroforms as ancestral places, and while specific memories or knowledge regarding these burials seems to have faded, these “Ghost-heaps” according to Stó:lō cultural experts working with Hill-Tout, were still very powerful places which the Stó:lō would not approach or “have anything to do with” (Hill-Tout 1930:121). The identities of the dead, while extended through the building of funerary petroforms, were not timeless. But Coast Salish reverence for the potency and liminality of their powerful dead remains understood and deeply respected today.

### ***The Public and Private Dead at Rocky Point***

Coast Salish cemeteries are “considered ‘*xexe*’ which can be translated simply to mean sacred or holy, but in the larger context...can mean “not to be touched”, “an area not to be entered”, or “a matter not to be spoken of”(Thomas 2014:1). This quote by Richard Thomas, Hereditary Chief of the Lyackson Nation, underscores the results of the visibility analysis in this dissertation, and its implications for understanding ideas of privacy, monumentality, and materiality as they were practiced at Rocky Point during the Late Pacific period. Visibility and perception are primary aspects of landscape and implicated in the making of places and peoples. As *xexe* entities, funerary petroforms are sacred, powerful, and best avoided. Yet the nature of

funerary petroform visibility suggests they were more than off-limits and unseen—they are shadowy touchstones on the landscape, demarcating potent places and the presence of ancestral power.

There are several simultaneous strategies of visibility at Rocky Point. First, not all of the dead were made visible with funerary petroforms. There seems to be absence of any strategy designed to render ritual practices visible for many, or even the majority, of the people who lived and died at Rocky Point. For those buried within funerary petroforms, there was a strategy of monumentality, which highlighted the visibility of some dead and produced intentional results (both products and effects), projected from the social present through time using stone as a durable medium of construction. Paradoxically, funerary petroforms were also implicated in a strategy concerned with creating invisible spaces and hiding the dead, characterized by concealing the presence of the ritual process. This strategy was an active attempt to hide the dead. But as the visibility analysis indicates, the dead at Rocky Point were not simply hidden; they were often specifically concealed at the threshold of visibility.

It has been proposed that liminality may have a spatial and material signature recognizable in the archaeological record (Garwood 2011; Parker Pearson and Richards 1996). I have demonstrated that correlates of liminality can be detected, although the recognition and understanding of liminality is historically and culturally contingent. At Rocky Point there are complex, simultaneous strategies of visibility in tension between efforts to conceal the dead from the mundane world of the living while situating them at the threshold of visibility. This indicates a Coast Salish-specific notion of monumentality, one that is counter to the dictums of monumentality explore elsewhere, such as Neolithic Europe, where the overt visibility of monumental features has been interpreted as the basis of their social power. This is a kind of anti-monumentality evident at Rocky Point where the dead are hidden, but often only marginally so and at the threshold of visibility/hiddenness. I conclude that:

- Different contexts of movement—mundane and ritual—may produce very different visual experiences of the dead.
- When viewed from the village or from travel routes bypassing or traversing cemeteries, the dead are often not completely hidden, nor are they completely visible.
- Within cemeteries, small clusters of the dead are visually concealed from one another, even when only separated by short distances and microtopography.

- The category of funerary petroforms that a ‘Western’ rationality might expect to be the most visible, the monumental Type 4 feature, is the least visible. This pattern of unusually large features segregated from other burials is repeated at Edye Point, albeit in a different way than at the Yates Cemetery, with the largest funerary petroforms situated outside of clusters of much smaller features.

As outlined in Chapter 2, the spatial dispositions of the Coast Salish house provide an analogy for understanding the ways in which privacy and power are mutually constituting. Coast Salish houses were contained and private, differentiated and set apart from those of their neighbours by walls and doorways. Tension was maintained between public and private space, with the public world outside the house shut off by walls that defined the interior of the house as private space to those outside the house group. Yet to those within the house group, with low walls and mats defining separate areas, privacy within the house was limited. But while living under the gaze of other house members, there is also an internal and private world for those individuals with spirit power, power that is secretive and personal. While Shamanic and Medium power was largely on public display, spirit power was otherwise an owned personal and corporate resource. There was a tension between the private attainment of power and the public use of that power, in which all recognized what class of power one might have, but the exact type and potency of that power was only hinted at. This is part of a larger Coast Salish trope or metonym concerning the dichotomy between public and private, revealing that which is powerful, personal and hidden in ritualized and controlled ways, meant to intonate and ‘hint at’, but never overtly display. Yet this power could not be too secretive, lest it cause fear or concern amongst neighbours. Furthermore, in order to hint at or intimate the kind of power one possessed, it was necessary for that power to ‘hide in plain sight.’ Just enough of the power was revealed during ritual events, for example spirit dancing, that people had a sense of this individual power. It is this interplay of public and private within and between houses and social bodies that power resides. Spirit power operated largely in the private sphere of ritual practice, expressed publicly only on special occasions. The upright posts of Coast Salish houses, for example, were sometimes carved with likenesses of their spirit powers, although these figures were always kept covered and were only revealed during ritual events (Boas 1890b:12).

There was little or no privacy in a Coast Salish house and there were likely few escapes from this stage and its intensely watchful audience. As the visibility analysis suggests, even while

paddling or walking between villages, the living were under the watchful presence of the ancestral dead. While the morphological and spatial analysis has focused entirely on the two largest cemeteries, the pattern of simultaneous visibility/hiddenness is also evident at Race Rocks. It is the most geographically isolated cemetery in the study area, if not the entire Salish Sea, yet it is a distinctive landform visible from many places on southern Vancouver Island and the other side of the Strait of Juan de Fuca, although often barely visible due both to its small size and distance out at sea. This small islet also has the largest median funerary petroform volume in the study area, despite its isolation and difficulty to access. This inaccessibility is a kind of hiddenness that visually and physically separates the living and the dead. Weather and distance create a kind of visually liminality, as this distinctive place is intervisible with much of the southern coast of Vancouver Island, but perpetually exists at the threshold of perception, drifting into and out of view through fog, rain, and haze.

There are concentric levels of privacy in ethnographic Coast Salish conception of space, ranging in scale from the village, to the house, to the individual body. This idea, evident in the spatial and visibility of funerary petroforms at Rocky Point, suggests some antiquity for public tensions between the visible and not visible. The villages of the living and the dead, while close to each other, are not inter-visible. While cemeteries are situated on landscapes that are both distinctive and funnelled the movement of the living, when viewed from the mundane contexts of canoe or overland travel, funerary petroforms within these cemeteries, with few exceptions, are not visible. Or they are situated at the threshold of visibility. Similarly, like the privacy between houses, clusters of funerary petroforms are not mutually visible. While they are situated in small clusters around one another—spaces that are quickly and easily traversed—often-subtle features of the landscape separate them. Much like a low reed curtain or a rafter within the house almost imperceptibly separates two families, so a chest-high low bedrock outcrop distinguishes two closely neighbouring clusters of funerary petroforms. At the smallest scale, that of the individual, bodies are concealed completely from view within funerary petroforms.

The ethnographic thematic analysis suggests that a living individual existed within a house and village affording little privacy and there were aspects of personhood that were private, powerful, and the basis for successful life. Spirit power was private and concealed, yet there were hints as to what that power might be, provoking a kind of “seeing without seeing,” that cued others to some sense of that power. In other words, possessing an internal incorporeal power

required an external indication of that power for it to be acknowledged, even if this recognition was unspoken. So while the corpse was hidden within a funerary petroform, it was hidden within something that provided some sense of the individual and their relationally with the cosmos. In effect, it was a new kind of corporeality that cued widely understood yet largely unspoken ideas of power below the level of discourse.

If a large cemetery can be considered a village for the dead<sup>27</sup>, then the lack of intervisibility between clusters of funerary petroforms may speak to the kind of divisions one may expect when considering privacy between house groups or communities of practice. In the same way that plank walls partition a house group from their neighbours while simultaneously promoting house solidarity and identify, the visually partitioning aspects of the landscape (e.g. low bedrock exposures) may similarly define both inclusive and exclusive social groupings. In the centre of the Ede Point cemetery, there is partial intervisibility between Localities 2 and 4 and the clusters of funerary petroforms there. But elsewhere, the dead are more spatially and visually separated. Interestingly, Localities 2 and 4 are also the most similar parts of the cemetery in terms of proportions of both feature types and volume classes. This partially intervisibility and comparable spectrum of funerary petroforms at Locality 2/4 speaks to a kind of inclusiveness not seen elsewhere at Rocky Point. This area is the median centre of all funerary petroforms at Ede Point. In the same way that the centre of the house is home to the “common people” who were afforded the least privacy with somewhat diffuse boundaries between them, the centre of the Ede Point cemetery has the greatest concentration of mostly Type 1 features, and while there are discrete and significant clusters, there is a greater degree of inter visibility between them along the seaward half of Locality 2/4.

Within Coast Salish houses, considering the low walls and discrete family compartments, the head of the house could easily have monitored each family (Gray 2008). This goes beyond simply observing activities that were occurring within a space, to include monitoring interactions and communications. While there is power in direct surveillance, individuals who recognize that they are under surveillance begin to discipline themselves, embody this power relation, and become the principle of their own subjection (Foucault 1991). In effect, the commoners and slaves in a Coast Salish longhouse, in the absence of any privacy, monitored their own activities.

---

<sup>27</sup> Although as I have argued, perhaps an exclusionary or partially exclusionary village for the dead, considering only a subset of the Rocky Point dead may have been interred within this manner of burial (Chapter 4).

The high status individuals, situated in the corners of the longhouse, were not subjected to this same degree of observation. Occupying the corners of the house allowed the elites to monitor others, who in turn policed themselves under this constant watch (Gray 2008). Extending the analogy, the clusters of mostly smaller features are also “watched over” by adjacent larger Volume Class 4 features, in the same way that those people in the centre of the house were surveilled from the corners by the house owner and immediate kin. And as these powerful kin inside the house were dispersed from one another within the house (occupying opposing corners), the largest funerary petroforms were similarly dispersed from one another. This is a spatial syntax in which the powerful look inwards, from the corner and peripheries of the house towards the centre. The peripheries are better defined than the centre and while the centre and the corners are adjacent and intervisible, two corners are opposing and concealed from one another. Extended to the cemetery, this is not a direct mapping of house structure, itself likely a somewhat idealized thing, onto the spatial structure of funerary petroforms. While it is useful to consider the spatial syntax of funerary petroforms at Edye Point according to the spatial distinctions of the ethnographic house, the cemetery seems to lack the kind of specific and concrete spatial boundaries evident in houses. While there are definite clusters of features at different scales, and visual segregation between many of them, the spatial pattern evident at Edye Point seems more like dispositions rather than concrete rules. The cemetery embodies the spatial ideals of the house without being a perfectly reproduced mapping of those spatial ideals and structures. The spatial analysis suggests that space was divided, but by tendency rather than rule. These spatial dispositions were likely never articulated as such (*sensu* Bourdieu 1977).

At the Yates Cemetery, however, there appears to be a more concrete spatial and visual distinction discerning those funerary petroforms on the top and sides of the central hill and those along the bottom. The monumental Type 4 features are spatially and visually isolated on top of the central hill. It was not just size that made these monumental burials famed, tainted, potent or sacred objects; these monumental features are most distinguished by their hiddenness. The very lack of access, the shielding and concealing heightened their intensity. Even though Type 4 funerary petroforms were sequestered from access, it does not mean they were inert. Rather, they were working below the level of discourse to engage people through the power of imagination, shaping and focusing awe, fear, or a range of other visceral effects.

### ***Knowing What Not To Know: Funerary Petroforms as a Public Secret***

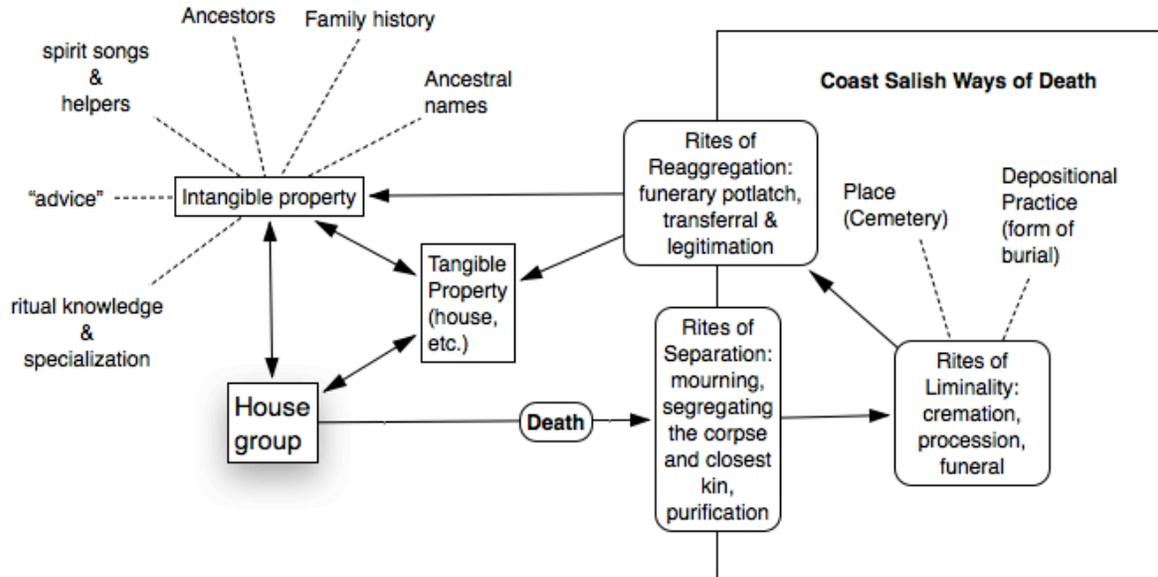
The building of funerary petroforms raises issues of secrecy and private knowledge. Witnesses and participants of funerary ritual need to agree that the ritual was successful in order for the ritual to be concluded with the dead safely removed to the world of the ancestors, and for the ritual to be known and remembered as such. The funerary record at Rocky Point speaks to a tension between the desire to preserve secrecy, which the ethnographic thematic analysis indicates is central to promoting authority and ideas of the morality of the upper class.

While the notion of materiality often relies on the visibility of things, the unseen and the intangible have a power of their own. “That which conceals also reveals” (Jones 2010:117) and the sequestering of the dead reveals two things: that some of the dead were powerful and required concealment, containment, and anchoring; and that not all members of a village had the ability to safely be around this powerful community of the dead. Removing the dead from the village, entombing them within a funerary petroform, and situating the burial at the threshold of perception; these were arguably secrets held in public trust that entailed *knowing what not to know*. The concealment of funerary petroforms on the landscape and the containment of the corpse within these features was a public secret. While covering the dead with layers of stone or earth was an act of containing and concealing, it also implicated some of the dead as requiring this kind of burial, and drew immediate attention to the dead through the process of placing stone and soil in specific ways. The depositional processes that resulted in funerary petroforms were acts of blocking, of concealing knowledge about the contents of the burial. It was an attempt to hide, mask, and restrict knowledge. Or it may be that there was a specialized awareness for some people, but that all did not equally hold a specific awareness of the significance of funerary petroforms. Either way, the implications of this are profound since ritual practices and the burial of the dead articulate with, or are a play on, life domains outside the cemetery and, as something outside regular discourse, invested with social power. Access to the corpse is prohibited to all, access to the cemetery likely restricted for most, and an imbalance arising since those associated with the restricted and the controlled are those come to provide a structure and legitimation to the social order.

### ***Funerals at Rocky Point as a Rite of Passage***

Funerary rituals are those emotionally and socially charged events that connect individuals together and the rupture caused by death is repaired. The connections and conduits made through funerary ritual can be indelible and during funerals surviving members of society array themselves in relation to the dead and doing so strengthens the bonds between living descendants and creates ancestral connections through time. In Coast Salish funerary practice, for the living to create these ancestral connections, the dead must be transformed from dangerous and polluting corpse to powerful and revered ancestor. In turn, surviving kin were transformed to their new identities as inheritors and successors.

In Coast Salish funerary practice, during the rites of separation and liminality (Figure 97), the mourners and the dead were a socially ambiguous category. Coast Salish funerary ritual emphasized incorporation of the dead into the world of the ancestors and this was assigned the greatest importance. The duration between the preparation and subsequent burial of the corpse, however, was a particularly liminal time. During mourning, the surviving immediate kin and the deceased constituted a special group, situated together between the worlds of the living and the dead. The rites of liminality were concerned with both care of and anchoring the corpse and guiding the spirit to its final destination. The corpse was a source of contamination, and the lingering ghost could take the souls of the living with them. Mourning immediate kin were similarly touched by the contagion of death and were particularly susceptible to this supernatural abduction. Ritualizing during these initial days was concerned with the separation of the living and the dead and the ritual purification of everything that had come into contact with the corpse (Suttles 1951:472-3). Death is a loss of predictable cooperation and signalled the potential decay of social or economic relationships resulting from the death of the individual. Everything associated with the burial of the dead was associated with this contagion, and everyone and everything associated with the corpse required purification.



**Figure 97: Coast Salish funerals as a Rite of Passage.**

The corpse was quickly disengaged from the social world, with mortuary treatment of the corpse (washing, binding and wrapping) occurring as part of the rite of separation. The rites of liminality entailed the building of funerary petroform, with these features and the cemetery retaining their liminality as the rites of reaggregation then moved the conclusion of the funeral out of the cemetery. There were two contemporaneous possibilities for transforming the corpse at Rocky Point: cremation, and containment within a funerary perform. Although it is unclear to what extent cremation was practiced at Rocky Point, all human remains observed in the study area were burned (five features, four on Bentinck Island and one at Edye Point). In most instances, cremated bone was heavily burned and reduced to black, blue and white fragments less than 1 cm in diameter. This is suggestive of intense and sustained burning (Schmidt and Symes 2008). Historic observations from excavated funerary petroforms at Cadboro Bay also point to the possibility of multiple episodes of burning within the funerary petroform (Deans 1892:44). Cremation was not practiced by the Straits Salish peoples ethnographically, but cremation is often a transformative process that contrives to create something new; it destroys and rebuilds the body in a new physical and spiritual form (Williams 2004, 2006, 2008), although specific meanings of cremation must be understood in their historical and cultural context (Ucko 1969:274). Among the Straits Salish, food is burned for the dead and is transformed into a medium of smoke and flame that transports this food to the ancestors. There is also the well-

documented ethnographic and contemporary practice of cremation among the Tlingit, who used it as means to free the spiritual essence of the individual and transform the “wet” and immediately dangerous corpse into a “dry” and timeless ancestor (Kan 1989). I suspect then that cremation practiced at Rocky Point served to create new identities for the dead, reconstituting them physically, so that they could then be relocated into a new locale within a funerary petroform, but also transformed and transported immediately to the ancestral world through burning. Inhumation within funerary petroforms was also a process of transformation, but one with an emphasis towards retaining bodily integrity until after the funeral. In both cremation and burial within stone, the identities of the dead were recreated in a new place. But the distinction between the two kinds of bodily treatment is important, since cremations involve an additional level of spectacle and display—they are sensuous events producing light, heat and columns of smoke visible from a distance (Oestigaard 2004; Williams 2008). It also involved a process of collecting fuel beforehand and waiting for the fire to cool after the fact, sifting through ash and charcoal to collect bone, then transporting that bone to the cemetery. Thus on one hand cremation is a sudden, visible and spectacular transformation of the body, immediately transforming the “wet” corpse. But it is also a protracted ritual process compared to those funerals where the corpse was not cremated.

Both villages at Edye Point and the head of Pedder Bay had their own cemetery, or *šmalq<sup>w</sup>elb* and relatives of the deceased carried the bound and wrapped corpse from the village to the cemetery, followed by a procession. This entailed walking overland to the nearby cemetery or crossing by canoe to offshore islets. People may have been invited “to witness” the funeral and were presented with gifts to do so. The collection and placing of stones and soil must have been a ritually orchestrated, although a somewhat impromptu performance. Enclosing the body within the funerary petroform was likely a particularly solemn conclusion to the rites of liminality, followed by the ritual process of then ensuring the spirits of the dead were removed from the living, the house and the village. At the graveside, food and other materials were likely burned and transformed by flame and smoke into a form the deceased could take with them. The intersection between ritual, material, and place produced an aesthetic that defined a good and proper burial, which was a necessary first step in a protracted ritual process central to assisting the ancestor into the world of the dead and transferring their tangible and intangible assets to survivors. The final moments of building the funerary petroform marked the end of the rite of

separation and the beginning of transforming the corpse to an ancestor. The ritual transformation of the dead may have produced a provisional identity subject to further work before the personhood of the dead could be fully realized. This may have been a kind of “temporary dead” prior to gaining admission into the company of the ancestors.

It is unlikely that the Rocky Point cemeteries were the singular focal point for ritualized activities associated with funerals. Leaving the cemetery was a first step towards returning to the social world and the rites of reaggregation. Carlson argues for funerary feasting at Pender Canal between the Early and Middle Pacific periods (3000-4500 calBP) based on evidence for ritual feeding of the dead (Carlson and Hobler 1993). If this holds true, then subsequent to the building of funerary petroforms, the rite of reaggregation at Rocky Point may have been completed with a funerary feast. In the ethnographic period, the funerary potlatch was work concerned with transforming the social persona of the dead from corpse to ancestor. In contrast to the somewhat impromptu and expedient ritual process of building a funerary petroform, the funeral feast may have been a meticulously planned event that involved the redistribution of the dead person’s material resources and the reintegration of their social roles into the community. Removed from the dangerous and polluting body and the cemetery, this was a potent venue for the emergence of the now-transformed ancestor, the emphasis of genealogical ties to them, and the assertion of inheritance and transference from the dead to the living (e.g., Hayden 2009; Kan 1989).

Once the body was successfully buried, this was an occasion for the transfer of rights and privileges from the dead to the living. This was not a seamless process without negotiation, however, and there was always the possibility of irreparable schism. Straits Salish memorial potlatches were an opportunity to meet the needs of the dead, but they were also feasting events that served to raise or maintain prestige of the living through the distribution of property (Hayden 2009). These were opportunities for the surviving descendants to take their place within the reciprocal potlatch network, and were occasions in which traditional names, status or hereditary privileges are claimed through speeches, dances and the distribution of property to those who were invited to provide witness (Cole and Chaikin 1990:5). Relationships with dead kin were at the core of the Coast Salish potlatch (Wike 1967:101). The dead were present and active participants and the potlatch host could access this ancestral support, which was needed to maintain and conduct the responsibilities of household leader (Wike 1967:101). Property redistribution also helped insure that the current titleholders would themselves join the ancestral

dead as a powerful leader. This connection between the potlatch and duties to the dead implicated the ancestors and their support in the periodic redistribution of wealth within and between communities throughout the Salish Sea (Amoss 1978:12).

Burnings for the dead were also associated with taking an ancestral name (Amoss 1978:92-95). While I argue that funerary petroforms were concerned with anchoring the body of the dead, the incorporeal dead were free to travel and enter the world of the living when invited to so. Burnings for the dead were conducted in the public space of the big house, where a space was kept open for them between the officiating medium and the people bringing food for the dead. This space was to protect the living from the danger of approaching too closely to the dead, who are gathered close around the fire.

### ***Transforming, Anchoring and Concealing the Dead with Funerary Petroforms***

Building funerary petroforms, as part of the rite of passage of the dead, was a restructuring of the individual into a social order that linked that person with the world of the ancestors, using stone which I have argued served as a metaphor of transformation, anchoring and concealing, while also working to purify and protect the living from the corpse and the disembodied spirit. Certain stones are believed to be transformed mythic or other beings that have assumed a stone shape (e.g., Prufer and Brady 2005; Saunders 2004). But these stone forms retain their power and are animate and sacred agents in society. This idea extends to landscapes and larger features, such as glacial erratics, bedrock outcrops, mountains or other stony places. There is a metaphorical significance of stone in the Coast Salish worldview as a transformational medium, associated with transformed ancestors who were powerful and sentient beings. They are “powerful non-humans which have a very real and material influence on the world, not only in myth-time, but today” (Thom 2005:192-3). Stones were agents, as were all other aspects and materials of nature, such as cedar trees and the wind. But the metaphorical aspects of stone as simultaneously transformative and anchoring made it an appropriate material with which to bury the dead. Stones, for example, served as homes for beings capable of transforming themselves. Wolf was a very potent *sia'wən* power among the Lekwungen, associated with transformative beings that live under stone houses (Duff 1951). In one narrative, Wolf bestowed martial prowess to a man in need of power to protect his family and friends from an imminent attack. This man, lying in the woods, was found by wolves, which thought him dead, and brought him inside their stone house. Realizing he was alive, the elder wolf “raised him up,” granted the man’s request for

supernatural power, bestowing a club and the abilities to use it in battle (Duff 1951). This story parallels spirit dancing and the *Sxwawaixw* dance, in which initiates are thought to be neither living or dead, but in that liminal place been wild and tame, dead and alive, then “raised up” (the term used to describe the transformation of spirit dancing initiates) as they discover their *sia’wən* song (Chapter 6). In another variation a sleeping boy was similarly carried to the wolves home through a hole in the rocks, where he received physical strength (Suttles 1951:447). These narratives all relate that wolf *sia’wən* is powerful, associated with transformative beings that live under stone houses, and that this was power acquired through a rite of passage homologous to death and rebirth. This is a powerful metaphorical connection to funerary petroforms, in which the dead, brought to a place beneath the stones, are “raised up” into the world of the ancestor.

In Coast Salish eschatology, there were multiple levels of anchoring the dead, beginning with the treatment of the corpse. Among Kwak’wala speaking groups to the north of the Coast Salish, who shared very similar funerary practices to their southern neighbours, the bentwood box and the ropes that contained and bound the corpse were prepared, respectively, by a widower and widow. If a woman who was not a widow prepared these ropes, she would “bind the life of her husband in the coffin” (Curtis 1913:54). Oblique references such as this suggest that fixing the dead in a foetal position was considered both a physical and metaphorical securing of the corpse, and that doing so was only safe by people already touched by the liminality of death. As most inhumation burials consist of tightly flexed (and therefore presumably bound or wrapped) cadavers, this concept of binding the dead may have considerable antiquity around the Salish Sea and elsewhere on the Northwest Coast. At Rocky Point during the Middle and Late Pacific periods, this trope of binding and anchoring the dead reaches its zenith in the use of funerary petroforms.

Stone is not an arbitrary symbol; rather it has metaphorical significance founded on physical world engagements. The material attributes of the stone itself (its weight, size, shape, colour, texture), as well as social and economic relationships with stone in other cultural contexts, evoke metaphorical relationship with the burial of the dead. The Straits Salish people moved stone and soil digging defensive trench embankments, clearing camas meadows of stones, and moving stones to create clam gardens. These actions are physical and economic transformations of place. Reef netting, for example, was a cooperative effort orchestrated by a “captain,” a person invested with the hereditary knowledge and rights (Suttles 1951:168). The Saanich people

considered a reef net “to represent a human being with head, body, arms and legs, and they believed that unless it was set in a definite way the leading sockeye would turn back disapprovingly and warn those behind. Since only a few priests knew how to set it, one always superintended the fishing, apportioned the catch, and directed the ceremonies” (Jenness 1934, appendix). The practice of reef netting seems analogous in many ways to the building of a funerary petroform: both were ritually orchestrated occasions requiring the organization of peoples, and the careful selection and transportation of materials. Just as individuals each manufactured a part of the net that was then assembled by the person leading the fishing, so too did individuals collect stones during the burial of the dead. In both events, materials were assembled, with ritual guidance, into a larger final form, and were set in a specific, family-owned place. As such, setting stones to anchor the net and setting stones to anchor the dead may have been homologous actions.

Midden inhumation was a burial practice concerned with concealing the corpse, which was bound in a flexed position, wrapped in mats or robes, sometimes placed within a bentwood box (and its attendant associations with storage), and inhumed within an oval pit. Sometimes small stones were placed on top of the body. Funerary petroforms were an elaboration and extension of this practice, concealing the similarly bound corpse within an oval depression. It is the addition of significantly more stone and soil to produce monuments patterned both in their appearance and placement, which speaks to the dichotomous need to both display the dead as well as to continue hiding the corpse and the natural process of decay. Considering the Coast Salish abhorrence of the corpse, the soil likely added another layer of protection to conceal the dead from the senses of the living, filling in the voids between stones and capping the cairn. As already discussed, funerary petroforms were also generally concealed on the landscape, hidden from viewing in the day-to-day movements of people. And some funerary petroforms were much less visible, such as those Type 4 features on top of the central hill at the Yates Cemetery.

Stones are also ritually and metaphorically associated with concealing. Crevices in bedrock, for example, were used as places to contain powerful things (not unlike the Type 8 features at the Yates Cemetery, which consist of boulder crevices for the dead). As part of the First Salmon ceremony at Becher Bay, after *sx<sup>w</sup>a<sup>y</sup>əq<sup>w</sup>* (the first salmon) was caught, its bones were placed in a rock crevice. The people were purified and the bones were “fed” with burning

*q'áxmin*<sup>28</sup> or *təmət*<sup>29</sup> was placed inside the fish (Duff 1951; Jenness 1934; Suttles 1951:173-175).

The first salmon ceremony was a homology of death, burial and resurrection. The ritual parallels the burial of the dead in several ways. There is an interesting similarity in the use of stone, as a way to contain the body of the salmon and on both occasions, *q'áxmin* and *təmət* were used as agents of purification in the liminal state of the ritual process. While a funeral works toward repairing the social fabric torn by the death of the individual, it is also central to creating ancestors but also resurrecting the names, prerogatives, and other resources of the deceased so that they might be visited upon the living again. The first salmon ceremony concerns honouring the salmon, who were “just like a person” (Gunther 1927:203) and considered an ancestor. This ritual worked towards creating an accord with salmon so they will continue to appear each year. The First Salmon ceremony and the funerary ritual for the human dead are cyclical movements between death, burial and resurrection.

### ***Houses for the Dead: The Metaphorical Significance of Funerary Petroform Morphology***

Coast Salish funerary ritual can be understood as a rephrasing of aspects of its social context. In Coast Salish epistemology, the living and the dead inhabit worlds, villages, and houses that mirror one another. Funerary petroforms serve as a kind of node connecting these two worlds, with the house and the grave analogous to one another. This metaphorical association between house and grave is a recursive one, in which the materiality of ritual draws upon and derives legitimacy and precedent from the domestic world. Coast Salish houses are more than structures; they are maps of hierarchy and etiquette that serve as physical, social, and metaphorical loci for bodies, persons, ideas and social relations. Like graves and cemeteries, they are sites where material culture, social practice, cosmology and the intellectual framework of society are enacted within spatial and architectural forms (Chapter 2).

In the same way that the use of space within a house or village is formalized according to social structures or dispositions, the use of space for burial structures or within the cemetery is equally structured, although this structuring is often idealized. Despite the heterogeneity of Type 1 features at Edye Point, for example, they form significant clusters that suggest a social context of association between many groups of these mostly small and medium-sized funerary petroforms

---

<sup>28</sup> Seeds of *Lomatium nudicaule*, or Indian Consumption plant, dried and burned as incense.

<sup>29</sup> Hematite.

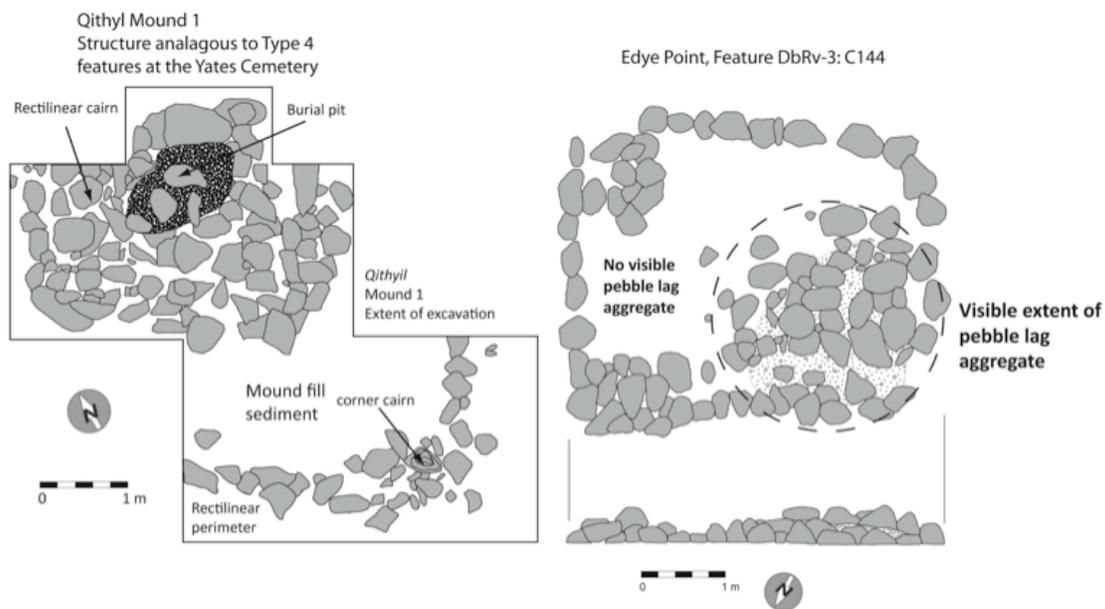
with curvilinear outlines. This association of inter-visible clusters of small features underscores a sense of communality at the centre of the site, as well as a general lack of privacy and overtly bounded space. This pattern is analogous to the inside of a Coast Salish house, where family compartments in the centre of the house, while divided, were often difficult to distinguish. Among the *Katzie* (Jenness 1955:7), *Lekwungen* (Boas 1890b:564) and *Lummi* (Stern 1934:34), the rafter support posts marked social sub-units (Mauger 1991:164). The low status spaces in the centre of the house lacked these architectural cues, and as such were almost certainly inter-visible spaces whose social boundaries were less definable. This is in contrast to the house owner and other powerful peoples who inhabited the corners of houses. Power is manifest in the defined and bounded spaces that also offer a greater degree of privacy. These people enjoyed a greater degree of privacy and their space was more clearly bounded and defined. The material manifestations of their power, such as spiritually potent carved house posts, provided visible demarcations of internal house space and were similarly concealed except under ritual circumstances.

There are two broad categories of funerary petroforms at Rocky Point: those that are curvilinear and those that are rectilinear in outline. I suspect that this bifurcation in morphology represents two fundamental tropes, each using materials in similar ways to produce two very different effects. As I have already suggested, funerary petroforms may be metaphorically thought of as houses for the dead. Excluding irregular features, oval or circular outlines account for 81% of funerary petroforms at Rocky Point. These smaller and much more numerous funerary petroforms may be predicated upon the oval depressions characteristic of earlier midden inhumations, and in this sense, a funerary petroform may be thought of as a kind of inverted inhumation burial. Similarly, it may also represent a mirror image of itself in a sense, with corpse below and petroform above. Either way, it is an elaboration on early inhumation practices that included stones and sediment placed on top of a corpse—what changes is the amount of material added and the situating of the dead outside of domestic space.

Those funerary petroforms with straight-sided outlines comprise only 19% of all funerary petroforms at Rocky Point, and as outlined in Chapter 10, are also significantly larger than those with curvilinear margins. The straight-sided features represent an emergent trope, a new idea unseen in earlier funerary practices. This novelty is combined with greater volumes of materials to produce both the largest funerary petroforms at Rocky Point as well as those that are the most visually restricted and spatially removed from not only the living, but from groups of other

funerary petroforms as well. Much as power inhered in the size and location of the house (Suttles 1990:491), the distinctive size and location of these straight-sided funerary petroforms distinguished them from all other burials.

As a dwelling for the dead, the tomb can incorporate, in miniature, elements of the house (Parker Pearson and Richards 1996). The very largest funerary petroforms at Rocky Point, Type 4 and 5 features (Figure 98) are constructed with an outer and straight-sided perimeter of stones with small cairns set in each corner. Feature DbRv-3:C144 at Edye Point for example, has three internal cairns; two small ones opposite a much larger one (presumably holding the corpse). It may be that this is analogous, and perhaps a dispositionally connected version of the interior of a plank house. If this analogy holds true, then perhaps the largest corner cairn is that of a house owner or one of their close relatives. The smaller opposing cairns may be symbolic representations of other powerful individuals or families set in each of the house corners.



**Figure 98: The rectilinear house-like structure of large funerary petroforms at Qithyl (left) and Rocky Point (right).**

While I have outlined how some funerary petroforms are metaphorical houses for the dead and conform to complementary ideas of space and structure, there are also architectural aspects in common. In the same way that the roofs of longhouses were covered by cedar roof planks bound to with cedar bark ties and weighted down with stones, funerary petroforms relate this same sheltering, concealing and covering of the dead, and the binding and weighting of the

burial with stones to keep it anchored to place. The straight-sided peripheral structure evident on all of the largest funerary petroforms also serves as walls, defining internal and private space from the external world. And while the corner cairns may be associated with families that occupy the corners of houses, they may also be architectural features emulating the corner posts of the longhouse.

The funerary petroform-house analogy I offer is substantiated by the use of “grave houses” during the historic period. While the antiquity of this practice is uncertain, and may be at least partly contemporaneous with funerary petroforms, the use of mausolea demarcates a transition from a metaphorical house for the dead to a more literal one. Historic paintings depict these as shed-style houses, fronted by carved human figures (Figure 99).



**Figure 99: Two historic examples of Coast Salish grave houses. The one to the left is from an unknown location (Richardson 1864) and the one to the right (McMurtrie 1849-1853) is from Victoria.**

If the shed roof structure of the grave houses depicted in these illustrations are literal reproductions of longhouses, they may provide some evidence for who was using these mausolea. While shed-roofed houses were common, gabled houses were indicative of social wealth and prominence (Barnett 1955:35). The shed house was not a simplified version of the gabled house; they were not only structurally distinct, but also socially differentiated (Barnett 1955:37). Of seven West Saanich houses, for example, only one had a gabled roof and circular door (Barnett 1955:41) Circular doors were an inherited privilege belonging only to a few (Suttles 1951). The roof architecture of these grave houses suggests they were not restricted in use to the uppermost class. The human figures positioned outside the gravehouse on the left in Figure 99 (Richardson 1864), are notched and flat-topped, suggesting they were originally interior supporting house

posts (Mackie 2013)<sup>30</sup>. This suggests that interior house posts were removed at some point from the houses of the living and were displayed, perhaps as a kind of effigy, outside of the houses for the dead. In the grave house depicted by Richardson (1864), there is also a carved bentwood coffin portraying mustelids—likely fishers. Not spirit helpers *per se*, fishers are symbols associated with purification (Suttles 1983), and these coffins and the ritual protections placed on them likely worked towards safely containing and concealing the corpse.

Unlike most other groups on the Northwest Coast, Coast Salish houses showed little differentiation in relation to the status or wealth of their inhabitants. Rather, important things were contained within—concealing hidden knowledge and hidden spaces while intimating that this was architecture containing powerful people. Similarly, funerary petroforms derived their power, in part, from the concealing and containing of the powerful dead. They consisted of layers of materials, ritually deposited to produce an effective burial for the dead. Most funerary petroforms were initially covered with a layer of soil concealing a largely stone infrastructure. This is evident in the form of a pebble aggregate that covers most funerary petroforms, suggesting this is a deflationary process rather than one of *in situ* pedogenesis (Chapter 7). Like house planks over a log structure or flesh covering bones, this soil concealed an elaborate internal structure in the largest funerary petroforms. In fact, the funerary petroforms as recorded in this analysis are generally not as they appeared at the conclusion of the depositional practices through which they accrued. They likely appeared more like mounds, with the sediment covering them more like a veneer at least partially covering the internal stone architecture. When funerary petroforms were “finished” and covered with sediment, these low mounds likely appeared more natural than cultural.

So why build elaborate internal stone structures to have it quickly concealed beneath a veneer of soil? This suggests that the funerary process of making these burials was a significant process of collecting the materials and structurally depositing them in such a way that dispositions about the dead and their surviving kin are manifest. But the process of building funerary petroforms is an action of producing hiddenness; hiding that which is only briefly witnessed during the funerary ritual. Much like *siaʷwən* power is revealed by the spirit dancer (Chapter 6),

---

<sup>30</sup> Coast Salish interior house posts were sometimes carved in the likeness of human beings (e.g., Barnett 1955:38).

but only in highly ritualized and liminal moments and only to such an extent that a general sense of that power is revealed.

While funerary petroforms have considerable durability and archaeological visibility, it is likely they become more visible through time as the sediment deflated and settled, revealing much or most of the internal stone structure. In the practical experience of recording funerary petroforms, it those that have more stone than soil visible that are most discernible. Through time, wind, rain and time, the natural appearing mound of soil is transformed by site formation processes into an arrangement of often-white granodiorite cobbles and boulders. This is analogous perhaps to the transition from corpse to skeleton, and the larger social transformation of the dead from dangerous and polluting corpse to ancestor. Bone and stone in this scheme are symbols of immortality because of their enduring qualities, a metaphor extended to the contrast between the ephemeral wood houses of the living and the permanent stone houses of the ancestors.

As the Coast Salish distinction between houses and the bodies they contain is blurred, houses and settlements can be spoken about as if they are people and people are synonymous with houses. In this way, houses can be personified as bodies and abstract and immaterial cosmological ideas about the body can then be extended to the house; these are ideas about death, genealogy, reciprocity, and descent. In this sense, funerary petroforms may be metaphorically related simultaneously not only to houses but also to human bodies. They may be stone effigies in a sense, a materialized form of personhood solidified in time and space, with the dead transformed from those formerly living among their kin, to stone peoples thereafter existing in myth-time, such as Stone *T'xwelátse* or *Sa'íyǝmaʔ* (Chapter 6).

As discussed in Chapter 6, the dead were an active presence at potlatches and were actively cared for by their descendants (citations from deleted text above). As these ethnographic examples described in Chapter 6 illustrate, while there were general prohibitions against interactions with the dead, there were ritual occasions when the material representations of the dead were cited and connections with the dead were created in a process of remembrance fundamental to ritual displays of kinship, the demonstration of hereditary rights and privileges, and the distribution of wealth. Funerary petroforms, while immovable, may have had simultaneous meanings, as a house for the dead, as well as stone effigies anchoring and

concealing the corpse. Either or both these meanings would have provided ancestral places and sites where memories and ritual connections with the dead were made possible.

There is very little information available on the use of space in Coast Salish ethnographic cemeteries, but as I argue in Chapter 2, principles of structuring space and movement in the houses and villages of the living are directly relevant to understanding the spatial syntax of the cemetery—the other powerful place in a society—and the ways that the dead might have been contextualized within the sociopolitical context of the living. As such, using the spatial analogy of the Lekwungen house (Chapter 5) is a useful way to consider the kinds of divisions that may be evident within a Straits Salish cemetery comprised of different families. While houses generally lacked visually overt spatial divisions, the divisions were nonetheless understood by members of the house and presumably by visiting members of other houses, who shared similar subtle spatial dispositions and cues. But it is likely that a greater degree of order was used when the house was going to be used for ritual purposes (Jeness 1934:37). While the day-to-day spatial order was lived at the level of disposition and below the level of discourse, among the Lekwungen, there was a more overt and structured internal ranking of classes when it came to seating and grouping public gatherings (Hill-Tout 1907b:307-308). It is possible that the spatial syntax of cemeteries may be an idealization of the ritualized architectural context. Among the Nuu-Chuh-Nulth, who arranged the internal composition of their houses by rank, the several families that inhabited the longhouse were allocated space based on their social status within the household, as described above in Chapter 5 (Drucker 1951:71). While this may or may not be fully applicable to the Straits Salish peoples or the Rocky Point peoples, it does indicate that the owner of houses and lineage heads—some of the most powerful peoples in a corporate group—occupied corners and peripheries of a core central area occupied by “common people.” Extending this spatial analogy to funerary petroforms at Edye Point, it may explain the dispersion of largest funerary petroforms from clusters of other funerary petroforms and the dispersal of these features from one another. Yet still occurring along the peripheries of these clusters, overlooking their house kin “from the corners” of the cairn group.

This pattern is writ large in the spatial and visual isolation of Type 4 features to the top of the central hill at the Yates Cemetery, where there is both a horizontal and vertical separation of the powerful dead. This upward movement is reminiscent of the ethnographic pattern in which the powerful dead were interred together on the tops of raised scaffolds and canoes placed in

trees, while the common people remained on the ground. There is no such vertical spatial differentiation of the dead at the Edye Point Cemetery, where the topography is general flat with the exception of bedrock knolls. No funerary petroforms were placed on top of these knolls, possibly because they are generally bedrock covered with a veneer of moss (and thus remain wet during the winter months). There are some places on these knolls, however, that remain dry year round yet still do not have features built on top of them. This suggests that a differentiation based on relative elevation at the Edye Point cemetery may not have been important, or that other factors restricted people from building on these landforms.

### ***The Containment and Anchoring of Difficult Bodies and Difficult Deaths***

It is unlikely that the numbers of dead interred within midden inhumations or funerary petroforms account for the entire population (Chapter 5). For many, or perhaps even most of the precontact Coast Salish dead, their bodies may have been exposed to the elements, placed in the ocean, or some other form of bodily disposal that is not archaeologically visible. This is in contrast to those contained in funerary petroforms, who were perceived as distinctive in some way, and considering the Coast Salish relationship with the dead, there may have been social anxieties surrounding these bodies and their deaths.

Funerary petroforms were a form of containment within special locales for bodies that could not safely be disposed of through the natural processes of decay. Risk of their physical or spiritual distribution was too great. This may be what separated funerary petroform burial from exposure burial. The death of those requiring burial within a funerary petroform, while an emotional experience for kin and a source of anxiety for the community, was also avenues toward new relationships and new social projects.

Building funerary petroforms was part of a funeral, likely one of the most emotional parts of the entire rite of passage, as the dead were thereafter physically removed from the sight of the living. All funerary petroforms, recent and ancient, were very likely sites of deeply felt emotion, evoking sadness and fear. The emotive power of things is strongest in those things that hold an “excess” of emotional association, such as personal effects of the dead or the grave site, which can stand as an extension of the dead person and serve to “presence” the deceased (Hallam and Hockey 2001). The very materiality of these emotive things have the capacity to elicit responses that significantly shape or alter human projects in unanticipated ways (Pollard 2008), as they may

be perceived as threatening, destabilizing, or liminal. In the presence of such powerful emotive things, people may become powerless or secondary agents to the things themselves (Pels 1998).

Violent death, for example, may require the dead to be hidden from view, or weighted down under cairns of stone. Only some acts of violence leave traces on the skeleton, but it is also worth bearing in mind that among the ethnographic Coast Salish that death does not always occur 'naturally', but may be the result of *sia'wən* sickness, an assault through sorcery, or the action of the dead (Chapter 6). Certain members of Coast Salish community may be seen as especially potent, their corporeal and incorporeal remains needing special containment. This may apply to bodies of those high class and powerful peoples invested with inherited and achieved supernatural capabilities, as well as shamans and other ritual specialists. In this sense, it may have been necessary to contain the spirits of these peoples, whose remains were inappropriate to allow it to disperse back into the cosmos in the normal way.

The ritual and mortuary practices evident at the False Narrows mortuary complex (Chapter 4) remind us that differential burial of the dead may crosscut status and demographic distinctions. These were difficult bodies and difficult deaths. Contemporaneous communities of the dead were ritually treated very differently. In addition to the midden inhumations common throughout the region, this site also had an inland boulder crevice burial complex where human remains were largely cremated. Funerary inclusions suggest that members of both of these communities were socially comparable. What distinguished them was the manner of their death. The most significant difference between the people interred within the midden and those along the bluffs is the presence of specific pathologies and the prevalence of burning in the bluff population. The people at False Narrows Bluff primarily died from *peri mortem* trauma and treponemal disease, suggesting it may have been the manner or cause of death (violence and disease) that was a principle factor in determining if the corpse needed to be removed from the village, exposed to fire and buried underneath and between large stone slabs. In other words, specific life histories or sudden deaths may set some people on a course of mortuary transformation different from the norm.

## ***Transforming the Dead and the Production of Power at Rocky Point***

In this section, I address the second thesis question:

*How are funerary petroforms, as the structured depositions of funerary ritual, implicated in the long-term process of producing and reproducing power relationships at Rocky Point?*

The corpse and the ways of handling it are powerful metaphors for the transition from life to death and funerary rituals are rites of passage meant to locate the deceased conclusively and permanently in the realm of death. The ritual includes the opportunity of renewed discussions or repudiations concerning categories and rules thus making transitions between sociocultural categories possible. Power relationships among the Rocky Point peoples are founded upon ancestral relationships and ancestral presence, which provided the historic precedence for connections to place and a sense of belonging. Martindale (2011) recently outlined how spirituality may have provided an ontological security to Northwest Coast peoples that trumped concerns for economic security (if there were even such concerns), and that political and economic practice may have been in part a consequence of the spiritual. For the Coast Salish, it was the ritualization of the transformation of the dead—both in the cemetery and during subsequent burnings and the funerary potlatch—that power relationships were negotiated and maintained. Ritual is not the reflection of social practice; ritual is a practice with social objectives. Coast Salish funerals, as a rite of passage, emphasized the permanence of the authority and power of ancestral knowledge and the transition of this security, power, and identity into the present and the future.

Funerals at Rocky Point were active moments in which the inherited rights, privileges, stores of proprietary intangible knowledge, and tangible materials were transferred from the dead to surviving kin. These were entangled practices tied to places. The corpse was removed from the houses of the living, to a liminal place where the material remains of the dead were anchored and concealed by bereaved inheritors and witnesses. These cemeteries were sites of grieving and places of transferal, where memories and histories were anchored to places. Through time and many deaths and births, there was an embodied and recursive movement between the villages of the living and the dead that offered both the maintenance of this transferal between corpse and successor, as well as a venue in which to contest or negotiate these powerful relationships. This was all conducted within a ritualized environment, and within historic and traditional frames of reference that derived their legitimacy from past practices and ancestral connections.

Funerary ritual at Rocky Point was more a process than an event, which structured the cemetery in such a way, that the cemetery itself appeared to be the source of the schemes of power and their values. Contesting and resisting power is difficult in ritualized environments (Bell 1992:140), and as such these cemeteries were venues in which innovations were possible. Stones and soils could be used in novel ways, meaningful in their metaphorical connections to practices outside of the cemetery, and deriving legitimacy from earlier ritual practices and materialities.

The depositional practices evident at Rocky Point (Chapter 8) are not the direct manifestation of hierarchical structure. For example, rather than viewing the largest Type 4 funerary petroforms as elite manoeuvres to muster labour to build one of these features as an overt assertion of power, Coast Salish funerary ritual may have been centered on the transformation of the newly dead to revered and powerful ancestor. It was an oblique performance of power. The building of funerary petroforms occurred during the dangerous liminal period in which power of the dead was unconstrained and potentially dangerous, thereby necessitating the building of funerary petroforms for the safety of the living. In this sense, the embodiment of power is as bottom-up as it is top-down. Participating and witnessing the ancestral transformation is a potent vehicle for the creation of ritualized agents in which power, in the Foucauldian sense, is embodied as positive and productive. All participants may have understood the importance to anchor and conceal the dead.

There is a multiplicity of concepts of containment inherent in the burial of the dead during the Late Pacific period. This was to the benefit of the living, thus encapsulating the dangerous and polluting corpse, and anchoring the unpredictable power of the dead to defined place where efforts at containment and purification could create a barrier between the living and inherently dangerous and uncanny encounters with ghosts. Some Coast Salish eschatological ideas, such as ritual burning and feeding of the dead, have considerable antiquity, but the midden inhumation data does not support the degree of supernatural agency of dead that is implicated in the building of funerary petroforms. The metaphorical feeding of the dead evident at places like Pender Canal (Carlson and Hobler 1993), however, does suggest that relationships between kin transgressed the barrier of death long before the advent of funerary petroforms (Chapter 4). In Coast Salish ritual practice, these kinds of burials may have been containers of power. Like houses both define and contain families and their assets of spiritual relationships, esoteric knowledge, and so forth, funerary petroforms house the dead. They are houses built in

stone, solidified and contrasted with the perishable wooden houses of the living, yet congruent with the idealized notion of family and house as eternal. Both are places that define privacy and differentiate insiders from outsiders.

Material can be used to misrepresent, confuse, or contradict relationships of power in the burial of the dead (Shanks and Tilley 1982). Family members burying the dead, for example, may have also experienced funerary petroforms as an appropriate expression of the power of the family and the household, while others experienced this as an opportunity to constrain or set limits to that power. While many hands were required to build the largest Type 4 funerary petroforms, there may have been congruent ideas about preserving the well being of the living, yet conflicting ideas about displaying power and containing power.

To twist this idea a turn towards a more Coast Salish ontology, funerary petroforms might only disguise or distort the status of living individuals if the archaeologist assumes that the mortuary ritual should, when undisguised, naturally express the status of the individual through the degree of elaboration. The study of burial, however, must be primarily concerned with attitudes to death and life (Hodder 1982a:200-201). As such, funerary ritual at Rocky Point may have been culturally and historically meaningful in different ways than the kind of overt aggrandizement that archaeologists often look for, particularly in the mortuary record. It may have less to do with expressing, honestly or otherwise, the socio-economic status of the dead, than with a process working within and towards different meanings and values. In other words, it may be dispositions in relation to death, rather than individual statuses or ethnic affiliations that dictate the style, material and form of burial monument. This seems to be the case at False Narrows Bluff, where contemporaneous mortuary practices included both flexed midden inhumation (with some small stone associations) and a very different kind of bodily treatment for those cremated and interred within inland boulder crevices, the fragmentary remains concealed within, behind, and under large slabs of exfoliated sandstone (Chapter 4). If mortuary inclusions can be trusted as some measure of status in those doing the burying, then this funerary practice cross-cuts different statuses, as well as ages and sexes. Those buried in the boulder/bluff complex had the presence of specific pathologies, dying from *peri mortem* trauma and treponemal disease. The manner or cause of death may have determined if the corpse needed to be removed from the village and buried within large stone slabs, or placed within village midden deposits (Curtin 2002). A similar bifurcation is evident at Rocky Point, a differentiation between those who were,

or were not, buried within funerary petroforms. While I lack information both on who was buried within funerary petroforms, and how others were treated, it is unlikely that all or even many of the people who lived and died at Rocky Point were buried within a funerary petroform. And cremation within funerary petroforms may have been common at Rocky Point (Chapter 7), but certainly not all people buried within funerary petroforms in the region were cremated. Cremation elsewhere in the region, such as at Qithyil, seems absent (Chapter 4). Therefore, there may be complex ideas about living and dying that crosscut the burial of the dead in funerary petroforms. But within the subsection of those Rocky Point people buried within one of these features, the morphological and spatial analysis indicates differentiation within this group.

The most obvious distinction is between the Type 1 features, those small and medium round and oval features that form first and second order clusters, and the largest class of features (which are often straight-sided) which both repel these smaller clusters, as well as one another. This pattern is most overtly expressed by the Type 4 features on Central Hill at the Yates Cemetery, which are spatially and visually isolated features. This pattern is also replayed at Race Rocks, which has the largest median feature size of any cemetery within the study area (including one very large straight-sided feature) and is also a spatially and visibly isolated cemetery far out in the Strait of Juan de Fuca.

It may be that the people whose death presented a particular problem or difficulty to the living may have required burial within a funerary petroform. In Coast Salish frames of reference, the form and size of the funerary petroform may have been an assertion by those burying the dead of the nature and potency of the spirit power that had to be contained for the mutual well being of the living. This was a determination arrived at in part by the family, by ritual experts conducting and orchestrating the work (and thus determining what kind of ritualized treatment the dead required), and validated by witnesses. But the community consensus was likely grounded in the idea of protecting the living by erecting the appropriate ritual, spatial, and material barriers between the living and the dead. The basis for the power of the dead, in Straits Salish ontology, was in their liminality—they were a conduit to ancestral knowledge and privileges. But as liminal beings, the dead were thought to be inherently dangerous. The lingering ghost, whether its intentions were benevolent or malign, was greatly feared, while the corpse was associated with impurity and the corruption of life. Both of these were sources of danger to the living and required ritual expertise to manage, contain, and purify (Chapter 6).

Funerary ritual at Rocky Point was conducted in liminal places (cemeteries, stony places associated with wetlands) and with liminal things (stones, corpses). Together, the relationally of these liminal materials and spaces brought together wetlands, islands, erratics, stones, and so forth, that were materially, spatially and metaphorically primed as appropriate for both the containment and transformation of the dead. These were mutually constituting; working together to tell ancestral stories and relate ideas of transformation, place, and history.

The powerful dead were both central to producing relations of power, but they also made demands of the living, necessitating a means of articulating and containing that power in a way that was both respectful and concrete. The dead were contained inside a stone perimeter, sometimes with these stones weighing several hundred pounds or more, and then within this the corpse was bound in a flexed position and placed within an oval depression (both connecting the novel practice of funerary petroforms to earlier midden inhumation practices). The intervening space was filled with stones and soil was used to both fill the interstices between these stones as well as thinly cover the feature producing a shallow (although temporary) mound. Larger funerary petroforms, such as the Type 4 features at the Yates Cemetery and the Type 6 feature at Edye Point (as well as the larger mounds at sites like Qithyil) greatly elaborated upon this idea, with a magnitude of difference in the amounts of soil and stone fill. The largest mounds in the Fraser Valley also evidence multiple episodes of ritual burning, likely relating to purification or several ritual feeding events that sequentially capped the funerary petroform as it was built. This process required more assistance in terms of labour, but perhaps more importantly, ritual expertise and proprietary knowledge to do this work correctly. It was also a protracted ritual process, perhaps taking significantly longer than the average funerary petroform. For example, the largest Type 4 funerary petroform at Rocky Point is 102 m<sup>3</sup> in volume, which is roughly the equivalent of 5-8 dump truck loads of soil that was excavated with digging sticks and moved in baskets. The largest stones moved at Rocky Point weigh between 7-10 metric tonnes apiece.

Larger features, and those using larger stones, indicate a need to conceal and anchor the dead in these features more so than the dead in other smaller features. Most funerary petroforms at Rocky Point consist of stones that a few people could likely move and enough soil to cover the feature but not produce the kinds of conical mounds seen at Qithyil and Comiaken (Chapter 4). The ethnographic data suggests that funerary petroforms could not be produced without some ritual assistance, since it is likely this expertise that separated a successfully containing and

anchoring funerary petroform from a pile of stones and soil. The degree of both ritualizing and depositional practice (in volume, size of stones, structure, and aesthetic) suggest that some of the dead required a very different kind of containment—both elaborate and large—while others required much smaller stones and features. Building funerary petroforms was a depositional and ritualized practice entailing the ritual and processional movement of the corpse, the preparation of the site, the orchestrated moving of stone and soil, and the setting of these materials in correct ways. The cultural and ritual knowledge required to arrange these stones in a way that produced a sense of successful ritual completion would have varied according to the ritual expertise, familial ideas, and previous experiences of the people involved.

Funerary petroforms provided a nexus for attaching the ancestors in a visible way to a place. It made power visible by turning the potential for power into a demonstration of power sustained through time and thus producing specific places. This kind of inter-generational planning suggests “the existence and importance of long-term transmission of cultural knowledge and persistence and potentially non-rational ties to place” (Martindale and Letham 2011:18). Burials within middens may have been a metaphorical link between resource production and habitation, with the dead buried in the very material associated with subsistence (Carlson 1999; Martindale and Letham 2011). But shell midden deposits are also places of history and memory work, and burials within midden, when considered in relation to depositional practice, further extend the idea of genealogies associated with ancestral places and a process of history making. Funerary petroforms were an elaborated upward and outward movement of this process that made the dead increasingly visible, increasingly liminal, and promoted a novel kind of permanence and aesthetic to funerary ritual.

As a fusion of permanence and aesthetic, funerary petroforms and the ritualizing that produced them were not symbolic of power, but were the very process of power production and maintenance. While individual mortuary treatments for a single body might speak to the identity of the person in life and that of their surviving relatives doing the burying, each burial was also situated within the broader social and cosmological ideals of what a person is and what constitutes a good death and a proper burial. Every burial may have been successively interacted with or at least witnessed and acknowledged, and their presence was structured by the burials that preceded and in turn had some measure in structuring all burials that followed. But this was a negotiated and fluid long-term process in which power relationships were negotiated and

ideas of personhood, identity and memory were constructed. As such it is not a perfect reflection of power relationships, but rather a negotiated process in the production of power relationships.

### **The Power and Authority of Ritual Experts in the Burial of the Dead**

Central to the funerary ritual at Rocky Point was the ritual expert. As the Rocky Point peoples used soils, sediment and stone to create funerary petroforms, the selection and use of materials in the structured deposition was the result of conscious decisions and verbalized instructions, likely from peoples with ritual knowledge and expertise. Importantly, one of the best ways to maintain the authority and prestige of formalized functions, such as funerals, is to have a restricted access to the required skills and training necessary to conduct rituals (Bell 1992, 1993), and this is certainly the case in ethnographic Coast Salish society (Chapter 6).

A conservative adherence to form may be indicative of ritual specialists. What is unexplored in both the ethnographic and archaeological records, however, is the role of specialists in standardizing ritual activities, elaborating on the discourse of ritual and mediating power dynamics. I suspect that in the interval between midden inhumation and the building of funerary petroforms, ritual specialists played an ever-increasing role in the burial of the dead. The role of ritual specialists in Coast Salish ethnographic and contemporary society is pronounced, particularly as it relates to the burial of the dead (Jenness 1955; Suttles 1951). If ritual specialists were involved in the making of funerary petroforms, it was likely they who orchestrated the collection and placement of stones and soil. These peoples may have been working within local internal social dynamics as well as external pressures, perhaps operating at multiple scales of interaction. They were keepers of tradition and participants in the communities of funerary ritual practice throughout the region. While ritual specialists may not have been the most socially powerful peoples, in their role as mediators between the communities of the living and the dead, they may have been able to exert considerable influence on the form and content of the funeral. Ritual professionalism is often a matter of differential knowledge and power (Hann 1998). By virtue of a Coast Salish ritualist's inherited and unique abilities to safely access the spirit world of the ancestors, their interpretation of rituals may have been incontrovertible in reference to ancestral precedents.

These people are likely centred within both internal community dynamics as well as external pressures, working at multiple scales of interaction and navigating different social and power relationships. If ritual specialists were involved in the making of funerary petroforms, it

was they who, at least in part, determined the form and placement of the features. As such, they were agents for continuity and change, as well as mediators of authority as it was expressed in the cemetery.

To be considered proper and effective, the building of funerary petroforms required ritual mastery. Piling stones and soil over the dead was something that anyone could accomplish. It was the protocols, the intangible and proprietary ritual knowledge and expertise, coupled with the correct selection and arrangement of stones and soil around the corpse that produced an appropriate funerary petroform and created the consensus and perception of ritual effectiveness.

Funerary ritual expertise in the burial of the dead may have been involved from at least the Middle Pacific period onward, evidenced by ritual feeding of the dead at Pender Canal ca. 1730 cal B.C. (Carlson and Hobler 1993). While there are “rich” Early and Middle Pacific period burials with incredible associated funerary inclusions, such as the Sechelt burial with 360,000 stone beads (Clark and Coupland 2013; Cybulski 2011), midden inhumation burials, as a ritualized practice, do not have the same ritual density that funerary petroforms exhibit. With the advent of funerary petroforms, the time physically spent actually containing the body is dramatically increased, at least for the medium and large features. Moving stones weighing several tonnes apiece, collecting hundreds or thousands of baskets of soil with digging sticks, and so forth, was a ritually orchestrated and laborious project. This is less about energy expenditure and labour organization and more concerned with bodily movements and actions that are central to producing ritualized bodies. Building funerary petroforms socialized participants through spatial movements below the level of consciousness. Rolling stones and carrying baskets of soil was inseparable from the ritual values themselves, such that moving stones and soil was not only an expression of subordination to the values being expressed in ritual, but that the movements themselves were the very production of ritualized bodies invested with these values. The end of ritual is a ritualized body, with a cultivated set of dispositions that echo through the rest of life. In this physical participation, ritual imperceptibly schools the social body in the schemes of acting in a way that one cannot easily or consciously articulate.

## ***Funerary Ritual, Tradition, and Late Pacific Period Social Structure at Rocky Point***

In this section, I address the third and last dissertation question:

*What did funerary ritual accomplish as a long-term process with regard to creating and recreating funerary tradition and the larger social structures of the Rocky Point peoples during the Late Pacific period?*

To understand the ways in which Late Pacific period funerary ritual and tradition shaped and informed social structure, it helps to conceptualize this tradition within the mortuary practices that both preceded and succeeded it. In the transition between midden inhumation, funerary petroforms, and grave houses and burial islets, we see ethnographic and archaeological indications of changing ideas in the material and spatial relationships between the living and the dead. Table 25 summarizes some of the key similarities and differences in the burial of the dead through time, in reference to material and spatial associations, visibility, and the ritualizing practices that may have produced them.

In the transition from midden inhumation to funerary petroforms and later funerary practices, there was a general outward movement of the dead away from the living, marking a progressive change in ideas of places appropriate for the dead. The spatial and material associations of the dead with the wooden longhouses of the living switch to funerary petroforms as a kind of stone house situated away from the living. There is an increasing sense of the liminality of the dead, suggested by the hidden nature of their placement on the landscape, situated at the threshold of visibility (Chapter 10) and the placement of the dead in places like islets, and around wetlands. This is followed by a return to wooden houses, in miniature form, but remaining spatially separated from the living. In addition to this outward movement of the dead, there was also an upward movement, with some grave houses built of raised poles, and the dead placed in canoes on scaffolds and in the limbs of trees (Barnett 1955:217; Boas 1891:575).

This upward and outward movement of the dead also suggests a change in dispositions concerning the corporeality of the dead. In the practice of midden inhumation, the body of the dead was removed from view. While the dead were ritually fed at Pender Canal as early as the Middle Pacific period, and the burnings for the dead are associated with funerary practices from at least this time into present day (Chapters 5 and 7), for otherwise unmarked midden inhumation, the location of specific individuals was likely short-lived. With the advent of funerary petroforms, the physical bodies of the dead were similarly removed from view, but were in a

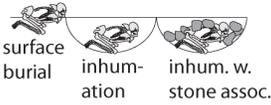
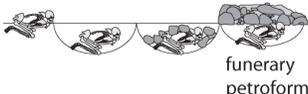
sense remade in stone. This was a kind of proxy corporeality, which served as a site at which memories could be attributed to places and where future citations and practices could be made.

This practice was extended into the ethnographic period, with wood replacing stone and soil as visual indications of the location of the dead. The difference being that, during the ethnographic period, kinship and group membership was explicitly indicated in the use of grave houses and canoes to contain the multiple bodies of the corporate group. Funerary petroforms, with one body per feature, seem to denote individuals that were then structured into clusters. There is no information on the spatial patterning of the dead in midden inhumations. It is not unreasonable to suspect, however, that there were similar familial areas for the dead in midden sites, the difference being that these areas were associated in a more general sense with families or groups. The prevalence of older midden inhumations disturbed by newer ones (Chapter 5), suggests that specific locations and memories of the individual dead were not preserved over time. With the advent of funerary petroforms, the building of each of these features was referent to earlier ones, creating a spatial and temporal order amongst the dead that was not possible with midden inhumations. While the spatial and morphological analysis suggests this ordering might be more like disposition than concrete rule, by establishing these relations and sequences amongst the dead, familial connection to place and histories was produced. Both of these processes and the long term projects of place and history making are foundational to relationships of power evident in the ethnographic period, defining the difference between *siʔém'* and *stéxam*<sup>31</sup> families.

---

<sup>31</sup> Those esteemed and powerful upper class peoples, and their less powerful neighbours, respectively.

**Table 25: Comparison of funerary ritual and mortuary practices from the Middle Pacific to Ethnographic periods.**

Funerary Practice	Early/Middle Pacific 4000 BC - 500 AD	Transitional Middle/ Late Pacific 500 AD - 1400 AD	Proto Historic/ Early Historic 1400 AD - 1770 AD
	 surface burial    inhumation    inhum. w. stone assoc.	 funerary petroform	 grave house/ mortuary box    tree burial    canoe burial
<b>Above/below ground</b>	Below	Partially below	Above
<b>Demarcation of corpse</b>	No	Yes	Yes
<b>Visible up close</b>	No	Yes	Yes
<b>Visible at a distance</b>	No	No	Yes
<b>Durability</b>	Possible	High	Low
<b>External differentiation between burial form</b>	No	Yes	Yes
<b>Bodily disposition</b>	Flexed	Flexed	Flexed
<b>Mortuary inclusions</b>	Variable	Uncommon <sup>32</sup>	Common
<b>Possibility of cremation</b>	Yes	Yes	No <sup>33</sup>
<b>Association with domestic space</b>	Yes	No	No
<b>On prominent landscapes</b>	Yes	Yes	Yes
<b>Orientation/alignment</b>	Variable	East/Cosmological <sup>34</sup>	East
<b>Expertise Involved</b>	Ritual	Ritual	Ritual, woodworking/artistic
<b>Labour contribution for burial architecture</b>	Minimal	Minimal to intensive	Intensive initially, minimal afterwards
<b>Duration of 'graveside' ritual</b>	Presumably short	Prolonged: building a petroform	Presumably short
<b>Materiality</b>	Midden, stone	Stone, soil	Wood
<b>Material association</b>	Midden: associated with house and subsistence	Stone: associated with transformation and anchoring	Wood: carving associated with supernatural forms
<b>Individuality</b>	Individual (some multiple interments)	Individual	Multiple family members
<b>Ritual feeding</b>	Yes <sup>35</sup>	Yes	Yes

<sup>32</sup> Small copper discs may be preferentially associated with funerary petroforms (Blake 2004). Mound 1 at Qithyil also has an incredible assemblage of mortuary inclusions (Chapter 4).

<sup>33</sup> Cremation or burning may have been practiced in the mortuary treatment of large numbers of people who died from smallpox and other introduced diseases during the protohistoric and early historic periods. But cremation does not otherwise appear to have been part of funerary ritual practice during this period.

<sup>34</sup> The long axes and straight sides of the largest funerary petroforms at Rocky Point (e.g., features DbRv-3:C144, DcRv-24:50) align with solstice summer sunrise. This a pattern observed at Qithyil and other funerary petroform sites in the region (Mike Blake, personal communication, June 21, 2013). This kind of cosmological alignment occurs elsewhere in North America, such as the American Bottom (Pauketat 2013)

During the ethnographic period, there was a movement for *si'ŕém* families to consolidate their dead into grave houses, clustering the corporate dead within a single architectural structure. This marks a significant departure from the Middle to Late Pacific period practice of one corpse per funerary petroform (Chapter 4). While many funerary petroforms cluster together, forming multiscalar clusters in some cases, it is generally only the smallest funerary petroforms that aggregate together. The larger the funerary petroform, the more likely it is to be dispersed from clusters of other burials and from other large funerary petroforms. Unlike earlier funerary petroforms, grave houses and canoes in trees are shared architecture for the dead. It is unlikely that all members of a family or house were buried in these structures, given their relatively small size, but they were discrete and focused places on the landscape for members of a specific group. Rather than revise the existing funerary petroform tradition to incorporate many bodies, such as the advent of chambered cairns or similar kinds of tumuli evident in Neolithic Europe (Chapter 2), the Coast Salish peoples developed wooden grave houses to aggregate their dead. This is part of a changing, albeit tempered form of monumentality, progressing throughout the Middle to Late Pacific periods. Transitioning from inhumations, with no archaeologically discernible surficial footprint, to funerary petroforms and their kind of anti-monumentality (visible features placed in ways that make them less visible), the sometimes ornately carved grave houses and boxes seem to have been placed in more visible locations, such as near shore islets. There are historic accounts of the prominence of these features around the waterways of what is now Victoria (Keddie 2003).

The Rocky Point spatial analysis indicates that there were areas differentiated from one another within each of the largest cemeteries, divided by visibility and natural barriers such as wetlands and seasonally saturated areas, low bedrock outcrops, elevation (hill tops) and bodies of saltwater (near shore islands like Bentinck Island and offshore islets like Race Rocks). The ethnographic thematic analysis suggests that each group may have had their own places for funerary rituals, many within the larger cemeteries at Edye Point and the Yates Cemetery, but also smaller cemeteries such as those at Cape Calver and Manor Point. Some isolated and inhospitable places, such as Race Rocks, provoke us to think of these as particularly liminal places associated with the containment of particularly powerful dead—peoples who in life were

---

<sup>35</sup> At Pender Canal, there was a transition during the Middle Pacific Period from a literal feeding of the dead (with spoons) to a metaphorical feeding by burning (Chapter 4).

already liminal, such as shamans, whose death posed particular difficulties for the living. There are also places, such as the centre of the Edye Point cemetery, that suggest a somewhat more inclusive kind of burial, where there are multiscale clusters of mostly Type 1 funerary petroforms. This is a place that does not have the same degree of visual isolation, with some intervisibility between clusters. This is also the only place at Rocky Point where there is an inversion in the spatial behaviour of the largest funerary petroforms—here they form the nucleus of clusters of small and medium funerary petroforms—in contrast to the rest of the cemetery where the largest features repel both clusters of smaller features as well as one another.

There is a changing materiality between midden, stone, and soil and wood (Table 25). It is worth considering midden as something other than a garbage dump (Carlson 1999; Hill 1995; Luby 2004; McNiven 2013). The shells, soil, bones and stones, as the physical medium of village matrices, can be understood as depositions comprised of the subsistence and domestic detritus of daily life or as emblematic of, and the very material of, the social and economic activities of the living. Deposition of this material may also be ritualized, considering the ritualized disposal of fish and other species evident in the ethnographic record (Suttles 1951). Considered this way, burial of the dead within village matrices might suggest that this was a source of food for the dead, with the shells and bones of animals reincarnated to feed the ancestors (Brown 1996; Carlson 1999:43-44). As such, the practice of discard becomes a ritual act in which the dead were provided food and the living were assured that their ancestors remained at peace. Alternately, the association of midden material with death ritual may have been significant as midden material is the result of discard, burning, destruction, collapse or decay. Midden then might be understood as the appropriate context for the body to disintegrate in and for the flesh to decay. In this sense, midden inhumation is associated with corporeal transformation, perhaps in a similar way to the stone of funerary petroforms associated with ideas of transformation and anchoring.

The use of wood and the expertise of carving it to produce mortuary architecture are another kind of material engagement and a means of differentiating the dead from one another. Some upper class grave houses were fronted by stone or wooden figures, “to guard the dead from evil spirits” (Webber 1899:313). These figures depicted inherited spiritual powers owned by *siʔém* families, which were privileged to use these symbols through the maternal line (Suttles 1987:129). Conversely, *stéxəm* mortuary practices seem to have involved considerably less ritualization (Chapter 6).

Funerary petroforms are the material and spatial products of tradition. In thinking through their materiality, we can see them situated in a long-term material engagement between stone, soil and the ancestral dead. But in Coast Salish ritualism, there seems to be room for determining appropriateness in the situation. In death, power is returned to place. Cemeteries are ancestral contexts, core areas where knowledge and social relations are anchored to place. Every funeral was a transformation of the body to a place, adding to and shaping the sense of that place with ancestral presence.

### **A Coast Salish Sense of Power, Prestige, and the Defeat of Hierarchy**

I have made a case that prior to cal A.D. 500, the transition from inhumation to funerary petroform was part of a process in which power and authority were increasingly being inherited directly from the ancestors. Ritualization is an effective play of power that is most effective when the basis of claims to power are from ancestral or spiritual sources (Bell 1992:116). Confronting death in a Coast Salish house and community required relatives and friends of the deceased to review or begin negotiations concerning the mutual obligations and solidarity with regard to ancestors. The version of social relationships shown in the ritual is frequently idealized and legitimized through references to the past and the ancestors; it provides a forum in which to disperse and conceal social conflicts (Bender 1992; Kristiansen 1991; Pader 1982).

The Rocky Point dead continued to be active participants in the affairs of the living. While they were not often interested in participating directly in the daily workings of the community, ancestral presence was a way in which the past was made present, a way in which the memory, power, and historical precedent of the dead was placed at the centre of power negotiations. In this scheme, those with stronger ties to the ancestral order were not creators of their own superiority. Rather, the legitimacy of power in Coast Salish society was a person's position in the ancestral order, which they temporarily embodied. This depersonalization of power was its efficacy, as the ancestral funerary petroform complex developed into an ideology legitimizing the dominant role of the elite in Coast Salish society, empowering those who controlled access to the ritual.

Ancestral presence was made possible through practices meant to perpetuate the agency of the dead, although it was likely that only some of the dead retained agency this way. This agency provided a conduit along which the dead could continue interacting with the living, and in this way, contribute to naturalizing the arbitrariness of power relations by framing them as a

consequence of the timeless social order. As such power relations originated in the past, and were perpetuated by incorporating the powerful dead and their relationships into present-day affairs.

Based on a synthesis of the ethnographic thematic analysis and the results of the funerary petroform dispositional typology and spatial analysis, I offer a historically and geographically contingent understanding of power at Rocky Point during the Late Pacific period. A class-based social structure was already well established by the Late Pacific period, and likely existed much earlier. The primary class distinction between *siʔém*, or “Those who know their history” (Suttles 1951:302) and *stéxəm*, or those who suffer the shame of severed links with the past, and thus their knowledge of good conduct (Jenness 1955; Suttles 1987:9) was the demonstrated long-lived connections to place. Unbroken history defined good ancestry, such that the taint of slavery among the high class, for example, related to a detrimental break (even temporarily) in this connection.

Good ancestry conferred advantages including access to a bank of prestigious family-owned and conferrable names, the proprietary rights to use intangible assets such as rituals, spell words, and dances; access to ceremonial objects and places (such as the cemetery); and the training that elders can impart on their kin. It was “impossible for a person without good ancestry to achieve any significant degree of prestige” (Amoss 1978:148). The heads of households could provide or withhold help to other households, thereby controlling to some extent the affairs of other houses. The goal of every household, however, was to maintain the balance between wealth and expenditure, and while there was almost certainly some rivalry, the intention was to “keep one’s good name and to keep up with one’s neighbours, not to break them” (Suttles 1951:495).

Inequalities of power were resented and were levelled when they occurred (Amoss 1978:148). Inequalities in prestige, however, were accepted, desired and institutionalized. Prestige was derived from being well known and respected throughout the wider Coast Salish community. Good ancestry was a definite asset but did not assure a “good name” if manners and wealth were lacking. Wealth alone did not confer prestige; to be well known, one also had to be well thought of and well behaved. The “myth of the lower class” (Chapter 5) served to remind the majority of people how to behave and conduct themselves in a way befitting their high class (Suttles 1987:9). The perception may have been that there were more low class people than in fact existed, but the idea of a low class was necessary as a means of both social control and social

levelling. The upper class was not a homogenous whole, however, and there existed status differences, although no formalized ranking or mobility upwards was possible within this larger class. The threat of being perceived of as low class regulated behaviour and likely served to level egregious power inequities. Gossip was remarkably effective at curbing deviancy or behaviour unbecoming a high-class person—such as overt aggrandizement—and may have been used to great effect as a social levelling mechanism. People were careful to maintain the appearance of proper behaviour and keep up their end of the exchanges of goods, cash and services. In their own words: “we don’t want people talking about us” (Amoss 1978:149).

There were tensions between ideals of individual autonomy within a system of social inequality. Autonomy to the point of anarchy characterized intragroup political action (Amoss 1978:146; Angelbeck and Grier 2012), and even leaders chosen for a specific task had to scrupulously avoid any suggestion that they are telling people what to do. Leadership was not lacking; rather its efficacy depended upon a leader’s skill in expressing the feelings of the group (Kew 1970:116-117). The upper class *si?ém’* worked at navigating this tension between individual power, both spiritual and economic, and the expectations of proper behaviour. Personal autonomy and social inequality came into conflict because autonomy implies that a person’s worth was independent of what others thought while asymmetries in power depended entirely on the judgment of the group as it was worked out at potlatches (Amoss 1978:150). Others conferred power through societal recognition and the rewarding of proper behaviour. In other words, one needed the support of their kin and neighbours to achieve and maintain the prestige that conferred a good name.

This is not to deny individuals seeking power, but successful inroads to inequality are not top-down assertions from ambitious aggrandizers. Rather, power is invested in those individuals assisting with the development of new institutions that tap into previously unknown activities than can change norms and ideals for the benefit of all (Wiessner 2002). The advent of funerary petroforms, and their novel use of stone and soil, was rooted in the tradition of the transformation of the dead and honouring the ancestors, and derived legitimacy from earlier funerary practices such as binding the body in a flexed position, placing the corpse in what is essentially an inhumation, then covering it with much more stone and soil than had previously been used. Perhaps the most significant change, at least at Rocky Point, was situating these burials way from domestic space. This may not have been the product of aggrandizing agents

appropriating the resources of their follows, or of people even attempting to do so. Rather, it may have been a process in which people were seeking prestige, not at the expense of others, but in a way that distinguished their dead from others. This may have been not only perfectly acceptable but since it was referent to earlier practices and institutions, also novel and legitimate. All structures have a significant history that cannot be ignored. In this way, structure, ideals, and individual agents may have worked together in complex ways that produced both stability and change. Stability and change, however, are predicated upon, often in unpredictable ways, with the interaction of the present with the past (Wiessner 2002).

Power inequalities arising from the ritualized building of funerary petroforms may have been an unintended outcome of competition among political actors working in alignment with the support of their community (Clark and Blake 1994). Competing and locally powerful individuals could recognize the potential of building funerary petroforms, and by their ability to form group consensus, frame these is ways that address group interests, such as transforming and anchoring the dead for the benefit of the living and the dead, an idea that likely had considerable antiquity in midden inhumation practices. The idea of building funerary petroforms may have taken root since these ideas of transformation and anchoring work best not only to the advantage of the powerful (whose ancestors require the most ritualizing and containing) but because it also works to the mutual benefit of the group. This was not simply rhetoric of respect for the ancestors masking inequality and competition. Even though the benefit may not be equal, the perception of anchoring and containing the powerful dead, and by some measure seeing this as also an opportunity to conversely limit the power of their living descendants, benefits the entire group, and as such becomes part of social structure. In this way, it is not about a societal change from egalitarian to inegalitarian, or of increasing sociocultural complexity, but a sliding scale of increasing differentiation between people, a transformation or expansion of existing inequalities that is as much a bottom-up process as it is top-down one, made possible only by conduits of power and benefit running in both directions.

This is not to say that it was perfectly negotiated or without conflict. People could deploy, play along with, and manipulate the basic schemes of power to varying degrees of success. But ritual does not demand complete consensus; the most successful ideological efforts are those that have no need for words, asking only for complicit silence (Bourdieu 1977:188) and the norms of polite behaviour (Bloch 1975:12,16). In other words, funerary ritual can tolerate a certain degree

of dissent; all that is required is some modicum of consent (Bell 1992). Ritualization is not about the heavy-handed or top-down assertion of power, instilling a dominant ideology, or even providing participants with the materials with which to articulate their own ideas. Ritualized practices require the external consent of participants while simultaneously tolerating a fair degree of resistance. Ritual symbols and meanings are too indeterminate to cement fixed ideas and ritualization as any form of social control is imprecise, sometimes unwieldy, and loose. The type of authority created by ritualization tends to make ritual activities effective in grounding and displaying a sense of community without over-riding the autonomy of individuals or subgroups (Bell 1992:222).

I have made a case that the transition from midden inhumation to funerary petroform was part of a process in which power and authority were increasingly being inherited directly from the ancestors. In this schema, those with stronger ties to the ancestral order were not creators of their own superiority. Rather, the legitimacy of power in Coast Salish society was a person's position in the ancestral order, which they temporarily embodied. This depersonalization of power was its potency, as the ancestral funerary petroform complex developed into an ideology legitimizing the dominant role of the elite in Coast Salish society, empowering those who control access to the rite. Power asymmetry was based on esoteric, inherited, and proprietary knowledge and ritual expertise. And this was rooted and legitimated by tradition and history.

I suspect that funerary petroforms embodied a quality of ambiguity and danger: imparting a sense of permanent liminality. They were places forever at the threshold between the worlds of the living and the dead. In this sense, I do not think that funerary petroforms served as overt displays of power. As liminal places, they were associated with the suspension of institutional order and social stability. They were places of the liminal condition. And places associated with deferral to ritual authority and dutifulness towards the spiritual. While funerary petroforms, and perhaps the dead in general, engendered this sense of *communitas* (Chapter 3), these notions of permeable power are anchored to the cemetery. During the funerary potlatch and other rites of separation, when the living moved back across the curtain of liminality, power relations were restored, and often elaborated upon from those forms possessed or desired prior to the rite of passage. In other words, building funerary petroforms were projects that many felt benefitted them directly. The most supernaturally dangerous and liminal dead were being

contained, for the public good. This engendered a sense of burial of the powerful dead as benefitting everyone, and by extension, that some of the most powerful dead required additional ritual steps to concretely conceal and anchor that power. In this way, building a large funerary petroform, including the moving of very large boulders or thousands of baskets of soil, was something conceived of as beneficial and productive to everyone.

A central question arising from the work at Qithyil concerns why Mound 1, the largest mound, is somewhat removed from the previous village location than later mounds<sup>36</sup> (Lepofsky, et al. 2000:412). This is a similar situation at the Yates Cemetery, where the largest Type 4 funerary petroforms are comparable in size, morphology, and isolation to those at Qithyil. This patterning may be explained, within Coast Salish epistemology, by the placement of stones, boulders, and soil as a ritualized process of segregating the potency and potential danger of the recently deceased from the living. In particular, those people in life who possessed the greatest spiritual engagements came undone at death and their corporeal presence remained forever dangerous and liminal. The building of funerary petroforms was a critical ritualized step in the longer-term process of the transformation of a decaying and dangerous corpse into a revered ancestor. Situating, anchoring and concealing the liminal and inherently dangerous corpse involved the process of deciding which and how many stones to add to the funerary petroform. This in turn was a process in which the power of that individual, and by extension their household, was mediated through funerary ritual.

The dead were meaningfully incorporated into community life. Funerary processions may have proceeded along set routes, deviating from the mundane routes travelled outside of the ritual context. This provided an opportunity for ancestral reference, with funerary petroforms working as material referents to the ancestors, serving as a touchstone between the worlds of the living and the dead. Ritual performances outside the cemetery, including the recalling and oral accounts of the life and achievements of the powerful dead were recounted at funerals and other commemorative events, and were witnessed and thus validated by guests. Both the shorter-term practices such as funeral processions through cemeteries, and the generational practices of memory work (such as the recycling of historic and auspicious names), effectively transposed memory of the dead across different contexts and allowed the dead to engage with social practices in new ways. The funerary petroform, as both a form of anchoring and concealing the

---

<sup>36</sup> See Chapter 4.

dangerous and perishable corpse, was also a bodily proxy for the dead—an ancestor incarnate with stone bones and soil flesh. Funerary petroforms, as durable objects, could transcend time, giving permanence to the social structures, power relationships, and order that they embodied. Materials were scaled up to acquire monumental proportions or scaled down to the size of a few stones. But all were endowed with ancestral qualities.

At the household and village level, there was a strong sense of corporate identity. Members of each household were descendants of a notable ancestor, and they shared inherited rights to resources, names, ritual activities, ceremonial performances, and paraphernalia. While all descendants of that house shared those inherited resources, in practice, the management of resources remained with those actually presiding in the house and power tended to be concentrated in the hands of one household elite. But villages were not corporate; rather they were comprised of autonomous households, representing several kin and local groups. While members of different houses may have participated in mutually beneficial activities, such as reef netting, ceremonial activities and mutual defence, this cooperation was not forced. Villages were not homogenous, and there was considerable polyvocality, with segments of a village potentially differing in spoken languages and perhaps even burial practices.

There must have been a cosmopolitan feel to the villages at Rocky Point. Formal intervillage organization likely consisted of a sense of affiliation based on common use and occupation of shared places, shared use-rights and resource procurement areas, respect for particular regional leaders, and the common use of particular languages and dialects (Miller 2007:16). To this I would add funerary practices that worked at household, village and regional levels to connect villages as far apart as Edye Point and Qithyil in larger genealogies of practice. This is evident in the remarkable comparability of the largest Type 4 features at the Yates Cemetery, with those largest mounds at Qithyil. The degree of conservatism found within the large Type 4 features speak to regionally shared dispositions regarding the burial of those individuals who may have been respected regional leaders. Building their funerary petroforms were projects that brought people together to honour the individual and their family, but also to do the important work of containing and anchoring the dead to place for the benefit of all.

Based on their varied experiences, there may have been local differences in social, ritual, and technological knowledge, and as such, localized ways of constructing funerary petroforms even at the scale of neighbouring villages. We see at Rocky Point that there are many similarities

in practice between the Edye Point and Yates Cemeteries, but also some key differences that set practices in these two places apart. Such localized know-how would have been contingent on or motivated by attempts to conform to or avoid someone else's ritual practices or the memories and meanings associated with them.

Precedents for inequality are often set in ideology, in the form of differential access to restricted information, the kinds and extent of social ties, and so forth, such that while an ethos of equality might exist the difference between the ideal and the reality may be great (Wiessner 2002). During the Late Pacific period, funerary ritual served to depersonalize authority, investing power in the hereditary positions of the upper class *siʔém'* and the ritual work of funerary specialists. External forces, principally the ancestors, legitimated power, reinforcing the idea that particular power was only accessible to those with hereditary rights to restricted knowledge.

The Rocky Point people were shaping their physical, social, and cosmological worlds through the movement of stone and soil: in turn, this process was central to the shaping and reshaping of relationships. Cemeteries and other spaces of ritual were defined and redefined by material and depositional practices, and the actions and movements of peoples within it. Funerary petroforms were part of a tradition in which ritual was central to the process of creating socialized bodies and environments that embodied asymmetrical power relations. The ritual practices at Rocky Point produced ritualized bodies through interaction with a structured and structuring environment. Cemeteries, and the stones and soil within them, were important to conceptions of the world. The manipulation of these materials and the interactions between people, things, animals, spirits and places were not passive. There were spiritual and supernatural significances to stones, illustrated in the Coast Salish interactions with the mineral world (Chapter 6). Social agents—both living humans and otherwise—were consulted and listened to, persuaded, and negotiated with to assist in the process of making funerary petroforms. Central to all these practices was an embodied and sensual experience, which was given meaning and significance within social relationships (Bourdieu 1977:144). This reconfiguring of places was an embodied experience, similar in many ways to other landscape transforming projects such as digging and clearing stones from camas fields. The embodied movements of these tasks were the production and reproduction of place and landscape.

### ***Increasing Entanglements Between the Living and the Dead***

How the Coast Salish dead were incorporated into the world of the living is an entry point through which we may consider fields of power at multiple scales in the lives of the Rocky Point peoples. When considering ritualization and burial of the dead as a structuring aspect of social organization among the Coast Salish, what emerges is not a perfect picture of status, but through their practices and attitudes towards death, we see both a deep and abiding respect for their dead, as well as an increasing emphasis on the idea that the caretaking of the dead was a project necessary for the well being of the living.

One of the fundamental problems presented by death is how to create continuity out of discontinuity. Funerary petroforms are about establishing a connection with the ancestral past—memory work linking the timeless power of the dead with the living descendants through ancestral discourse. During the transition from the Middle Pacific and Late Pacific periods, the ancestral dead became, or were increasingly implicated in the affairs of the living. Ethnographically, we know that the dead were powerful forces in Straits Salish society, as a supernatural support for the social order (Wike 1967). I believe that this idea was part of a long-term continuum, beginning with the inhumation of the dead in village and domestic space by at least the Middle Pacific period. At Pender Canal, what began as a literal feeding of the dead with spoons at the moment of inhumation later became a metaphorical feeding of the dead through repeated ritual burnings in which smoke and fire transformed food for the dead (Carlson and Hobler 1993). The practice of burning for the dead is still widely practiced today, indicating an incredible continuity of ritual practice.

Along this tension between continuity and change in practice, we see through time and the novel use of stone and space that the dead themselves were transformed. Previously hidden bodies within domestic space became visible, moving upward and outward from the village and taking a place around the peripheries of the living. I argue that unlike earlier midden inhumation practices, the dead are directly implicated in the process of making histories and connections to place. These are the foundation of power in Coast Salish society, and forming the fundamental bifurcation between the Upper and Lower classes.

### ***Difficult Deaths and the Need to Separate the Living and the Dead***

The dead, whether their intentions were benign or malevolent in life, were defined by their liminal nature as powerful and dangerous entities that required careful and respectful ritual expertise. It is this liminal character of the dead that causes uncertainty and fears for the well being of the living when the dead are disturbed, be it in the distant past or today.

While the dead were increasingly implicated in the affairs of the living with the advent of funerary petroforms, they were also paradoxically understood as inherently dangerous and there arose a necessity to separate a cross-section of the Rocky Point dead conclusively and concretely from the living. A successful funerary ritual was one that created a physical and supernatural barrier separating this world from the next, but in a respectful way befitting that of the dead and their family. This is evident in the placement of funerary petroforms at Rocky Point, spatially removed from the village and visually isolated both from the houses of the living, as well as from travel routes between villages.

Building funerary petroforms at Rocky Point was done in a time when many, or even most people's bodies were disposed in a way that left no archaeological trace: perhaps left in the open or placed in the ocean. The containment of a group of the dead under tones of stone and soil, and away from the village, suggests that they were perceived as distinctive in some way and that particular concerns or anxieties surrounded their bodies or their deaths.

I argued in Chapter 11 that people interred within funerary petroforms were those whose deaths provoked anxiety or posed a risk to the living. These were dangerous deaths and bodies. Certain members of a community may have been seen as especially potent, their remains needing special containment. Material and spatial distinctions were made for this category of the dead. In many instances, these may have been the powerful and elite members of society, whose death posed immediate difficulties, resulting in the potential rupture of critical social and economic relationships. The building of funerary petroforms was almost certainly concerned with power and inequality, and the deaths of these individuals was a threat to the social and economic well being of not just the immediate family, but to the larger kin network as well. With the social rupture caused by a death, the personhood of the dead was undone. The corpse was consequently perceived as a source of pollution and corruption and the incorporeal aspects of the person were something that was inherently (although often inadvertently) dangerous. A particular

concern was the potential for the newly dead to carry the souls of grieving family into the world of the dead.

To moderate the danger, the dead were removed from the village of the living, concealed and anchored under stone, sealed in this vault with sediment, and placed on a part of the landscape where they were not easily visible. The building of funerary petroforms, however, is not simply a reflection, or common yardstick measure of status. As I outlined in Chapter 4, factors other than status may crosscut the form of funerary practice. I cited the example of the False Narrows site, where during the Middle Pacific period, it was the cause of death (violence of disease) that seemed to determine who was cremated and buried within boulder crevices or who was buried below ground within midden inhumations. It may be that the death of loved ones by violence, death caused by sorcery (perhaps physically manifested as disease), and the death of inherently liminal people (shamans, twins, etc.) required ritual steps to mitigate the danger to the living. Members of different statuses, however, were interred in both situations. While this site and its funerary practices predate funerary petroforms, it highlights a Coast Salish precedent for people with difficult deaths requiring a specific kind of transformation. The corpse was quickly and dramatically transformed by fire—a practice evident at Rocky Point (Chapter 7)—removed from domestic space, and concealed and anchored within a complex of large boulders. Other difficult deaths, such as those of shamans, must have also posed a risk to the living and required ritual actions to mitigate the danger to the living. These most difficult of bodies may have been removed to the most distant and liminal of cemeteries, such as Race Rocks.

This rhetoric of danger and fear of the dead, much like the danger and apprehension experienced in the presence of a spirit dancer with potent *sia'wən* power, also reveals that social power itself is liminal and unpredictable. The necessity to contain the powerful dead through the various forms of separation evident at Rocky Point speaks to the potency of the living descendants and the power of the family and the house. Those most powerful were the most isolated. This is evident in the placement of the placement of Type 4 funerary petroforms on top of Central Hill at the Yates Cemetery. These largest features are spatially isolated on top of a hill and are the least visible of all funerary petroforms at the site, despite their unusually large volumes. Race Rocks also as the highest median feature volume of any cemetery at Rocky Point, suggesting that while only a small number of funerary petroforms were built there, efforts were made to build unusually large features on top of these already very spatially isolated dead. While

Race Rocks, situated well out into the Strait of Juan de Fuca, and separated from Vancouver by treacherous currents was a very isolated place, like the funerary petroforms at the Yates Cemetery, the burial island is also visible at the threshold of sight from many points around greater Victoria.

### ***Transforming the Living through the Transformation of the Dead***

Straits Salish funerals were rites of passage. Death and burial are times of intense emotion and funerary petroforms were built in efforts to see to the needs of dead; they were acts of caring and lamentation. But they were also an effort at commemorating people who may have been pivotal members of the house and transmitters of knowledge, memories of ancestors, and genealogies, for their own families as well as those they were connected to through marriage or other ties. With their death, families lost a vital connection to the past and the present. This loss was likely a crisis, prompting the survivors to conduct funerary ritual appropriate to begin the process of transferring this knowledge and ancestral prerogative to the survivors.

During the ritualized actions that produced them, funerary petroforms worked to define an initial and provisional new identity for the dead. It was during this time that ritual experts, family members, and witnesses worked to place the dead in an appropriate kind of funerary petroform and in a space befitting them.

The mourners were concerned with ensuring the welfare of the dead, removing the corpse to a safe place, and seeing to the emotional and social well being of close kin and mourners. The building of funerary petroforms elaborated the material aspects of the funerary process; a focusing of ritual work on the liminal corpse. This served to set the stage for subsequent rites of aggregation that occurred over the longer term, culminating in a funerary potlatch and subsequent ritual burnings for the dead. As part of this longer ritual process, the dead were transformed into ancestors, social and economic connections that were threatened by the death of pivotal family member were renewed, and mourners assumed new roles as inheritors. The building of funerary petroforms was the moment in which the larger ritual process of transformation and transferal was initiated. The building, placement, and form of the funerary petroform were important initial efforts that set the stage for the transformation of the dead from corpse to ancestor and the living from mourner to inheritor.

It 'makes sense' in Coast Salish epistemology to use stone for the purposes of burial, since the metaphorical aspects of stone and the ritual objectives of funerals both entailed qualities of

transformation, anchoring, containment and concealing. It was these aspects of stone as both a material and a metonym that made funerary petroforms effective in concluding the liminal stages of funerary ritual.

### ***Ritual Dispositions and Depositional Practice in Coast Salish Funerals***

Continuities between inhumation burial and subsequent funerary petroforms, such as the use of stone, flexed bodies, cremation, and so forth, likely legitimated the advent and novelty of this newer ritual depositional practice. But importantly the corpse was removed outward from the domestic space of the village. The corpse was still hidden, but not beneath stone and soil constructions. The funerary petroform became a proxy for the corpse—a site of memory work and a citation in ritual contexts. But the building of funerary petroforms also elaborated the funerary ritual. It focused the process of ritualizing itself over a longer period of time, in the collection and deposition of stone and soil.

The funerary petroforms at Rocky Point defy easy classification. When looking for patterns in the kinds of stones used, the proportion of stone to sediment, the outline of the feature, and so forth, what emerges is a cloud of attributes around core ideas. The building of funerary petroforms was based on dispositions and negotiations rather than explicit templates of patterns. The dispositional typology I developed in this dissertation demonstrates a wide variability in this structured deposition, particularly amongst Type 1 features, which are smaller, curvilinear in outline, and tend to form clusters. Larger features, however, appear more conservative in form, are more likely to be isolated from other funerary petroforms and are also more likely to have straight sides. Type 4 features are very discretely defined and emerge as separate from all other funerary petroforms.

### ***Centre and Periphery in the Burial of the Dead at Rocky Point***

The spatial analyses conducted in the dissertation included a series of tests with the eight types of funerary petroforms, as well as an analysis based solely of feature size. The spatial analysis considered two basic aspects of funerary petroforms. First, determining if certain kinds or sizes of funerary petroforms aggregate together, at what scales these clusters form, and where these are located. Second, analysis entailed determining the visibility of funerary petroforms in different contexts.

Several of these analyses involved the application of novel spatial statistics such as Ripley's *K*-function to identify multi-scalar clustering, and Nearest Neighbour Hierarchical Cluster Analysis to identify the locations of those clusters. Continuous Sector Analysis was used to consider how clusters of funerary petroforms formed linear networks that might indicate movement from one cluster to another through the Edye Point cemetery. These three methods are relatively new spatial statistics; the latter two have not been previously applied, to my knowledge, in other archaeological contexts.

In Chapter 8, I proposed that understanding how different kinds and sizes of funerary petroforms interact with one another is a way to consider the reflexive nature of funerary petroform construction. These analyses indicated that both the Edye Point and Yates Cemeteries are comprised of small clusters of funerary petroforms. These aggregations of burials are significant, since the thematic analysis of the use of cemetery space indicates that families grouped their burials together within larger cemeteries. Larger corporate grouping of the dead may also be evident in the centre of the Edye Point cemetery, where NNHC analysis identified clusters of clusters, mostly of small and medium-sized Type 1 features with curvilinear outlines.

Conversely, the largest features—Type 4 features at the Yates Cemetery and generally the larger straight-sided Type 3 features at Edye Point—not only repelled one another, but also were repelled by clusters of other (mostly smaller) funerary petroforms. People who were liminal in society, such as shamans or presumably people with potent *sia'wən* power, had special ritual practices associated with them. In life, these were people set apart. These larger funerary petroforms occupied spaces along the edges of these clusters; much like household owners and other powerful peoples occupied the corners of the house and look inwards to the house centre and the commoners who lived there.

Clusters of funerary petroforms at both Edye Point and the Yates Cemetery are visually isolated from one another, often by microtopographic features such as low bedrock outcrops. This may be analogous to the low walls and mats that visually separated the interior of the house into different family groups. Other more isolated clusters of funerary petroforms, such as those at Cape Calver and Eemdyk passage may be kin groups situated at the social peripheries of Rocky Point, perhaps denied access to the larger groupings of families and corporate groups at Edye Point.

Race Rocks stands apart from these other isolated clusters of burials; in its remoteness, liminality and the dangerous journey required to get there, it may have been the cemetery for the most dangerous of bodies and most liminal of peoples. Or perhaps it was a cemetery for shamans and other spiritual experts, or those with *sia'wan* power of the South Wind Man (Chapter 8).

### ***Seeing, Movement, and Concealing the Dead***

In this dissertation, I conclude that there were different contexts in which funerary petroforms were experienced: the mundane context of travelling between villages, and the ritual context of moving intentionally through cemeteries, such as funeral processions. I identified possible pathways of movement in both these ritual and mundane contexts. I conducted a novel use of visibility analysis at the intra-cemetery scale. The accuracy of the archaeological data and the high-resolution digital elevation model allowed for the analysis of visibility in the space between two funerary petroforms, when the scale for visibility analysis is generally at a landscape scale. I also operationalized a Coast Salish sense of liminality in this analysis, by considering a third category of visibility—liminal—a narrow band existing at the interface between visible and not visible.

The placement of the cemeteries themselves was guided by principles that concentrated the dead on key landforms. These were places where mundane movement was funnelled, either overland like at the Yates Cemetery, or by sea travel at Edye Point. In both instances, the visibility analysis indicated that the dead were hidden in the context of mundane travel, existing peripherally at the threshold of visibility or hidden altogether. Within the Yates and Edye Point Cemeteries, clusters of the dead were further visually separated from one another by microtopography; with nearby clusters of funerary petroforms separated by often-subtle landforms such as low bedrock exposures, much like the interior of a longhouse, where mats or half walls partially isolated different family compartments. It was the house-owner and other powerful peoples in the house who were privileged with, or required, the most privacy. Extending this idea to the cemetery, the unusually large and distinctively built Type 4 features on Central Hill at the Yates Cemetery are also the most visually isolated. These were burials that were never visible from the trails bisecting the cemetery. To witness these funerary petroforms required moving off the trails and into ritual space.

I considered movement within a ritual context at Edye Point, where I identified possible pathways within that cemetery. Linear arrangements of funerary petroforms were defined by

continuous sector analysis and linear kernel density analysis, under the assumption that in a ritual context such as a funeral procession, mourners, ritualists and witnesses were moving from the village and through the cemetery. Burials may have been placed along such trails, as part of a process of moving through ancestral space bordering the world of the dead. It may have been in this context where the dead were openly and clearly seen, but under the protection of ritual specialists.

There are layers of concealment in the burying the Rocky Point dead. The dead were concealed with mats—the corpse was concealed within the stone cairn and this was then concealed with a layer of soil (which often deflated, revealing again the stone structure). The funerary petroform itself was placed where it was concealed on the landscape and through time it became further concealed with lichens and mosses. But each of these ritualized steps of concealment was witnessed, or at least people were aware they existed, and therein lies the power of this process—creating a tension between display and concealment is an acknowledgement and awareness that the body had to be hidden as part of the transformation from corpse to ancestor. While the dangerous and polluting body was anchored and hidden from view, the ancestral presence was constituted and thereafter dwelling along the boundaries of the living and the dead.

### ***The Power of the Dead at Rocky Point***

I have presented a case for the active process of ritualizing the dead at Rocky Point as a means of negotiating authority by a group of people tapping into an extra-communal source of power. This appeal to ancestral order brought the power of the dead back into the community of the living. While this was a strategy and scheme of power, it also empowered everyone in some way for this to be an effective form of ritual. As I have argued, the ritualization of the burial of the dead assured everyone that they benefited in some way from the schemes that identify and channel power. This empowerment, while perhaps minimal or even illusory (Bell 2007:287), meant that everyone emerging from the rite had a sense of empowerment and felt as though they were able to deploy schemes of authority, even if they did not profit by everything that was said or done. But there were likely varying levels of ritual mastery, and participants need not fully understand what was happening. In fact, obfuscation and secrecy makes ritual effective at what it does.

Coast Salish ritual practice, evident at Rocky Point in the material and spatial production of funerary petroforms and cemeteries, was a strategy, an ongoing and evolving process of action.

Funerary petroforms and the cemeteries they constitute are not a reflection of ritual practice, they are the means by which dispositions and ideas were shaped. The physical act of moving stone and soil, or even an awareness of this as something happening close to the village, had the power to create people invested with a sense of ritual. Funerals produced ritualized bodies. While I have argued that the building of funerary petroforms was concerned with the transformation of the dead from corpse to ancestor, this was a process parallel to the transformation of surviving kin from mourners to inheritors. It was through long-term practices that memory and tradition were realized. This suggests that the Coast Salish people may have maintained a long-term spatial emphasis on genealogical relationships, linking families to places for at least 4,000 years in the Salish Sea. What changes is the degree to which the ideology of respect for the ancestors was practiced and the extent to which the dead were increasingly entangled in the lives and affairs of the living. The advent of funerary petroforms, and the emphasis on the spatial and material distinctions between the living and the dead, but among the dead themselves, speaks to the dead as agents in the production and legitimation of the social order.

The *si'pém'* needed the support of their powerful dead in order to carry out the responsibilities of managing their household. The dead, as transformed ancestors, were powerful and sentient agents who worked as guardians of ancestral traditions, rights, and privileges, as well as the embodiment of land tenure. Death increasingly became a continuum along which personal relationships, histories, and genealogies could be extended.

The burial of the dead using stones and soil was a constant play off other fields of action, echoing and alluding to practices outside the cemetery. There are complex relationships with stones and soil and the producing of camas fields and the anchoring reef-nets. These were physical transformations of the landscape and seascape, two of the most critically important economic practices of the Straits Salish peoples. Both of these practices were also concerned with the creation and maintenance of distinct places, places that were controlled through a land tenure practice founded on familial histories of use and practice. These connections and histories defined individuals, families, and communities and their social and economic relationships. It was the ancestors who connected peoples to these places and provided this connection with a sense of timeless precedent.

Ancestral connections, manifest both materially and spatially at Rocky Point, and ethnographically, speak to a process of history making; a process in which tradition becomes

focused on ritual practices that elaborate both the simultaneous danger and transformation of the corpse. A corpse that needed to be both concealed and anchored to appropriate places for the protection of the living. This anchoring and place making are actions of memory work that through time produce familial histories. But these histories were not symmetrical or inclusive. They became foundational to defining *siʔém'*, or those who know their *ČilE ʔan*, their history (Suttles 1951:302).

While these practices were concerned with the making of histories and places, we must also consider what ritual denied, what it inverted. The building of funerary petroforms was as much concerned with denying histories and connections as it was in making them. Upper class status implied that one had “advice”, or *snəp*, consisting of knowledge of genealogies and family traditions demonstrating family greatness, and the social capital of a good hereditary name and rights. Wealth was simply a product of and proof for the possession of the intangible assets of immaculate ancestry, ritual knowledge, and the supernatural support of the ancestors and acquired spirit power.

To lack or be denied access to ritual knowledge and expertise was what prohibited some people from making funerary petroforms. The building of funerary petroforms was a ritual practice; moving stones and soil was part of the embodied process of building these features, but it was the ritualizing and invested esoteric knowledge that made them effective things at transforming, anchoring and containing the dead. While piling stones produced cairns—and was something anyone could physically do—it was ritual expertise that made funerary petroforms forceful things. An arrangement of stones over the dead, without the appropriate ritual procedures, oversight, and guidance, would not have produced an effective funerary petroform, thus endangering the living and upsetting the dead. Consequently, this situated the *stéxəm* and others lacking access to this ritual as dependent upon the permissions, assistance, and obligations of those with intangible ancestral connections and knowledge. Or, it excluded the ritual from them altogether.

In Coast Salish society, knowledge is invested temporarily in the individual (who assumes an inherited ancestral name with its own historical trajectory and persona) and warehoused in the longer-lived corporeal and architectural entity that is the family and house group. But in the absence of clans, which produced a kind of symbolic immortality (Kan 1989), the Coast Salish used other means to preserve the longevity of families and houses. Unlike many other groups on

the Northwest Coast, the Coast Salish do not use crest imagery. These crests embody specific historical narratives that were “associated with the roles of office within a corporate group. Such symbols acted as historical cues, markers of status, statements of title and access to resource and territories, and examples of spiritual and hence political authority” (Martindale and Letham 2011:8). Rather, the Coast Salish peoples of the Middle and Late Pacific periods used funerary petroforms as their own kind of memory work with the intention to anchor individual and familial histories and ancestral narratives to place.

These are places dense with ritual meaning and significance. These “ghost heaps” (Hill-Tout 1930:121) were referential to ancestral presence embodying these stone houses and constituting these powerful places. These were places that embodied the order of the world, connecting ancestral precedence with the present and working towards producing ritualized bodies inculcated in these ancestral narratives. Unlike the prominent displayed crests used elsewhere on the Northwest Coast, funeral petroforms were hidden from daily view. The kinds of histories produced by the Coast Salish through their ritual practices were oblique and hidden from daily view. A more overt assertion of history would have likely met with resistance and defeat, as there were institutions within Coast Salish society to defeat hierarchy<sup>37</sup>. Gossip and public opinion, for example, provided effective limits on aggrandizement. The fields of power were largely concerned with securing “a good name,” and being well thought of.

But within these structures that limited personal and familial aggrandizement, the very materiality of funerary petroforms and their placement served to shape the fields of power. The visibility analysis I conducted in this research demonstrated that funerary petroforms, while visible and ritually structured, also had the capability to fade from view, existing at the threshold of perception, while quietly framing behaviour. Funerary petroforms achieved their mastery specifically because people failed to recognize what they did. Funerary petroforms framed the daily lives of the Rocky Point peoples, working from the peripheries to shape disposition, guide behaviour, and structure perception, movement, and action. Situated near to the villages and

---

<sup>37</sup> Ethnohistoric grave houses, particularly those on small islets and points of land, were presumably quite visible. If this funerary practice post-dates the building of funerary petroforms, it may be part of a change in the relationship between the living and the dead, a difference between communities of practice, or the existence of a parallel funerary practice. This is evident at the False Narrows Bluff site (Chapter 4), where the cause of death, more so than status or other distinctions, determined the correct course of funerary action (inhumation versus cremation and inland rock bluff burial). I suspect there has been, since at least the Middle Pacific period, a repertoire of ritualization that the Coast Salish peoples could draw upon, as the situated demanded. Funerary petroforms were only one of these avenues during the transitional Middle/Late Pacific periods.

along the major routes of travel between them, they were something that could not easily be recognized or challenged since their power worked below the level of discourse, implicitly conditioning people as social beings. The experiences of living and being in the world are shaped through our bodies (Meskell and Joyce 2003) and the categorization, ordering and placement of objects and daily interactions with things and places, from birth to death, imparts in us the expectations of the social group. I have demonstrated that the ordering of the longhouse, for example, was homologous with fields of power, grounding intangible social ideals in the tangible material world. This habitual way of being in the world and the underlying social order became second nature. The material and spatial context of funerary petroforms was a context for behaviour, cuing dispositions, and determining expectations that frame actions in those times and places.

In this dissertation I have avoided the meaning of funerary ritual and the burials they produced. Rather I have focused on the active role of material culture, space and place, and ritualized depositional practices to shape people as social beings. Funerary petroforms were not a passive representation of social relations or a mirror of social structures. Rather, the spatial and material products of the ritual process provide archaeologists with sources of insight into the ways in which culture was, and continues to be, actively produced by engagements with the Coast Salish ancestral dead.

There is a dichotomous nature to funerary petroforms as an expression of power and a simultaneous containment of that power. In Coast Salish eschatology, upon death, binding the physical body and removing it from the village of the living to a formal cemetery contained the corporeal body. During the funeral, a petroform was built over the body, often with one or more concentric perimeters of stone around the corpse before the entire feature was covered with stone and soil. The form and size of the funerary petroform was an assertion by those burying the dead of the nature and potency of the spirit power that had to be contained for the mutual well being of the living. This was simultaneously a top-down assertion of the potency and the inherited rights and privileges of those burying the dead, as well as a bottom-up process in which participants and witnesses could contribute in the very containment of that power. But by participating in this schema of power, all were inculcated, consciously or not, in the ancestral power associated with the dead. These ideas relate to the increasing centrality of the ancestors in

the production and legitimization of the fields of power at Rocky Point and of the ritualization of long-term history making and social memory.

The authority of the *si'łém* was based on esoteric and inherited knowledge and ritual expertise. But just as relations of power are engendered from the top-down, there must also be conduits for that power from below. This was not simply rhetoric of respect for the ancestors masking inequality and competition. People could deploy, play along with, and manipulate the basic schemes of power to varying degrees of success. But ritual does not demand complete consensus. The most successful ideological efforts are those that have no need for words, asking only for complicit silence (Bourdieu 1977:188) and adherence to the norms of polite behaviour (Bloch 1975:12,16). In other words, funerary ritual can tolerate a certain degree of dissent; all that is required is some modicum of consent. It is difficult to argue with a song or a prayer. With every funerary petroform that was built, however, this worked towards creating ritualized bodies, past burials in the cemetery cuing future action, and increasingly legitimating the schemes of power in the burial of the dead. Those schemes of power invested in the cemetery translate into the local interactions of everyday life. The embodiment of ritual produced ritualized agents and because rituals attach peoples to sets of meanings it is hard to then ignore those meanings in other venues of life. This creates an instinctiveness of power relations framed in reference to the ultimate organization of the cosmos. As rituals create and enforce core social meanings, the material and spatial record of ritualization can give archaeologists privileged insight into past social process at multiple scales of analysis.

During the Late Pacific period, funerary ritual served to depersonalize authority, investing power in the hereditary position and work of ritual specialists. The ancestors, as active agents, reinforced the idea that particular power was only accessible to those with hereditary rights to this restricted knowledge. But the power granted through ritual was likely unwieldy and imprecise, since the basis of that power was founded on adherence to tradition and precedence.

In Coast Salish society, there was likely a collective mourning and honouring of the dead, in which to openly disagree or refuse to participate was not only an insult to the living hosts, but an offence to the ancestors who were believed to be present and engaged in the funerary rituals. At the conclusion of the funeral and associated memorial potlatch, participants were expected to leave their conflicts and jealousies behind. In this way, the sacredness of Straits Salish funerals placed some limitations around individual and household aggrandizement as well as serving as a

source of motivation for the living to abide by the rules of generosity and cooperation. While the agreement that participants reached about the distribution of power in their social world may have been fragile and open to dissent at times, in a decentralized society of both cooperating and competing families and households, it was likely enough to support the serious games of the elite while simultaneously working towards levelling or defeating hierarchy.

Burying the dead at Rocky Point was a tension between process and product. The act of building the funerary petroform was an essential process in the production of ritualized peoples and places. The results of the visibility analysis suggest that in the context of daily life, the finished product was something usually fleetingly glimpsed through the corner of their eyes (sensu Morphy 1989:26). In the context of funerary ritual and movement within the cemetery, however, the dead were visible and present. As material and spatial products, the networks for funerary petroforms and the power residing in stones and other materials worked towards shaping dispositions and guiding the present and future practices of the Rocky Point peoples. The presence of the first funerary petroform cued or encouraged the possibility of a second and with each new burial, new possibilities were created, predicated upon and legitimating practices based on the presence of existing burials. Each successive burial was a movement towards creating the place and the history of ritual and depositional practices there. Through time, the history of relationality between the survivors of the dead buried there was negotiated, maintained, and contested. The spatial and material dispensations of the burials provided citations for bodily practices, perception and movement through these cemeteries. These were sites for ritualizing bodies and producing memories, both of which worked towards inculcating peoples in the relations of power manifest in the emergent and ongoing funerary landscape.

At Rocky Point, the dead were inscribed in place through depositional practices and made into ancestral beings through ritual work in sacred places. These cemeteries were places embodying ideas of transformation, ancestral journeys, and the afterlife. They anchored the ancestors to places in an idealized and concrete way, in contrast to the larger seasonal movements and perishable materiality of the living. These funerals were creative acts of and for the ancestors, a medium for memory that formed familial and community identities and narratives through time. As such, they were central places to continual rebirth of knowledge, familial connections to place, history, and power.

## **Summation**

Archaeologists must be wary of imposing their own, often hierarchical, notions of social relationships on the archaeological record and the peoples that produced it. This is not to deny that power inequalities existed in the past, they almost always did. Rather, a more hierarchical approach is to focus on the local lived experiences of peoples in the past, considering the level at which households, kin and community linked landscape, space and materials through ritual practice.

The building of funerary petroforms was a ritualized process of memory work situated within personal and communal bereavement. Rather than a simple escalation of hierarchy, however, the use of funerary petroforms during the Late Pacific period was implicated in the development and maintenance of overlapping social networks and ritual contexts for action.

There is a metaphorical connection to those who lie buried inside a funerary petroform, an ideology of transformation in which the dead are transformed from a living member of a family, house, and village, to a revered, remembered and powerful ancestor. Power, tradition and structure were made and remade over the course of protracted historical encounters between asymmetrically powerful families and houses. Ritual authority, which derived its legitimacy from formalization, historic precedent, and esoteric knowledge, presented a timeless continuity with the ancestors and an idealized past.

Building funerary petroforms, as a form of memory work, history making, and place making, was also a process restricting subordinates from engaging in their own practices and projects to make histories and connections to places. Indelible history, connections to place, as well as the intangible assists of ritual knowledge were resources non-elites desired and needed to define their places in the world. Restricting who could, or could not define and “know their history” served, intentionally or not, to undermine the autonomy of followers, binding them in relations of dependency. As such, the fields of power in Late Pacific period Coast Salish society were predicated in part upon a community of ritual practice’s access to the capabilities of building funerary petroforms, as a process of both attending to the needs of the living and the dead, and as a form of memory work implicit in to making and remaking of history, identity, and connections to place by those with the rights to bury their dead in this way.

The principle form of power invested in funerary petroforms was ritual knowledge—but just as these burials worked towards defining relations of power, they were also the means by

which power could be limited and hierarchy could be contested or defeated. The kind of power created by ritual at Rocky Point was likely unwieldy, imprecise and as much bottom-up and it was top-down. This means that to understand the building of funerary petroforms as a practice culturally, geographically and temporally contingent to the Coast Salish people is to reject funerary petroforms as a relative yardstick by which to compare status or as a mirror of the social persona of the dead. Rank, status, and other forms of hierarchy are not givens in funerals (Chapter 2). Rather, there are tensions, negotiations and contesting in the maintenance of power, including power that is hereditary.

Funerary petroforms are also a material and spatial metonymy, mapping the larger Straits Salish ideas about the dead and the afterlife. There is an underlying structure and meaning in these arrangements of rock and soil. They are a cue, a silent reminder of the durability of the power relationships of the living into the afterworld of the dead. Power both inherited and earned in life is carried with one through the boundary of death and there in the world of the ancestors becomes a timeless resource for their surviving kin. While funerary petroforms were built in a moment in time as part of a process of bereavement and commemoration, they were also a critical first step in the rite of passage towards the metaphorical transformation of the corpse to an ancestor. And through time, the social memory invested in them was implicated in the transferal and legitimatization of power among the living. The event of death is transformed from a passing personal emotional loss to something experienced communally; it is the production of a narrative of the past. The cemetery is a site where competing narratives are played out, reinforcing the social order but also a place of contestation, within acceptable limits, of this social order.

In Coast Salish society, the collective mourning and honouring of the dead unified groups and as participants emerged from the funerary process; they were expected to leave their conflicts, disputes and jealousies behind. To openly disagree or refuse to participate was not only an insult to the living hosts, but an offence to the ancestors who were believed to be present and engaged in the funerary rituals. In this way, the sacredness of Coast Salish funerals placed limitations around individual and household aggrandizement as well as serving as a source of motivation for the living to abide by the rules of generosity and cooperation.

In this research, I have presented evidence outlining ritualized depositional practices in the burial of the Rocky Point dead. Analysis of the placement of stone and soil in the building of

funerary petroforms is an entry point through which we can consider the long-term process of ritualization. The materialization of ritual is not a measure or reflection of power; ritual is the very production of power. To take this seriously means to consider what ritual does, what it accomplishes and effects in its practice.

I have argued that ritual deposition and practice at Rocky Point was an active producer of the archaeological record, a tension between tradition and innovation through time, space, and material. The ritualized use of space and material in the building of funerary petroforms is amenable to systematic recording and empirical analysis at scales ranging from the individual funerary petroform (composed of selected and arranged stones and sediment), to the cemetery and landscape scale as a totalized sum of these depositional practices. The mixed methods I have used in this dissertation are well suited to tacking back and forth between the data I collected at Rocky Point and the premise that ritual entails a depositional practice with material and spatial outcomes.

## **Epilogue: Our Entanglements with the Coast Salish Dead**

The past has an ever-changing role in shaping our lives (Lowenthal 1985). It allows us to make sense of the present while simultaneously imposing powerful constraints upon the way that very present develops. Some aspects of the past are celebrated and carried forth through memory work, others forgotten or even eradicated. But the past, constituted by its ubiquitous material and spatial actants, is inescapable (Lowenthal 1985).

The ritual and depositional practices of the Rocky Point people during the Middle and Late Pacific periods produced two large cemeteries situated along the peripheries of their villages, as well as smaller cemeteries between and around them. These burials were an unfolding ritual process that engaged bodies, materials, and places through time, in a process with no conceived or intended end-point. When the practice of building funerary petroforms ceased sometime during the end of the Late Pacific period, the burials themselves continued their work as active and entangling agents. These are ancestral nodes—places of gravitas—with a valence founded in their materiality and relationality to other burials. They are the powerful and liminal actants of the Rocky Point landscape. Situated on prominent and significant landforms, yet hidden from daily view, these funerary petroforms never stopped working. The cultural and historical trajectory of this ancestral entanglement continues today for the Coast Salish peoples, who may still reckon familial connections to funerary petroform cemeteries throughout the Salish Sea. They certainly recognize these as ancestral and thus sacred places, the avoidance and protection of which are of paramount concern.

To disturb the dead is to both continue the painful colonizing process of erasing connections to places and histories, but it may also preface misfortune and death in Coast Salish communities, as the dead who may be angry and confused, find their way back to living descendants (e.g., Boyd 2009; Mapes 2009). This connection, and concomitant custodial responsibility between the Coast Salish peoples and their ancestral dead is evident at Rocky Point. I have argued, for example, that the process of building funerary petroforms was a depositional practice originating in the transitional Middle/Late Pacific period and concerned with the ritualized transformation of the dead from corpse to ancestor. This anchoring of ancestral presence to place served the eternal needs of the dead, and as an act of bereavement, worked towards the longer-term process of transforming mourners to inheritors. There is also a longer history of attending to the well being of the dead, practiced for example, through ritual

burning (Chapter 4 and 6). This is evident at Rocky Point, as burned food was found in direct association with several funerary petroforms. But this genealogical practice has considerable antiquity, with convincing evidence for it almost four thousand years ago at Pender Canal (Chapter 4). It is a practice that continues today, as food is burned both for the recently deceased as well as the ancestral dead. This is a powerful narrative of durability and resilience, and while its material and spatial forms have changed over the past 4,000 years, there is clear continuity in this concern for the wellbeing of the dead.

The entanglements that I have discussed in this dissertation are not just limited to the past. Funerary petroforms continue to entangle us today. The Rocky Point Ammunition Depot and Training Area, presently a Canadian Armed Forces property (Figure 100), encapsulates most of the funerary petroforms in this study. As a result of both historic and present-day practices, the funerary petroform cemeteries at Rocky Point are likely the largest of their kind remaining on southern Vancouver Island. It is a profound irony that this landscape is still largely intact because the military occupies it, despite an absence of a clear Federal-level heritage mandate or in-house archaeologists to oversee it. The Department of National Defence is to be commended for its active, ongoing, and progressive stance in the protection of the funerary petroforms at Rocky Point.

There are tensions today around calling these cemeteries/sacred sites archaeological sites, as it has a way of foregrounding archaeological knowledge and simultaneously distancing the Coast Salish people from their own past and connections. Words like “prehistoric,” “precontact,” “cultural resource,” and even “archaeological site” make Coast Salish connections to these places seem less active, less visceral (Roy 2010:48-49). Archaeology, when it is attendant to a more historically and culturally contingent way of thinking about space, materials, and deposition, however, foregrounds these places as active and implicated in the relations of power both in the past and the present.



**Figure 100: Rocky Point is a place entangled with a complex history of practices.**

Funerary petroforms are touchstones to those deeply emotional and profound moments of loss in the past. In a sense, the present day treatment of funerary petroforms is to revisit this sense of loss and pain. How we treat the Coast Salish dead speaks volumes about how we treat their living descendants. While sites of resiliency and durability, Coast Salish cemeteries are under pervasive threat of destruction (Chapter 4). Despite provisions for protection under the British Columbia Heritage Conservation Act, funerary petroforms like those on Grace Islet, the small cemetery I introduced in the prologue, are being destroyed (or “mitigated”) every year. A fundamental flaw in the province’s current implementation of the heritage act is to treat funerary petroforms as though each one is an individual site, permitting roads, trenches, and house foundations between neighbouring burials. Doing so negates the cemetery as a sum of its parts. One of the principle lessons to emerge from this analysis is the importance not only of the physical form of funerary petroforms (and the human remains they contain), but also the spatial relationships between these burials and the cemeteries they comprise. The Rocky Point people were following a kind of material and spatial—and thus social and sacred—syntax in their burial of the dead. Funerary petroforms were placed on the landscape in patterned and specific ways, adhering to principles of visibility and dispositions concerning the appropriateness of burying each person in the right place and in the correct way. Building a house amongst funerary petroforms, even if not physically and directly impacting them, is an act of destruction in the breaking of the valence between these burials and the larger cemetery they constitute.

This work underscores some of the complexity in the funerary practices and histories of the Coast Salish peoples at Rocky Point, and by extension, Grace Islet and other cemeteries

around the Salish Sea. It is my hope that this dissertation adds to the present-day public discourse concerned with securing a future for Coast Salish funerary petroforms.

## References Cited

- Acheson, Steven and Sid Riley  
1976 *Gulf of Georgia Archaeological Survey: Powell River and Sechelt Regional Districts*. Report on file at the Heritage Resource Centre of the Ministry of Community, Aboriginal, and Women's Services.
- Alcock, Susan E.  
2002 *Archaeologies of the Greek past: Landscape, Monuments and Memories*. Cambridge University Press, Cambridge.
- Aldenderfer, Mark S.  
1982 Methods of Cluster Validation for Archaeology. *World Archaeology* 14:61-72.  
  
2010 Gimme That Old Time Religion: Rethinking the Role of Religion in the Emergence of Social Inequality. In *Pathways to Power*, edited by T. D. Price and G. M. Feinman, pp. 77-94. Springer, New York.  
  
2011 Envisioning a Pragmatic Approach to the Archaeology of Religion. *Archeological Papers of the American Anthropological Association* 21(1):23-36.
- Aldenderfer, Mark S. and Roger K. Blanshfield  
1984 *Cluster Analysis*. Sage University Paper Series on Quantitative Applications in the Social Sciences Series Number 07-044. Sage Publications, Newbury Park.
- Ames, Kenneth M. and Herbert D.G. Maschner  
1999 *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. Thames and Hudson Ltd., London.
- Amoss, Pamela  
1972 The Persistence of Aboriginal Beliefs and Practices among the Nooksack Coast Salish, Anthropology, University of Washington, Seattle.  
  
1978 *Coast Salish Spirit Dancing: The Survival of an Ancestral Religion*. University of Washington Press, Seattle.  
  
1990 The Indian Shaker Church. In *Handbook of North American Indians, Vol. 7: Northwest Coast*, edited by W. Suttles, pp. 633-639. Smithsonian Institution, Washington, D.C.
- Anaya-Hernandez, Armando and Ian R. Wilson  
2006 *Permit 2006-242, Archaeological Impact Assessment of Section 109, Sooke District*. Report on file at the British Columbia Archaeology Branch.
- Anderson, David G. and Kenneth E. Sassaman  
1996 *The Paleoindian and Early Archaic Southeast*. University of Alabama Press, Tuscaloosa.

- Anfinset, Nils and M. Wrigglesworth  
 2012 Introduction: Local Societies, Regions and Processes of Cultural interaction in the Bronze Age. In *Local Societies in Bronze Age Northern Europe*, edited by N. Anfinset and M. Wrigglesworth, pp. 1-9. Equinox Publishing Ltd., London.
- Angelbeck, B. and C. Grier  
 2012 Anarchism and the Archaeology of Anarchic Societies: Resistance to Centralization in the Coast Salish Region of the Pacific Northwest Coast. *Current Anthropology* 53(5):547-587.
- Angelbeck, Bill  
 2009 "They Recognize No Superior Chief": Power, Practice, Anarchism and Warfare in the Coast Salish Past, *Anthropology*, University of British Columbia, Vancouver.
- Appadurai, Arjun  
 1986 Introduction: Commodities and the Politics of Value. In *The Social Life of Things: Commodities in Cultural Perspective*, pp. 3-63. Cambridge University Press, Cambridge.
- Arcas Associates  
 1988 *Detailed Impact Assessment, Archaeological Site DgRs-2, Tsawwassen, B.C. Permit Report 1988-16*. Report on file at the British Columbia Archaeology Branch.
- Arcas Consulting Archeologists Ltd.  
 1994 *Archaeological Investigations at the Departure Bay site (DhRx-16), Nanaimo B.C.* On file at the Culture Library, Ministry of Sustainable Resources.
- Arnold, Bettina  
 2001 The Limits of Agency in the Analysis of Elite Iron Age Celtic Burials. *Journal of Social Archaeology* 1(2):210-224.
- Ashmore, Wendy  
 2004 Social Archaeologies of Landscape. In *A Companion to Social Archaeology*, edited by L. Meskell and R. Preucel, pp. 255-271. Blackwell Press, Oxford.
- 2007 Building Social History at Pueblo Bonito: Footnotes to a Biography of Place. In *The Architecture of Chaco Canyon, New Mexico* edited by S. H. Lekso, pp. 179-198. University of Utah Press, Salt Lake City.
- Ashmore, Wendy and Arthur Bernard Knapp (editors)  
 1999 *Archaeologies of Landscape: Contemporary Perspectives*. Blackwell Publishers, Malden.
- Baddeley, A.  
 2010 *Analyzing Spatial Point Patterns in R*. Commonwealth Scientific and Industrial Research Organisation, Perth.

- Baddeley, A. and R. Turner  
2005 Spatstat: An R Package for Analyzing Spatial Point Patterns. *Journal of Statistical Software* 12(6):1–42.
- Bailey, T. C. and A. C. Gatrell  
1995 *Interactive Spatial Data Analysis*. John Wiley and Sons, New York.
- Bancroft, Hubert Howe  
1875 *The Native Races of the Pacific States of North America* 4 Antiquities. Longmans, Green and Co., London.
- Banning, E. B.  
2000 *The archaeologist's laboratory : the analysis of archaeological data*. Kluwer Academic/Plenum Publishers, New York.
- Barclay, A. and J. Harding (editors)  
1999 *Pathways and Ceremonies: The Cursus Monuments of Britain and Ireland*. Neolithic Studies Group Seminar Papers 4, Oxbow Books, Oxford.
- Bard, K.  
1988 A Quantitative Analysis of the Pre-Dynastic Burials in Armant Cemetery 1400-1500'. *Journal of Egyptian Archaeology* 74:39-55.
- Barnett, Homer G.  
1938 The Coast Salish of Canada. *American Anthropologist* 40(1):118-141.  
  
1955 *The Coast Salish of British Columbia*. University of Oregon Monographs, Studies in Anthropology No. 4, Eugene.  
  
1957 *Indian Shakers: A Messianic Cult of the Pacific Northwest*. Southern Illinois University Press, Carbondale.
- Barrett, John C.  
1988 The Living the Dead and the Ancestors; Neolithic and Early Bronze Age Mortuary Practices. In *The Archaeology of Context in the Neolithic and Bronze Age: Recent Trends*, edited by J. C. Barrett and I. Kinnes, pp. 30–41. University of Sheffield, Department of Archaeology, Sheffield.  
  
1990 The Monumentality of Death: The Character of Early Bronze Age Mortuary Mounds in Southern Britain. *World Archaeology* 22(2):179-189.  
  
1994 *Fragments from Antiquity: An Archaeology of Social Life in Britain, 2900-1200 BC*. Blackwell, Oxford.  
  
1996 The Living, the Dead and the Ancestors: Neolithic and Early Bronze Age Mortuary Practices. In *Contemporary Archaeology in Theory*, edited by R. Preucel and I. Hodder, pp. 394-412. Blackwell Publishers Ltd., Oxford.

- 1999 Mythical landscapes of the British iron Age. In *Archaeologies of Landscape: Contemporary Perspectives*, edited by W. Ashmore and A. Knapp, pp. 253-268. Blackwell Publishers, Malden.
- 2000 Fields of Discourse: Reconstituting a Social Archaeology. In *Interpretive Archaeology*, edited by J. Thomas, pp. 23-32. Leicester University Press, London.
- Barrett, John C. and Mark Edmonds  
2002 Places Apart? Caves and Monuments in Neolithic and Earlier Bronze Age Britain. *Cambridge Archaeological Journal* 12(1):113-129.
- Barth, F.  
1975 *Ritual and Knowledge Among the Baktaman of New Guinea*. Yale University Press, New Haven.
- Basso, Keith  
1996 Wisdom Sits in Places: Notes on a Western Apache Landscape. In *Senses of Place*, edited by S. Feld and K. Basso, pp. 53-90. School of American Research Press, Sante Fe.
- Baxter, M.J.  
1994 *Exploratory Multivariate Analysis in Archaeology*. Edinburgh University Press, Edinburgh.
- Beck, Charlotte  
1994 Introduction: Dating in Exposed and Surface Contexts. In *Dating in Exposed and Surface Contexts*, edited by C. Beck, pp. 3-13. University of New Mexico Press, Albuquerque.
- Beck, Robin A. (editor)  
2007 *The Durable House: House Society Models in Archaeology*. . Center for Archaeological Investigations Occasional Paper No. 35, Southern Illinois University Carbondale.
- Beckwith, Brenda R.  
2004 "The Queen Root of This Clime": Ethnoecological Investigations of Blue Camas (*Camassia leichtlinii* (Baker) Wats., *C. quamash* (Pursh) Greene; Liliaceae) and its Landscapes on Southern Vancouver Island, British Columbia, Biology, University of Victoria, Victoria.
- Behrensmeyer, A.K.  
1978 Taphonomic and Ecologic Information from Bone Weathering. *Paleobiology* 4:150-162.
- Bell, Catherine  
1992 *Ritual Theory, Ritual Practice*. Oxford University Press, New York.  
1993 The Authority of Ritual Experts. *Studia Liturgica* 23:98-120.

- 1997 *Ritual: Perspectives and Dimensions*. Oxford University Press, New York.
- 2002 "The Chinese believe in spirits": Belief and Believing in the Study of Religion. In *Radical Interpretation in Religion*, edited by N. K. Frankenberry, pp. 100-116. Cambridge University Press, Cambridge.
- 2007 Response: Defining the Need for a Definition. In *The Archaeology of Ritual*, pp. 277-288. Cotsen institute of Archaeology, Cotsen Advanced Seminar 3, Los Angeles.
- Bell, Michael M.  
1997 The Ghosts of Place. *Theory and Society* 26:813-836.
- Bell, T. and G. R. Lock  
2000 Topographic and Cultural Influences on Walking the Ridgeway in Later Prehistoric Times. In *Beyond the Map: Archaeology and Spatial Technologies*, edited by G. R. Lock, pp. 85-100. IOS Press, Amsterdam.
- Bender, Barbara  
1992 Theorizing landscape and the prehistoric landscapes of Stonehenge. *Man* 27(4):735-755.
- Bender, Barbara, Sue Hamilton, Christopher Tilley and Ed Anderson  
2007 *Stone Worlds: Narrative and Reflexivity in Landscape Archaeology*. Publications of the Institute of Archaeology, University College London. Left Coast Press, Walnut Creek, Calif.
- Berggren, Åsa and Liv Nilsson Stutz  
2010 From Spectator to Critic and Participant; A New Role for Archaeology in Ritual Studies. *Journal of Social Archaeology* 10(2):171-197.
- Bernick, Katheryn  
1983 *A Site Catchment Analysis of the Little Qualicum River Site, DiSc-1: A Wet Site on the East Coast of Vancouver Island*. Mercury Series, Archaeological Survey of Canada Papers 118. National Museum of Man, Ottawa, Ont.
- Besag, J.  
1977 Discussion of Dr Ripley's Paper. *Journal of the Royal Statistical Society, Series B* 39:193-195.
- Bevan, Andrew and James Conolly  
2006 Multiscalar Approaches to Settlement Pattern Analysis. In *Confronting Scale in Archaeology: Issues of Theory and Practice*, edited by G. R. Lock and B. Molyneaux, pp. 217-234. Springer, New York.

- Binford, Lewis R.  
 1967 Smudge Pits and Hide Smoking: The Use of Analogy in Archaeological Reasoning. *American Antiquity* 32(1):1-12.
- 1971 Mortuary Practices: Their Study and Their Potential. In *Approaches to the Social Dimensions of Mortuary Practices*, edited by J. A. Brown, pp. 6-29. vol. 25. Memoirs for the Society of American Archaeology, New York.
- Bird, J. H.  
 1989 *The Changing Worlds of Geography: A Critical Guide to Concepts and Methods*. Oxford University Press, New York.
- Blake, Michael  
 2004 Fraser Valley Trade and Prestige as Seen from Scowlitz. In *Complex Hunter-Gatherers Evolution and Organization of Prehistoric Communities on the Plateau of Northwestern North America*, edited by W. C. Prentiss and I. Kuijt, pp. 103-114. The University of Utah Press, Salt Lake City.
- Blake, Michael, Gary Coupland and Brian Thom  
 1993a Dating the Scowlitz Site. *The Midden* 25(1):7-9.
- 1993b *Up-date on Scowlitz: Dating the Scowlitz Site*. Report on file at the Heritage Resource Centre of the Ministry of Community, Aboriginal, and Women's Services.
- Blakely, Sandra  
 2011 Toward an Archaeology of Secrecy: Power, Paradox, and the Great Gods of Samothrace. *Archeological Papers of the American Anthropological Association* 21(1):49-71.
- Bloch, Maurice  
 1971 *Placing the Dead: Tombs, Ancestral Villages, and Kinship Organization in Madagascar*. Seminar Press, New York.
- 1974 Symbols, Song, Dance and Features of Articulation: Is Religion and Extreme Form of Traditional Authority. *European Journal of Sociology* 15(1):55-81.
- 1975 *Political Language and Oratory in Traditional Society*. Academic Press, London.
- 1977 The Past and the Present in the Present. *Man* 12:278-292.
- 1986 *From Blessing to Violence: History and Ideology in the Circumcision Ritual of the Merina Of Madagascar*. Cambridge Studies in Social Anthropology. Cambridge University Press, Cambridge.
- 1992 What Goes Without Saying: the Conceptualization of Zafimaniry Society. In *Conceptualizing Society*, edited by A. Kuper, pp. 127-146. Routledge, London.

1994 *From Blessing to Violence: History and Ideology in the Circumcision Ritual of the Merina of Madagascar*. Cambridge Studies in Social Anthropology. Cambridge University Press, Cambridge.

1995a Questions Not to Ask of Malagasy Carvings. In *Interpreting Archaeology: Finding Meaning in the Past*, edited by I. Hodder, M. Shanks, V. Buchil, J. Carman, J. Last and G. Lucas, pp. 212-215. Routledge, London.

1995b The Resurrection of the House Amongst the Zafimaniry of Madagascar. In *About the House Levi Strauss and Beyond*, edited by J. Carsten and S. Hugh-Jones, pp. 69-83. Cambridge University Press, Cambridge.

2005 Ritual and Deference. In *Essays on Cultural Transmission*, edited by M. Bloch, pp. 123-137. London School of Economics Monographs on Social Anthropology. Berg, Oxford.

Boas, Franz

1888 *The Houses of the Kwakiutl Indians*. Proceedings of the United States National Museum of Anthropology.

1890a First General Report on the Indians of British Columbia. *Report of the British Association for the Advancement of Science* 59:801-899.

1890b *Sixth Report of the British Association for the Advancement of Science*. British Association for the Advancement of Science, London.

1891 Second General Report on the Indians of British Columbia. *60th Report of the British Association for the Advancement of Science for 1890*:562-715.

Boivin, Nicole

2004 From Veneration to Exploitation: Human Engagement with the Mineral World. In *Soils, Stones and Symbols: Cultural Perceptions of the Mineral World*, edited by N. Boivin and M. A. Owoc, pp. 1-30. UCL Press, London.

2008 *Material Cultures, Material Minds*. Cambridge University Press, Cambridge.

2009 Grasping the Elusive and Unknowable: Material Culture in Ritual Practice. *Part of a special issue: Materiality, Belief, Ritual: Archaeology and Material Religion* 5(3):266-287.

Boivin, Nicole and Mary Ann Owoc (editors)

2004 *Soils, Stones and Symbols: Cultural Perceptions of the Mineral World*. UCL, London.

Boots, B. and A. Getis

1988 *Point Pattern Analysis*. Sage Publications, Newberry Park.

Borić, Dušan

2003 'Deep Time' Metaphor: Mnemonic and Apotropaic Practices at Lepenski Vir. *Journal of Social Archaeology* 3(1):46-74.

2007 The House Between Grand Narratives and Microhistories: A House Society in the Balkans. In *The Durable House: House Society Models in Archaeology*, edited by R. A. Beck, pp. 97-129. Occasional Papers, Vol. 35. Center for Archaeological Investigations (CAI), Southern Illinois University, Carbondale, IL.

2008 First Households and 'House Societies' in European Prehistory. In *Prehistoric Europe: Theory and Practice*, edited by A. Jones, pp. 109-142. Wiley-Blackwell, Chichester.

Bourdieu, Pierre

1970 The Berber House or the World Reversed. *Social Science Information* 9:151-170.

1977 *Outline of a Theory of Practice*. Cambridge University Press, Cambridge.

1984 *Distinction. A Social Critique of the Judgement of Taste*. Routledge, London.

1990 *The Logic of Practice*. Polity Press, Cambridge.

1991 *Language and Symbolic Power*. Translated by M. Adamson and G. Raymond. Harvard University Press, Cambridge, MA.

Boyd, Colleen E.

2009 "You See Your Culture Coming Out of the Ground Like a Power": Uncanny Narratives in Time and Space on the Northwest Coast. *Ethnohistory* 56(4):699-731.

Boyd, Robert I.

1994 Smallpox in the Pacific Northwest: The First Epidemics. *B.C. Studies: A Quarterly Journal of Humanities and Social Sciences*.

Bradley, Richard

1990 *The Passage of Arms*. Cambridge University Press, Cambridge.

1993 *Altering the Earth: The Origins of Monuments in Britain and Continental Europe*. Monograph Series 8. Society of Antiquaries of Scotland, Edinburgh.

1998a Ruined Buildings, Ruined Stones: Enclosures, Tombs and Natural Places In The Neolithic Of South-West England. *World Archaeology* 30(1):13-22.

1998b *The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe*. Routledge, London.

2000 *An Archaeology of Natural Places*. Routledge, London.

2005 *Ritual and Domestic Life in Prehistoric Europe*. Routledge, London ; New York.

- Braun, David P.  
1981 A Critique of Some Recent North American Mortuary Studies. *American Antiquity* 46(2):398-416.
- Braun, V. and V. Clarke  
2006 Using Thematic Analysis in Psychology. *Qualitative Research* 3(2):77-101.
- Brolly, Richard P.  
1992 Little Beach Site, Ucluelet, B.C.: 1991 Archaeological Investigation. *The Midden* 24(1):2-4.
- Brown, Douglas  
1994 *Report on the 1994 Excavations of the Comiakén (Duncan) Burial Mound, Duncan, British Columbia*. Report of file at the British Columbia Archaeology Branch.  
  
1996 *Disposing of the Dead: A Shell Midden Cemetery in British Columbia's Gulf of Georgia Region*, Department of Anthropology, University of British Columbia, Vancouver.  
  
2003 Shell Middens and Midden Burials in Southern Strait of Georgia Prehistory. In *Archaeology of Coastal British Columbia*, edited by R. L. Carlson, pp. 153-164. Archaeology Press, Simon Fraser University, Burnaby.
- Brown, Douglas and Dana Lepofsky  
1997 *Report on the 1997 Excavations at the Scowlitz Site (DhR116), Fraser Valley, B.C.* Report on file at the British Columbia Archaeology Branch.
- Brown, J. A.  
1987 Quantitative Burial Analyses as Interassemblage Comparison. In *Quantitative Research in Archaeology: Progress and Prospects*, edited by M. Aldenderfer. Sage Publications, Newbury Park.
- Brück, Joanna  
1999 Ritual and Rationality. *European Journal of Archaeology* 2(3):313-344  
  
2004 Material Metaphors: The Relational Construction of Identity in Early Bronze Age Burials in Ireland and Britain. *Journal of Social Archaeology* 4(3):307-333.
- Bryan, Alan Lyle  
1963 *An Archaeological Survey of Northern Puget Sound*. Occasional Papers of the Idaho State University Museum, Number 11, Pocatello.
- Burley, David  
1980 *Marpole : Anthropological Reconstructions of a Prehistoric Northwest Coast Culture Type*. Publication / Department of Archaeology, Simon Fraser University. Dept. of Archaeology, Simon Fraser University, Burnaby, B.C.

- 1989 *Senewelets: Culture History of the Nanaimo Coast Salish and the False Narrows Midden, Memoir 2*. Royal British Columbia Museum, Victoria, B.C.
- Burley, David and Chris Knusel  
1989 Burial Patterns and Archaeological Interpretation: Problems in the Recognition of Ranked Society in the Coast Salish Region. *Proceedings of the Circum-Pacific Prehistory Conference: Development of Hunting-Fishing-Gathering Maritime Societies Along the West Coast of North America*. Reprint Proceedings, Volume III-C, The Circum-Pacific Prehistory Conference, Seattle.
- Buse, Peter and Andrew Stott (editors)  
1999 *Ghosts: Deconstruction, Psychoanalysis, History*. MacMillan Press, London.
- Butler, J.  
1993 *Bodies That Matter*. Routledge, London.
- Butzer, Karl W.  
1982 *Archaeology as Human Ecology : Method and Theory for a Contextual Approach*. Cambridge University Press, New York.
- Caldwell, Warren  
1955 Two Cyst Burials from San Juan Island, Washington. *American Antiquity* 20(4):383-384.
- Calvert, G.  
1970 The St. Mungo Cannery Site: A Preliminary Report. *B.C. Studies* Fall and Winter(6 and 7):54-76.
- Campbell, Emmy-Lou  
2010 The Transformative Power of T'xwelátse: A Collaborative Case Study in Search of New Approaches to Indigenous Cultural Repatriation Processes, Dispute Resolution, University of Victoria, Victoria.
- Cannon, Aubrey  
1989 Historical Dimensions in Mortuary Expressions of Status and Sentiment. *Current Anthropology* 30(4):437-458.  
  
2002 Spatial Narratives of Death, Memory, and Transcendence. In *The Space and Place of Death*, edited by H. Silverman and D. B. Small, pp. 191-199. American Papers of the American Anthropological Association Number 11.
- Carlson, Roy L.  
1990 *The 1986 Excavations at the Canal Site (DeRt 1 and DeRt 2)*. Report on file at the Archaeology and Registry Services Branch.

- 1999 Sacred Sites on the Northwest Coast of North America. In *Bog Bodies, Sacred Sites and Wetland Archaeology*, edited by B. Coles, J. Coles and M. S. Jorgensen, pp. 39-46. Wetland Archaeology Research Project Occasional Paper 12, Exeter.
- 2011 The Religious System of the Northwest Coast of North America. In *The Oxford Handbook of the Archaeology of Ritual and Religion*, edited by T. Insoll, pp. 639-655. Oxford Handbooks in Archaeology, Oxford University Press, Oxford.
- Carlson, Roy L. and Philip M. Hobler  
 1993 The Pender Canal Excavations and the Development of Coast Salish Culture. *B.C. Studies* 99:25-52.
- Carsten, Janet and Stephen Hugh-Jones (editors)  
 1995 *About the House: Lévi-Strauss and Beyond*. Cambridge University Press, Cambridge.
- Cherry, Alisa-Miriam  
 2014 Native Burial Site Near Saltspring Island at Centre of Land Debate. *The Globe and Mail*.
- Chesson, Merideth S.  
 2001a Embodied Memories of Place and People: Death and Society in an Early Urban Community. In *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, edited by M. S. Chesson, pp. 100-113. vol. Archaeological papers of the American Anthropological Association Number 10. American Anthropological Association, Arglington.
- 2001b *Social Memory, Identity and Death: Anthropological Perspectives on Mortuary Rituals*. Archaeological Papers of American Anthropological Association Number 10, Arlington.
- 2001c Social Memory, Identity, and Death: An Introduction. In *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, edited by M. S. Chesson, pp. 1-10. vol. Archaeological papers of the American Anthropological Association Number 10. American Anthropological Association.
- Chippis-Sawyer, Allis Pakki  
 2007 Standing on the Edge of Yesterday: A Dilemma of Oral Knowledge Survival in a West Coast Family, Faculty of Education, University of Victoria, Victoria.
- Christensen, Alexander F. and D.W. Read  
 1977 Numerical Taxonomy, R-Mode Factor Analysis and Archaeological Classification. *American Antiquity* 42:163-179.
- Clark, John E. and M. Blake  
 1994 The Power of Prestige: Competitive Generosity and the Emergence of Rank Societies in Lowland America. In *Factional Competition and Political Development in the New World*, edited by E. Brumfield and J. G. Fox, pp. 17-30. Cambridge University Press, Cambridge.

- Clark, Terrence  
 2000 Prehistoric Culture Change on Southern Vancouver Island: The Applicability of Current Explanations of the Marpole Transition. MA Thesis, Department of Anthropology, University of Victoria, Victoria, BC.
- 2010 Rewriting Marpole: The Path to Cultural Complexity in the Gulf of Georgia, Department of Anthropology, University of Toronto, Toronto.
- Clark, Terrence and Gary Coupland  
 2013 Exploring the Lives of the Ancient Chiefs: Recent Research at an Elite Charles-Age (5500-3500 B.P.) Cemetery. Paper presented at the 78th Annual Society for American Archaeology Conference, Honolulu, HI.
- Cole, Douglas  
 1999 *Franz Boas: The Early Years 1858-1906*. Douglas & McIntyre, Vancouver.
- Cole, Douglas and Ira Chaikin  
 1990 *An Iron Hand Upon the People: The Law Against the Potlatch on the Northwest Coast*. Douglas & McIntyre, Vancouver.
- Combs-Schilling, M. E.  
 1989 *Sacred Performances: Islam, Sexuality and Sacrifice*. Columbia University Press, New York.
- Condrashoff, Nancy  
 1984 *DcRu 52: A Salvaged Burial Cairn in Songhees Territory*. Report on file at the British Columbia Archaeology Branch.
- Conkey, Margaret W.  
 1993 Humans as Materialists and Symbolists: Image Making in the Upper Paleolithic of Europe. In *Origins of Humans and Humaness*, edited by T. Rasmussen, pp. 95–118. Jones & Bartlett, Boston.
- Connerton, P.  
 1989 *How Societies Remember*. Cambridge University Press, Cambridge.
- Conolly, James and Mark Lake  
 2006 *Geographical Information Systems in Archaeology*. Cambridge manuals in archaeology. Cambridge University Press, Cambridge, UK ; New York.
- Cordell, Linda S. and Judith A. Habicht-Mauche  
 2012 *Potters and Communities of Practice: Glaze Paint and Polychrome Pottery in the American Southwest, AD 1250 to 1700*. University of Arizona Press, Tucson.
- Cramér, H.  
 1999 *Mathematical Methods of Statistics*. Princeton University Press, Princeton.

- Criado, Filipe  
 1995 The Visibility of the Archaeological Record and the Interpretation of Social Reality. In *Interpreting Archaeology: Finding Meaning in the Past*, edited by I. Hodder, M. Shanks, A. Alexandri and V. Buchli, pp. 194-204. Routledge, London.
- Cruikshank, Julie  
 2005 *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination*. UBC Press, Vancouver.
- Curtin, A. Joanne  
 1984 Human Skeletal Remains from Namu (ELSx 1): A Descriptive Analysis, Archaeology, Simon Fraser University, Burnaby.
- 1991 *Gabriola Island Burial Recovery Project: Report on the 1989 Field Season*. Report on file at the Archaeology and Registry Services Branch.
- 1999 Section 4: Mortuary Practices. In *Archaeological Investigations at Tsawwassen, B.C.*, edited by R. Brolly, G. Howe, H. Pratt and S. Witt, pp. 33-62. Arcas Consulting Archaeologists Ltd., Coquitlam.
- 2002 *Prehistoric Mortuary Variability on Gabriola Island, British Columbia*. Simon Fraser University Archaeology Press, Burnaby.
- 2005 Prehistoric Treponematosi in the Pacific Northwest. In *The Myth of Syphilis: The Natural History of Treponematosi in North America*, edited by M. L. Powell and D. C. Cook, pp. 306-330. University Press of Florida, Gainesville.
- 2008 Putting Together the Pieces: Reconstructing Mortuary Practices from Commingled Ossuary Cremations. In *The Analysis of Burned Human Remains*, edited by C. Schmidt and S. A. Symes, pp. 201-209. Elsevier, Boston.
- Curtis, Edward S.  
 1913 *The North American Indian, Vol. IX: The Salishan Tribes of the Coast*. Cambridge University, Cambridge.
- Cybulski, Jerome  
 1975 *Skeletal Variability in B.C. Coast Populations: A Descriptive and Comparative Assessment of Cranial Morphology*. Mercury Series, Archaeological Survey of Canada, Ottawa, Ontario.
- 1994 Culture Change, Demographic History, and Health and Disease on the Northwest Coast. In *In the Wake of Contact: Biological Responses to Conquest*, edited by C. Larsen and G. Milner, pp. 75-85. Wiley-Liss Press, New York.
- 2011 *The Osteology of "Bead Man," An Early Pacific Human Skeleton from the Bible Camp Site (DjRw-14), Sechelt, British Columbia*. Report of file at the Archaeology and History Division, Canadian Museum of Civilization.

- Cybulski, Jerome S., Darlene Balkwill, Gregory S. Young and Patricia D. Sutherland  
 1992 *A Greenville Burial Ground: Human Remains and Mortuary Elements in British Columbia Coast Prehistory*. Archaeological Survey of Canada Mercury Series Paper No. 146. Canadian Museum of Civilization, Hull, Quebec.
- Dady, Pete  
 2003 *An Archaeological Inventory of Albert Head, Victoria, B.C.* Report on file at the Archaeology and Registry Services Branch of the Ministry of Sustainable Resource Management.
- David, B., Max Pivoru, William Pivoru, Michael Green, Bryce Barker, James F. Weiner, Simala Douglas, Thomas Kokents, Lisa Araho and John Dop  
 2008 Living Landscapes of the Dead: Archaeology of the Afterworld Among the Rumu of Papua New Guinea. In *Handbook of Landscape Archaeology*, edited by B. David and J. Thomas, pp. 158-166. Left Coast Press, Walnut Creek, Calif.
- David, Bruno and Julian Thomas  
 2008 Landscape Archaeology: Introduction. In *Handbook of Landscape Archaeology*, edited by B. David and J. Thomas, pp. 27-43. World Archaeological Congress Research Handbooks in Archaeology. Left Coast Press, Walnut Creek, Calif.
- de Certeau, M.  
 1984 *The Practice of Everyday Life*. University of California Press, Berkeley.
- de Smith, M.J., M.F. Goodchild and P.A. Longley  
 2007 *Geospatial Analysis: A Comprehensive Guide to Principles, Techniques and Software Tools*. Matador, Leicester.
- De Soete, G., W.S. Desarbo and J.D. Carroll  
 1985 Optimal Variable Weighting for Hierarchical Clustering: An Alternating Least-Squares Algorithm. *Journal of Classification* 2:173-192.
- Deans, James  
 1871a The Cadboro Bay Cairns: An Ancient City of the Dead. *The Daily British Colonist and Victoria Chronicle*, December 22.  
 1871b The Stone Cairns. *The Daily British Colonist and Victoria Chronicle*, December 22, 1871.  
 1872a Cairns - Their Appearance, Age, by whom Constructed, their Past and Present Uses. *British Colonist Tuesday*, Jan. 30.  
 1872b Cairns, Their Uses, Past and Present. *The British Colonist Wednesday*, January 31.  
 1891a Burial Mounds of Vancouver Island. *American Antiquarian and Oriental Journal* 13:171-172.

- 1891b Yicsack. *The Antiquarian* 1(3):45-48.
- 1892 The Antiquities of British Columbia. *The American Antiquarian and Oriental Journal* 1:41-44.
- Desmond, S.  
2000 A Tomb With A View. *Archaeology Ireland* 51:30-31.
- Diggle, J.P.  
2003 *Statistical Analysis of Spatial Point Patterns, Second Edition*. Oxford University Press, New York.
- Dillehay, Tom D.  
1990 Mapuche Ceremonial Landscape, Social Recruitment and Resource Rights. *World Archaeology* 22(2):221-241.  
  
2007 *Monuments, Empires, and Resistance: The Araucanian Polity and Ritual Narratives*. Cambridge University Press, Cambridge.
- Dixon, P.M.  
2002 Ripley's K Function. In *Encyclopedia of Environmetrics*, edited by A. El-Shaarawi and W. Piegorisch, pp. 1796-1803. vol. 3. John Wiley & Sons, Chichester.
- Djingova, R. and I. Kuleff  
1992 An Archaeometric Study of Medieval Glass from the First Bulgarian Capital, Pliska (Ninth to Tenth Century AD). *Archaeometry* 34(1):53-61.
- Donald, Leland  
1990 Death and Mourning among the 19-th Century Tlingit. *Current Anthropology* 31(4):481-484.  
  
1997 *Aboriginal Slavery on the Northwest Coast of North America*. 1 ed. University of California Press, Berkley/Los Angeles/London.
- Drennan, Robert D.  
2010 *Statistics for Archaeologists: A Common Sense Approach*. Second ed. Interdisciplinary Contributions to Archaeology. Springer, New York.
- Drucker, Philip  
1951 *The Northern and Central Nootkan Tribes*. Smithsonian Institution, Bureau of American Ethnology, Bulletin 144. Government Printing Office, Washington, D.C.  
  
1955 *Indians of the Northwest Coast*.
- Duff, Wilson  
1951 Unpublished Wilson Duff Notebook 11, Straits Salish. British Columbia Provincial Archives, File B6004 50 STR-W-001, Victoria.

- 1952 *The Upper Stalo Indians of the Fraser Valley, British Columbia*. Anthropology in British Columbia, Memoir No. 1. B.C. Provincial Museum, Victoria, B.C.
- 1956 Prehistoric Stone Sculpture of the Fraser River and Gulf of Georgia. *Anthropology in British Columbia* 5(15-51).
- 1969 The Fort Victoria Treaties. *B.C. Studies* 3:3-57.
- Dunnell, Robert C.  
 1992 The Notion Site. In *Space, Time, and Archaeological Landscapes*, edited by J. Rossignol and L. Wandsnider, pp. 21-37. Plenum Press, New York.
- Easton, Norman  
 1985 The Underwater Archaeology of Straits Salish Reefnetting. M.A. thesis, University of Victoria, Victoria, B.C.
- Eckert, Penelope and Sally McConnell-Ginet  
 1992 Think Practically and Look Locally: Language and Gender as Community-Based Practice. *Annual Review of Anthropology* 21(1):461-488.
- Eckert, Suzanne L.  
 2008 *Pottery and Practice: The Expression of Identity at Pottery Mound and Hummingbird Pueblo*. University of New Mexico Press, Albuquerque.
- Eldridge, Morely and Iain McKechnie  
 2008 (Re)calibrating Regional Chronologies on the North Coast: Data from Prince Rupert Harbour. Paper presented at the Society for American Archaeology Annual Meeting, Vancouver.
- Eldridge, Morley and Darcy L. Mathews  
 2005 *Archaeological Investigations at DeRu-22, Lyonesse Estates, Saltspring Island: HCA permit 2005-036*. Report on file at the British Columbia Archaeology Branch.
- Eliade, Mircea  
 1961 *The Sacred and the Profane: The Nature of Religion*. Harper and Row, New York.
- Eller, Jack David  
 2007 *Introducing Anthropology of Religion*. Routledge, New York.
- Elliot, D.  
 1983 *Saltwater People*. School District No. 63, Saanich.
- Elmendorf, William  
 1960 *The Structure of Twana Culture*. Research Studies. Washington State University, Pullman.

- Ericson, Kerstin  
 2004 Geomorphological Surfaces of Different Age and Origin in Granite Landscapes: An Evaluation of the Schmidt Hammer Test. *Earth Surface Processes and Landforms* 29:495-509.
- Everitt, Brian S.  
 1979 Unresolved Problems in Cluster Analysis. *Biometrics* 35:169-182.  
 1980 *Cluster Analysis*. 2nd ed. Heinemann Educational Books, London.  
 1993 *Cluster Analysis*. Third Edition ed. Edward Arnold, London.
- Fahlander, Fredrik  
 2003 *The Seriality of Practice. A Microarchaeology of Burial*. Gotarc Series D, No. 46.
- Fahlander, Fredrik and Terje Oestigaard  
 2008 The Materiality of Death: Bodies, Burials, Beliefs. In *The Materiality of Death: Bodies, Burials, Beliefs*, edited by F. Fahlander and T. Oestigaard, pp. 1-16. British Archaeological Reports S1768, Oxford.
- Feeley-Harnik, G.  
 1989 Cloth and the Creation of Ancestors in Madagascar. In *Cloth and Human Experience*, edited by A. B. Weiner and J. Schneider, pp. 73-116. Smithsonian Institution Press, Washington, D.C.
- Fetzer, Paul  
 1950 Paul S. Fetzer Papers. Digital Collection, Accession No. 4038-002. University of Washington Special Collections, Seattle.
- Fortin, M. and M.R.T. Dale  
 2005 *Spatial Analysis: A Guide for Ecologists*. Cambridge University Press, Cambridge.
- Foucault, Michel  
 1982 *The Archaeology of Knowledge*. Pantheon Books, New York.  
 1983 The Subject and Power. In *Michel Foucault: Beyond Structuralism and Hermeneutic*, edited by H. L. Dreyfus and P. Rabinow, pp. 208-226. 2nd ed. The University of Chicago Press, Chicago.  
 1991 *Discipline and Punish: The Birth of a Prison*. Penguin, London.
- Foucault, Michel and Colin Gordon  
 1980 *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. 1st American ed. Pantheon Books, New York.
- Fowler, Chris  
 2004 *The Archaeology of Personhood : An Anthropological Approach*. Routledge, London.

- Fowles, Severin  
2013 *An Archaeology of Doings: Secularism and the Study of Puebloan Religion*. School for Advanced Research Press, Sante Fe.
- Fox, J. J.  
1979 The Ceremonial System of Savu. In *The Imagination of Reality: Essays in Southeastern Asian Coherence Systems*, edited by A. L. Becker and A. A. Yengoyan, pp. 145-173. Ablex, Norwood.
- Gahr, D. Ann Trieu  
2006 Architects to Ancestors: The Life Cycle of Plankhouses. In *Household Archaeology on the Northwest Coast*, edited by Elizabeth A. Sobel, D. A. Trieu Gahr and K. M. Ames, pp. 37-56. International Monographs in Prehistory Press, Michigan.
- Gamble, Lynn H., Phillip L. Walker and Glenn S. Russell  
2001 An Integrative Approach to Mortuary Analysis: Social and Symbolic Dimensions of Chumash Burial Practices. *American Antiquity* 66(2):185-212.
- Garfield, Viola  
1939 *Tsimshian Clan and Society*. University of Washington Publications in Anthropology, VII, Seattle.
- Garrow, Duncan  
2012 Odd Deposits and Average Practice. A Critical History of the Concept of Structured Deposition. *Archaeological Dialogues* 19(02):85-115.
- Garth, Thomas R.  
1952 The Middle Columbia Cremation Complex. *American Antiquity* 18(1):40-56.
- Garwood, P.  
2011 Rites of Passage. In *The Oxford Handbook of the Archaeology of Ritual and Religion*, edited by T. Insoll, pp. 151-284. Oxford University Press, Oxford.
- Gedalof, Ze'ev, Marlow Pellatt and Dan J. Smith  
2006 From Prairie to Forest: Three Centuries of Environmental Change at Rocky Point, Vancouver Island, British Columbia. *Northwest Science* 80(1):34-46.
- Geertz, Clifford  
1957 Ritual and Social Change: A Javanese Example. *American Anthropologist* 59(1):32-54.
- Gell, Alfred  
1998 *Art and Agency : An Anthropological Theory*. Oxford University Press, Oxford.
- Getzin, Stephan , Thorsten Wiegand, Kerstin Wiegand and Fangliang He  
2008 Heterogeneity Influences Spatial Patterns and Demographics in Forest Stands. *Journal of Ecology* 96:807-820.

- Giddens, A.  
1984 *The Constitution of Society*. Cambridge University Press, Cambridge.
- Gillespie, Susan D.  
2000a Beyond Kinship: An Introduction. In *Beyond Kinship Social and Material Reproduction in House Societies*, edited by R. A. Joyce and S. D. Gillespie, pp. 1-21. University of Pennsylvania Press, Philadelphia.  
  
2000b Maya "Nested Houses" The Ritual Construction of Space. In *Beyond Kinship: Social and Material Reproduction in House Societies*, edited by R. A. Joyce and S. D. Gillespie, pp. 135-160. University of Pennsylvania Press, Philadelphia.  
  
2002 Body and Soul Among the Maya; Keeping the Spirits in Place. In *The Space and Place of Death*, edited by H. Silverman and D. B. Small, pp. 67-78. Archaeological Papers of the American Anthropological Association 10, University of Illinois, Urbana-Champaign.  
  
2008 History in Practice: Ritual Deposition at La Venta Complex A. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 109-136. School for Advanced Research Press, Sante Fe.
- Goldstein, Lynne  
1976 Spatial Structure and Social Organization: Regional Manifestations of Mississippian Society, Anthropology, Northwestern University, Evanston, Illinois.  
  
1980 *Mississippian Mortuary Practices: A Case Study of Two Cemeteries in the Lower Illinois Valley*. Northwestern University Archaeology Program, Evanston.  
  
1981 One-Dimensional Archaeology and Multi-Dimensional People: Spatial Organization and Mortuary Analysis. In *The Archaeology of Death*, edited by R. Chapman, I. Kinnes and K. Randsborg, pp. 53-69. Cambridge University Press, New York.  
  
2002 Visible Death: Mortuary Site and Mortuary Landscape in Diachronic Perspective. In *The Space and Place of Death*, edited by H. Silverman and D. B. Small, pp. 201-206. vol. Archaeological Papers of the American Anthropological Association Number 11. American Anthropological Association, Arglington.
- Goody, Jack  
1962 *Death, Property and the Ancestors*. Stanford University Press, Stanford.
- Gordon, Avery  
1997 *Ghostly Matters: Haunting and the Sociological Imagination*. University of Minnesota Press, Minneapolis.
- Gosden, Chris  
1994 *Social Being and Time*. Blackwell, Oxford.

- 2005 What Do Objects Want? *Journal of Archaeological Method and Theory* 12(3):193-211.
- 2006 Material Culture and Long-Term Change. In *Handbook of Material Culture*, edited by C. Tilley, W. Keane, S. Kuchler, M. J. Rowlands and P. Spyer, pp. 425-442. Sage Publications, London.
- Gosden, Chris and Yvonne Marshall  
1999 The Cultural Biography of Objects. *World Archaeology* 31(2):169-178.
- Gower, J.C.  
1971 A General Coefficient of Similarity and Some of its Properties. *Biometrics* 27:857-874.
- Grant, W. C.  
1857 Description of Vancouver Island. *Journal of the Royal Geographical Society of London* 27:268-320.
- Gray, Brendan  
2008 Sampling Methods in Northwest Coast Household Archaeology: A Simulation Approach Using Faunal Data from the Ozette Site, Anthropology, University of Victoria, Victoria.
- Gray, Brendan, Duncan McLaren and Becky Wigen  
2010 *Final Report of Archaeological Investigations at the Ruskin Dam Site, Dhro-59: Volume I*. Report on file at the British Columbia Archaeology Branch.
- Gregory, D. and J. Urry (editors)  
1985 *Social Relations and Spatial Structures*. MacMillan, Basingstoke.
- Guest, Greg, K.M. MacQueen and E.E. Namey  
2012 *Applied Thematic Analysis*. Sage, Los Angeles.
- Gunneweg, J., T. H. Beier, U. Diehl, D. Lambrecht and H. Mommsen  
1991 'Edomite', 'Negbite' And 'Midantite' Pottery from the Negev Desert and Jordan: Instrumental Neutron Activation Analysis Results. *Archaeometry* 33(2):239-253.
- Gunther, Erna  
1927 *Klallam Ethnography*. University of Washington Publications in Anthropology I, Seattle.
- Habicht-Mauch, Judith A., S.L. Eckert and D.L. Huntley  
2006 *The Social Life of Pots*. University of Arizona Press, Tucson.
- Haeberlin, Hermann K.  
1918 sbEtEtdaq: A Shamanic Performance of the Coast Salish. *American Anthropologist* 20(3):249-257.

- Hall, A.V.  
1965 The Peculiarity Index, a New Function for Use in Numerical Taxonomy. *Nature* 206:952.
- Hall, Roberta L. and James C. Haggarty  
1981 Human Skeletal Remains and Associated Cultural Material from the Hill Site, DfRu-4, Saltspring Island, British Columbia. In *Contributions to Physical Anthropology, 1978-1980*, edited by J. S. Cybulski, pp. 64-105. vol. Archaeological Survey of Canada paper No. 106. National Museum of Man Mercury Series, Ottawa.
- Hallam, Elizabeth and Jennifer Lorna Hockey  
2001 *Death, Memory and Material Culture*. Berg, Oxford.
- Ham, Leonard, Arlene Yip and Leila Kullar  
1982 Seasonality, Shell Midden Layers, and Coast Salish Subsistence Activities at the Crescent Beach Site, DgRr1. Ph.D. dissertation, Department of Sociology and Anthropology, University of British Columbia, Vancouver, B.C.
- Hammer, Ø.  
2009 New Methods for the Statistical Detection of Point Alignments. *Computers & Geosciences* 35:659-666.
- Hammer, Ø., D.A.T. Harper and P.D. Ryan  
2001 PAST: Paleontological Statistics Software Package for Education and Data Analysis. *Palaeontologia Electronica* 4(1):9.
- Hann, C. M.  
1998 *Property relations : renewing the anthropological tradition*. Cambridge University Press, Cambridge, UK New York.
- Härke, Heinrich  
2001 Cemeteries as Places of Power. In *Topographies of Power in the Early Middle Ages*, edited by M. de Jong and F. Theuvs, pp. 9-30. Brill, Leiden.
- Harmon, Alexandra  
2007 Coast Salish History. In *Be of Good Mind: Essays of the Coast Salish*, edited by B. G. Miller, pp. 30-54. UBC Press, Vancouver.
- Harris, Cole  
1997 *The Resettlement of British Columbia: Essays on Colonialism and Geographical Change*. UBC Press, Vancouver.
- Hawkes, Christopher  
1954 Archaeological Theory and Method: Some Suggestions from the Old World. *American Anthropologist* 56:155-168.

Hayden, Brian

1990 Nimrods, piscators, pluckers, and planters: The emergence of food production. *Journal of Anthropological Archaeology* 9(1):31-69.

1995 Pathways to Power: Principles for Creating Socioeconomic Inequalities. In *Foundation of Social Inequality*, edited by T. D. Price and G. Feinman, pp. 15-85. Plenum, New York.

2001 Richman, Poorman, Beggarman, Chief: The Dynamics of Social Inequality. In *Archaeology at the Millennium: A sourcebook*, edited by G. Feinman and T. Price, pp. 231-272. Kluwer Academic/Plenum Publishers, New York.

2009 Funerals As Feasts: Why Are They So Important? *Cambridge Archaeological Journal* 19:29-52.

2012 Agency, Actors, and Aggrandizers: Archaeological Changes in Ritual and Religion. Paper presented at the University of British Columbia Archaeology Day, Vancouver.

Hayden, Brian, Edward Bakewell and Rob Gargett

1996 The World's Longest Lived Corporate Group: Lithic Analysis Reveals Prehistoric Social Organization Near Lillooet, British Columbia. *American Antiquity* 61(2):341-356.

Hendon, Julia A.

2010 *Houses in a Landscape: Memory and Everyday Life in Mesoamerica*. Duke University Press, Durham.

Hertz, Robert

1960 A Contribution to the Study of the Collective Representation of Death. In *Death and the Right Hand*. Translated by R. Needham and C. Needham. Free Press, New York.

Hickock, Andrew, William A. Whire, Kim Recalma-Clutesi, Steven R. Hamm and Haley E. Kanipe

2010 Mortuary Evidence of Coast Salish Shamanism? *Canadian Journal of Archaeology* 34:240-264.

Hill, J.D.

1995 *Rituals and Rubbish in Iron Age Wessex*. British Archaeological Reports 242, Oxford.

Hill-Tout, Charles

1900 Notes on the Sk'qo'mic of British Columbia, a Branch of the Great Salish Stock of North America (Appendix II). In *70th Report of the British Association for the Advancement of Science for 1902*, pp. 472-549, London.

1902 *Report on the Ethnological Survey of Canada*. Report presented to the British Association for the Advancement of Science, London.

1904 Report on the Ethnology of the Siciatl of British Columbia, a Coast Division of the Salish Stock. *Journal of the Anthropological Institute of Great Britain and Ireland* 34:20-91.

1907a *British North America 1, The Far West: The Home of the Salish and Dene*. Copp Clark, Toronto.

1907b Report on the Ethnography of the Southeastern Tribes of Vancouver Island, B.C. *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 37:306-374.

1930 Prehistoric Burial Mounds of British Columbia. *Art, Historical and Scientific Association of Vancouver, B.C.* 5(4):120-126.

1933 Prehistoric Burial Mounds of British Columbia. *Museum and Art Notes, Art, Historical and Scientific Association of Vancouver, BC* 5(4):120-126.

Hobsbawn, Eric

1983 Mass-Producing Traditions: Europe, 1870-1914. In *The Invention of Tradition*, edited by E. Hobsbawn and T. Ranger, pp. 263-307. Cambridge University Press, Cambridge.

Hobsbawn, Eric and Terence Ranger (editors)

1983 *The Invention of Tradition*. Cambridge University Press, Cambridge.

Hodder, Ian

1982a *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. New Studies in Archaeology. Cambridge University Press, New York.

1982b Theoretical Archaeology: A Reactionary View. In *Symbolic and Structural Archaeology*, edited by I. Hodder. Cambridge University Press, Cambridge.

1984 Burials, Houses, Women and Men in the European Neolithic. In *Ideology, Power and Prehistory*, edited by D. Miller and C. Tilley. Cambridge University Press, Cambridge.

1990 *The Domestication of Europe*. Blackwell, Oxford.

2000a Ancestral geographies of the Neolithic: Landscapes, monuments and memory. *Cambridge Archaeological Journal* 10(2):376-380.

2000b *Towards Reflexive Method in Archaeology: The Example at Çatalhöyük*. BIAA monograph ; no. 28. McDonald Institute for Archaeological Research University of Cambridge ; Distributed by Oxbow Books, Cambridge Oxford.

2011 Human-Thing Entanglement: Towards an Integrated Archaeological Perspective. *Journal of the Royal Anthropological Institute* 17(1):154-177.

- 2012 *Entangled: An Archaeology of the Relationships between Humans and Things*. Wiley-Blackwell, Oxford.
- Hodder, Ian and Craig Cessford  
2004 Daily Practice and Social Memory at Çatalhöyük. *American Antiquity* 69(1):17-40.
- Hodson, F.R.  
1990 *Hallstatt: The Ramsauer Graves*. Dr. Rudolf Habelt GMBH, Bonn.
- Hodson, Frank Roy  
1977 Quantifying Hallstatt: Some Initial Results. *American Antiquity* 42(3):394-412.
- Holland, Steven N.  
2006 Cluster Analysis. Department of Geology, University of Georgia, Athens.
- Holtorf, Cornelius  
1997 Megaliths, Monumentality and Memory. *Archaeological Review from Cambridge* 14(2):45-66.
- Hood, Bryan C.  
1993 The Maritime Archaic Indians of Labrador: Investigating Prehistoric Social Organization. *Newfoundland Studies* 9(2):163-184.
- Howell, Todd L. and Keith W. Kintigh  
1996 Archaeological Identification of Kin Groups Using Mortuary and Biological Data: An Example from the American Southwest. *American Antiquity* 61(3):537-554.
- Huggett, J.W.  
1995 Numerical Techniques for Burial Analysis. In *Computer Applications and Quantitative Methods in Archaeology 1993*, edited by J. Wilcock and K. Lockyear, pp. 183-189. BAR International Series 598, Oxford.
- Hugh-Jones, C.  
1979 *From the Milk River*. Cambridge University Press, Cambridge.
- Huntley, David H.  
1995 Colwood Delta. In *Quaternary Geology of Southern Vancouver Island*, edited by P. T. Bobrowsky and J. J. Clague, pp. 1-10. Report on file at the University of Victoria Library, Victoria.
- Illian, Janine, Antti Penttinen, Helga Stoyan and Dietrich Stoyan  
2008 *Statistical Analysis and Modelling of Spatial Point Patterns*. John Wiley & Sons, Chichester.
- Ingold, Tim  
1986 *The Appropriation of Nature: Essays on Human Ecology and Social Relations*. Themes in Social Anthropology. Manchester University Press, Manchester.

- 1993 The Temporality of Landscape. *World Archaeology* 25(2):152-174.
- 2000 Making Culture and Weaving the World. In *Matter, Materiality and Modern Culture*, edited by P. Graves-Brown, pp. 50-71. Routledge, London.
- 2007 Materials Against Materiality. *Archaeological Dialogues* 14(1):1-16.
- 2011 *Being Alive: Essays on Movement, Knowledge and Description*. Routledge, London.
- Ingold, Tim and Jo Lee Vergunst  
 2008 Introduction. In *Ways of Walking: Ethnography and Practice on Foot*, edited by T. Ingold and J. L. Vergunst, pp. 1-19. Ashgate, Farnham.
- Insoll, Timothy  
 2009 Materializing Performance and Ritual: Decoding the Archaeology of Movement in Tallensi Shrines in Northern Ghana. *Part of a special issue: Materiality, Belief, Ritual: Archaeology and Material Religion* 5(3):288-310.
- James, T.S., J.M. Bednarski, G.C. Rogers and R.G. Currie  
 2010 LIDAR and digital aerial imagery of the Leech River Fault Zone and coastal regions from Sombrio Point to Ten Mile Point, southern Vancouver Island, British Columbia. Geological Survey of Canada, Open File 6211, 1 vols.
- Jenks, George F.  
 1967 The Data Model Concept in Statistical Mapping. *International Yearbook of Cartography* 7:186-190.
- Jenness, Diamond  
 1934 The Saanich Indians of Vancouver Island. Typescript of unfinished manuscript, copy in Special Collections, University of Victoria, Victoria.
- 1955 *The Faith of a Coast Salish Indian*. Anthropology in British Columbia 3. B.C. Provincial Museum, Victoria, B.C.
- Jilek, Wolfgang G. and Louise Jilek-Aall  
 1982 Shamanic Symbolism in Salish Indian Rituals. In *The Logic of Culture: Advances in Structural Theory and Methods*, edited by I. Rossi, pp. 127-136. Tavistock Publications Ltd., London.
- Johnston, J.W.  
 1976 *Similarity Indices 1: What Do They Measure?* Report prepared for the Nuclear Regulatory Commission, Battelle Pacific Northwest Laboratories.
- Johnstone, D.  
 1991 The Function(s) of a Shell Midden Site from the Southern Strait of Georgia, Archaeology, Simon Fraser University, Burnaby.

- Jones, Andrew  
2010 Layers of Meaning: Concealment, Memory and Secrecy in the British Early Bronze Age. In *Archaeology and Memory*, edited by D. Boric, pp. 105-120. Oxbow Books, Oxford.
- Jones, Andrew and Gavin MacGregor (editors)  
2002 *Colouring the Past: The Significance of Colour in Archaeological Research*. New York University Press, New York.
- Joseph, Susan Eve  
1994 Coast Salish Perceptions of Death and Dying: An Ethnographic Study, Department of Psychological Foundations in Education, University of Victoria, Victoria.
- Joyce, Rosemary A.  
1999 Social Dimensions of Pre-Classic Burials. In *Social Patterns in Pre-Classic Mesoamerica*, edited by D. C. Grove and R. A. Joyce. Dumbarton Oaks Research Library and Collection, Washington, D.C.  
2001 Burying the Dead at Tlatilco: Social Memories and Social Identities. In *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, edited by M. S. Chesson. vol. Archaeological Papers of the American Anthropological Association Number 10. American Anthropological Association, Arlington.  
2003 Concrete Memories: Fragments of the Past in the Classic Maya Present (500-1000 AD). In *Archaeologies of Memory*, edited by R. M. Van Dyke and S. E. Alcock. Blackwell Publishing, Oxford.  
2004 Unintended Consequences? Monumentality as a Novel Experience in Formative Mesoamerica. *Journal of Archaeological Method and Theory* 11(1):5-29.  
2008 Practice In and as Deposition. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 25-40. School for Advanced Research Press, Santa Fe, NM.
- Joyce, Rosemary A. and Susan D. Gillespie (editors)  
2000 *Beyond Kinship: Social and Material Reproduction in House Societies*. University of Pennsylvania Press,, Philadelphia.
- Joyce, Rosemary A. and Jeanne Lopiparo  
2005 PostScript: Doing Agency in Archaeology. *Journal of Archaeological Method & Theory* 12(4):365-374.
- Joyce, Rosemary A. and A. M. Pollard  
2010 Archaeological Assemblages and Practices of Deposition. In *Material Culture Studies*, edited by D. Hicks and M. C. Beaudry, pp. 291-309. Oxford University Press, Oxford.

Kan, Sergei

1986 The 19th-century Tlingit potlatch: a new perspective. *American Ethnologist* 13(2):191-212.

1989 *Symbolic Immortality: The Tlingit Potlatch of the Nineteenth Century*. Smithsonian Institution Press, Washington, D.C.

Keane, Webb

2008 The Evidence of the Senses and the Materiality of Religion. *Journal of the Royal Anthropological Institute* 14 (Suppliment)(1):110-127.

Keddie, Grant

1984 Fortified Defensive Sites and Burial Cairns of the Songhees Indians. *The Midden* 16(4):7-9.

1985 Fortified Defensive Sites and Burial Cairns of the Songhees Indians. *Discovery: Friends of the British Columbia Provincial Museum Quarterly Review* 13(2).

1991 Notes on Defensive Sites on the Southern Coast of B.C.

2003 *Songhees Pictorial A History of the Songhees People as seen by Outsiders, 1790-1912*. Royal British Columbia Museum, Victoria.

Kennedy, Dorothy and Randy Bouchard

1995 *An Examination of Esquimalt History and Territory: A Discussion Paper*. Report prepared for Esquimalt Nation. On file with the Esquimalt Nation.

Kertzner, David I.

1988 *Ritual, Politics and Power*. Yale University Press, New Haven.

Kew, J. E. Michael

1970 Coast Salish Ceremonial Life: Status and Identity in a Modern Village. Ph D, UMI Dissertation Services, University of Washington, Ann Arbor, Mich.

1990 Central and Southern Coast Salish Ceremonies Since 1900. In *Northwest Coast*, edited by W. Suttles. Handbook of North American Indians. vol. 7, W. C. Sturtevant, general editor. Smithsonian Institution Press, Washington, D.C.

Kigoshi, K., N. Suzuki and Hiroko Fukatsu

1973 Gakushuin Natural Radiocarbon Measurements VIII. *Radiocarbon* 15(1):42-67.

King, F.T.

1978 'Don't that beat the band?' Non-egalitarian Political Organization in Prehistoric Central California. In *Social Archaeology: Beyond Subsistence and Dating*, edited by C. L. Redman, pp. 225-248. Academic Press, New York.

- Kirk, Ruth  
1986 *Wisdom of the Elders: Native Traditions on the Northwest Coast*. Douglas & McIntyre, Vancouver.
- Kirk, Trevor  
2006 Materiality, Personhood and Monumentality in Early Neolithic Britain. *Cambridge Archaeological Journal* 16(3):333-347.
- Knapp, Arthur Bernard  
2009 Monumental Architecture, Identity and Memory. *Proceedings of the Symposium: Bronze Age Architectural Traditions in the East Mediterranean: Diffusion and Diversity*. Gasteig, Munich.
- Knapp, Arthur Bernard and Wendy Ashmore  
1999 Archaeological Landscapes: Constructed, Conceptualized, Ideational. In *Archaeologies of Landscape*, edited by W. Ashmore and B. Knapp. Blackwell Publishers Ltd., Oxford.
- Kopytoff, Igor  
1986 The Cultural Biography of Things: Commoditization as Process. In *The Social Life of Things*, edited by A. Appadurai, pp. 64-91. Cambridge University Press, Cambridge.
- Kristiansen, Kristian  
1991 Chiefdoms, states, and systems of social evolution. In *Chiefdoms: power, economy and ideology*, edited by T. Earle. 16-43 vols. Cambridge University Press, Cambridge.
- Krivoruchko, K.  
2011 *Spatial Statistical Data Analysis for GIS Users*. ESRI Press, Redlands.
- Kuijt, Ian  
2001 Place, Death, and the Transmission of Social Memory in Early Agricultural Communities of the Near Eastern Pre-Pottery Neolithic. In *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, edited by M. S. Chesson. Archaeological Papers of the American Anthropological Association. vol. Number 10. American Anthropological Association, Arlington.
- Lakoff, George and Mark Johnson  
2003 *Metaphors We Live By*. 2nd edition. University of Chicago Press, Chicago.
- Lamdin-Whymark, H.  
2008 *The Residue of Ritualised Action: Neolithic Deposition Practices in the Middle Thames Valley*. BAR Archaeopress, British Series 466, Oxford.
- Latour, Bruno  
1999 *Pandora's Hope: Essays on the Reality of Science Studies*. Harvard University Press, Cambridge.

- 2005 *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press, Oxford.
- Lave, J. and E. Wenger  
1991 *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press, Cambridge.
- Lawhead, Stephen  
1980 *Salvage Archaeology Project: A Report on the Investigations of the 1979 Mobile Salvage Crew*. Report on file at the British Columbia Archaeology Branch.
- Leen, Daniel  
1981 The Rock Art of Western Washington. *Northwest Anthropological Research Notes* 15(1).
- Lepofsky, Dana, Michael Blake, Douglas Brown, Sandra Morrison and Nicole Oakes  
2000 The Archaeology of the Scowlitz Site, SW British Columbia. *Journal of Field Archaeology* 27(4):391-416.
- Lepofsky, Dana, Douglas Brown, Sandra Morrison and Natasha Lyons  
1998 *Report on the 1998 Excavations at the Scowlitz Site (DhRI 16), Fraser Valley, RC*. Report on file at the British Columbia Archaeology Branch.
- Lepofsky, Dana, Douglas Brown, Nicole Oakes, Sandra Morrison, Michael Blake and Tracy Rogers  
1999 *Report on the 1999 Excavations at the Scowlitz Site (DhRI16), Fraser Valley, B.C.* Report on file at the British Columbia Archaeology Branch.
- Lepofsky, Dana, D. Schaepe, A. Graesch, M. Lenert, P. Ormerod, K. Carlson, J. Arnold, M. Blake, P. Moore and J. Clague  
2009 Exploring Stó:lo-Coast Salish Interaction and Identity in Ancient Houses and Settlements in the Fraser Valley, British Columbia. *American Antiquity* 74:595-626.
- Levi-Strauss, Claude  
1983 *The Way of the Masks*. Jonathan Cape, London.  
1987 *Anthropology and Myth: Lectures, 1951-1982*. Blackwell, Oxford.
- Levine, Ned  
2007 CrimeStat 3.3: A Spatial Statistics Program for the Analysis of Crime Incident Locations. Ned Levine & Associates and the National Institute of Justice, Houston.  
2006 Crime Mapping and the Crimestat Program. *Geographical Analysis* 38:41-56.
- Llobera, Marcos  
2012 Life on a Pixel: Challenges in the Development of Digital Methods Within an “Interpretive” Landscape Archaeology Framework. *Journal of Archaeological Method and Theory* 19(4):495-509.

- Lopiparo, Jeanne L.  
 2007 House Societies and Heterarchy in the Terminal Classic Ulua Valley, Honduras. In *The Durable House: House Society Models in Archaeology*, edited by R. A. Beck, pp. 73–96. Southern Illinois University Press, Carbondale.
- Lowenthal, David  
 1985 *The Past is a Foreign Country*. Cambridge University Press, Cambridge.
- Luby, Edward M.  
 2004 Shell Mounds and Mortuary Behaviour in the San Francisco Bay Area. *North American Archaeologist* 25(1):1-33.
- Lucy, Sam  
 1997 Housewives, Warriors, and Slaves? Sex and Gender in Anglo-Saxon Burials. In *Invisible People and Processes*, edited by J. Moore and E. Scott, pp. 150-168. Leicester University Press, Leicester.
- Lutz, John  
 2008 *Makuk: A New History of Aboriginal-White Relations*. UBC Press, Vancouver.
- Lyman, R. Lee and Gregory L. Fox  
 1989 A Critical Evaluation of Bone Weathering as an Indication of Bone Assemblage Formation. *Journal of Archaeological Science* 16(3):293-317.
- 1997 A Critical Evaluation of Bone Weathering as an Indication of Bone Assemblage Formation. In *Forensic Taphonomy: The Postmortem Fate of Human Remains*, edited by W. D. Haglund and M. H. Sorg, pp. 223-248. CRT Press, Boca Raton.
- Lyman, R. Lee and Michael J. O'Brien  
 2001 The Direct Historical Approach, Analogical Reasoning, and Theory in American Archaeology. *Journal of Archaeological Method and Theory* 8(4):303-341.
- Lyons, Natasha  
 2000 Recent Palaeoethnobotanical Research at Scowlitz. Paper presented at the Archaeological Society of British Columbia, Vancouver.
- Mackie, Quentin  
 1995 *The Taxonomy of Ground Stone Woodworking Tools*. BAR international series. Tempus Reparatum, Oxford.
- 2001 *Settlement Archaeology on a Fjordland Archipelago: Network Analysis, Social Practice and the Built Environment of Western Vancouver Island, British Columbia, Canada Since 2,000 BP*. BAR International Series 926, Oxford.

- 2013 A Coast Salish Mausoleum, 1864. In *Northwest Coast Archaeology*.  
<http://qmackie.com/2013/12/27/a-coast-salish-mausoleum-1864/>. Accessed January 3, 2013.
- Manly, B.F.  
 1994 *Multivariate Statistical Methods: A Primer*. Chapman & Hall, New York.
- 1996 The Statistical Analysis of Artefacts in Graves: Presence and Absence Data.  
*Journal of Archaeological Science* 23:473-484.
- Mapes, Lynda  
 2009 *Breaking Ground: The Lower Elwha Klallam Tribe and the Unearthing of Tse-whit-zen Village*. University of Washington Press, Seattle.
- Marshall, Yvonne  
 2000 Transformations of Nuu-chah-nulth Houses. In *Beyond Kinship Social and Material Reproduction in House Societies*, edited by R. A. J. a. S. D. Gillespie, pp. 73-102. University of Pennsylvania Press, Philadelphia.
- 2006 Houses and Domestication on the Northwest Coast. In *Household Archaeology on the Northwest Coast*, edited by E. A. Sobel, D. A. Trieu Gahr and K. M. Ames, pp. 37-56. International Monographs in Prehistory, Archaeological Series 16, Ann Arbor.
- Martindale, Andrew and Bryn Letham  
 2011 Causalities and Models within the Archaeological Construction of Political Order on the Northwest Coast of North America. In *The Archaeology of Politics: the Materiality of Political Practice and Action in the Past*, edited by P. G. Johansen and A. M. Bauer, pp. 323-353. Cambridge Scholars Press, Newcastle.
- Mason, Andrew, Pete Dady, Monica Karpiak, Jeff Bailey, Jen Lindberg, John Maxwell and Rob Vincent  
 1999 *Archaeological Inventory at Select Department of National Defence Properties, CFB Esquimalt*. Prepared by Millennia Research and Golder Associates, for Public Works and Government Services Canada, and CFB Esquimalt. Non-permit report on file at the Heritage Resource Centre of the Ministry of Community, Aboriginal, and Women's Services.
- Massey, N.W.  
 1986 Metchosin Igneous Complex, Southern Vancouver Island: Ophiolite Stratigraphy Developed in an Emergent Island Setting. *Geology* 14:602-605.
- Mathews, Darcy L.  
 2002a *Archaeological Inventory and Impact Assessment Northeast ¼ Section 3 and Southwest ¼ Section 8, Gabriola Island. HCA Permit 2002-210*. Report on file at Archaeological Planning and Assessment, Ministry of Sustainable Resource Management.

2002b *Archaeological inventory and impact assessment, proposed residential development 3120 Humber Road, Victoria, B.C.* Report on file at the British Columbia Archaeology Branch.

2004a *Mary Hill: An Archaeological Inventory.* Report on file at the British Columbia Archaeology Branch.

2004b *Rocky Point: An Archaeological Inventory.* Report on file at the Archaeology and Registry Services Branch, Victoria.

2006a Ancient Cities of the Dead Revisited: Early Burial Cairn Investigations in Victoria. *The Midden* 38(1):14-20.

2006b Burial Cairn Taxonomy and the Mortuary Landscape of Rocky Point, British Columbia, Anthropology, University of Victoria, Victoria.

2008 Immortal Landscape: Burial Cairns and Precontact Straits Salish Identity. Paper presented at the 73rd Annual Meeting of the Society for American Archaeology, Vancouver, B.C.

2009 What the Dead Want: Reflections on Building a Burial Cairn. Paper presented at the B.C. Studies Victoria, B.C.

2010a Fuel for Thought: Douglas Fir Culturally Modified Tree Sites and Salish Sea Savannahs. Paper presented at the 33rd Annual Society for Ethnobiology Conference, Victoria.

2010b *Recovery of Human Remains from Skull Islet (1690T), Gulf Islands National Park Reserve.* Report on file at the Gulf Islands National Park Reserve, Parks Canada.

2011 *2011 Burial Cairn Investigations at D'Arcy Island, Gulf Islands National Park Reserve, British Columbia.* Report on File at Parks Canada, Coastal BC Field Unit.

Mathews, Darcy L. and Pete Dady

2002 *Excavation and Monitoring at DcRu-74: Colwood Trunk Sewer Phase V, South Esquimalt Lagoon, HCA Permit 2002-398.* Report on File at the British Columbia Archaeology Branch.

Mathews, Darcy L. and Nicole Kilburn

2013 *Heritage Investigation Permits 2010-0144 and 2012-0135 Letter Report: Archaeological Survey and Research Investigations in the Uplands Park area of the Corporation of the District of Oak Bay, DcRt-124, Oak Bay, B.C.* Report on file at the British Columbia Archaeology Branch.

Mathews, Darcy L., Nicole Kilburn and Ron Sam

2011 *The Burial Cairns and Mounds of Uplands Park: 2010-2011 Archaeological Research in Oak Bay, British Columbia HCA Permit 2010-0144.* Report on file at the British Columbia Archaeology Branch.

- Mathews, Darcy L. and Eric McLay  
 2011 *Emergency Systematic Excavation and Relocation of a Burial Cairn at DfRu-100, Montague Harbour Provincial Marine Park, Galiano Island, BC. HCA Permit 2008-064*. Report on file at the British Columbia Archaeology Branch.
- Matson, R.G.  
 1994 *Report on the 1993 Excavations at Scowlitz*. Prepared for the Archaeology Branch and Sto:lo Tribal Council  
 Report on file at the Heritage Resource Centre of the Ministry of Community, Aboriginal, and Women's Services.
- Mauger, Jeffrey E.  
 1978 *Shed Roof Houses at the Ozette Archaeological Site: A Protohistorical Architectural System*. Washington Archaeological Research Center Project Report 73. Washington State University, Pullman.  
 1991 Shed-Roof Houses at Ozette and in a Regional Perspective. In *Ozette Archaeological Project Research Reports. Vol. 1, House Structure and Floor Midden*, edited by S. R. Samuels, pp. 29-174. Washington State University, Department of Anthropology Reports of Investigations No. 63, Pullman.
- McHugh, Feldore  
 1999 *Theoretical and Quantitative Approaches to the Study of Mortuary Practice*. BAR International Series 785. Archaeopress, Oxford, England.
- McIlwraith, T.F.  
 1948 *The Bella Coola Indians*. University of Toronto Press, Toronto, Ont.
- McKay, Kathryn  
 2002 *Recycling the Soul: Death and Continuity of Life in Coast Salish Burial Practices*. M.A., Department of History, University of Victoria, Victoria, British Columbia.  
 2009 *Disturbing the Dead: Diversity and Commonality Among the Stó:lō*. *The University of the Fraser Valley Research Review* 2(2):119-136.
- McLay, Eric, Kelly Bannister, Lea Joe, Brian Thom and George P. Nicholas  
 2004 *A'lhut tu tet Sulhween: "Respecting the Ancestors" Report of the Hul'qumi'num Heritage Law Case Study*. Hul'qumi'num Treaty Group.
- McMurtrie, W.B.  
 1849-1853 *Indian Graves in Victoria*, pp. Charcoal sketch. Museum of Fine Arts, Boston.
- McNiven, Ian J.  
 2003 *Saltwater People: Spiritscapes, Maritime Rituals and the Archaeology of Australian Indigenous Seascapes*. *World Archaeology* 35(3):329-349.

2013 Ritualized Middening Practices. *Journal of Archaeological Method and Theory* 20(4):552-587.

McNiven, Ian J. and Duncan Wright

2008 Ritualized Marine Midden Formation in Western Zenadh (Torres Strait). In *Islands of Inquiry: Colonization, Seafaring and the Archaeology of Maritime Landscapes.*, edited by G. Clark, L. Foss and S. O'Connor, pp. 133-147. Terra Australis 29. ANU E Press, Canberra.

Meskill, Lynn

1996 The Somatization of Archaeology: Institutions, Discourses, Corporeality. *Norwegian Archaeological Review* 29(1):1-16.

1999a Archaeologies of Life and Death. *American Journal of Archaeology* 103(2):181-199.

1999b *Archaeologies of Social Life: Age, Sex, Class et cetera in Ancient Egypt*. Blackwell, Oxford.

2000a Cycles of Life and Death: Narrative Homology and Archaeological Realities. *World Archaeology* 31(3):423-441.

2000b The Practice and Politics of Archaeology in Egypt. In *Ethics and Anthropology: Facing Future Issues in Human Biology, Globalism, and Cultural Property*, edited by A. M. Cantwell, E. Friedlander and M. L. Tramm, pp. 146-169. Annals of the New York Academy of Sciences. vol. 925.

2001 The Egyptian Ways of Death. In *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, edited by M. S. Chesson. vol. Archaeological Papers of the the American Anthropological Association Number 10. American Anthropological Association, Arglington.

2003 Memory's Materiality: Ancestral Presence, Commemorative Practice and Disjunctive Locales. In *Archaeologies of Memory*, edited by R. M. Van Dyke and S. E. Alcock, pp. 34-55. Blackwell Publishing, Malden, MA.

2004 *Object Worlds in Ancient Egypt: Material Biographies Past and Present*. Berg, London.

2005a *Archaeologies of Materiality*. Blackwell Publishing Malden.

2005b Introduction: Object Orientations. In *Archaeologies of Materiality*, edited by L. Meskill, pp. 1-17. Blackwell Publishers, Malden.

2005c Objects in the Mirror Appear Closer Than They Are. In *Materiality*, edited by D. Miller, pp. 51-71. Duke University Press, Durham.

2008 Memory Work and Material Practices. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 233-244. School for Advanced Research Press, Sante Fe.

- Meskell, Lynn and Rosemary A. Joyce  
 2003 *Embodied Lives: Figuring Ancient Maya and Egyptian Experience*. Routledge, London.
- Meskell, Lynn, Carolyn Nakamura, Rachel King and Shahina Farid  
 2008 Figured Lifeworlds and Depositional Practices at Çatalhöyük. *Cambridge Archaeological Journal* 18(02):139-161.
- Meskell, Lynn and Robert W. Preucel (editors)  
 2004 *A Companion to Social Archaeology*. Blackwell Pub., Malden, MA. ; Oxford.
- Metcalf, Peter and Richard Huntington  
 1991 *Celebrations of Death: The Anthropology of Mortuary Ritual*. 2nd / revised and with a new introduction by Peter Metcalf. ed. Cambridge University Press, Cambridge.
- Midgley, M.  
 1985 *The Origin and Function of the Earthen Long Barrows of Northern Europe*. BAR International Series S259, Oxford.
- Miller, B. G.  
 2007 Introduction. In *Be of Good Mind: Essays on the Coast Salish*, edited by B. G. Miller, pp. 1-29. UBC Press, Vancouver.
- Miller, Daniel (editor) 1998 *Material Cultures: Why Some Things Matter*. University of Chicago Press, Chicago.
- 2005a *Materiality*. Duke University Press, Durham.
- 2005b Materiality: An Introduction. In *Materiality*, edited by D. Miller, pp. 1-50. Duke University Press, Durham.
- 2009 *Stuff*. Polity, Cambridge.
- Miller, Jay  
 1999 *Lushootseed Culture and the Shamanic Odyssey*. University of Nebraska Press, Lincoln.
- Milligan, G.W.  
 1989 A Study of the Beta-Flexible Clustering Method. *Multivariate Behavioral Research* 24:163-176.
- Milligan, G.W. and M. Cooper  
 1988 A Study of Variable Standardization. *Journal of Classification* 5(2):181-204.

- Milliken, Randall, Richard Fitzgerald, M.G. Hylkema, R. Groza, T. Origer, D.G. Bieling, Leventhal, A, R.S. Wiberg, A. Gottfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier and D.A. Fredrickson  
 2007 Punctuated Culture Change in the San Francisco Bay Area. In *Clairifornia Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jones and K. A. Klar, pp. 99-123. AltaMira Press, Lanham.
- Mills, Barbara J.  
 2004 The Establishment and Defeat of Hierarchy: Inalienable Possessions and the History of Collective Prestige Structures in the Pueblo Southwest. *American Anthropologist* 106(2):238-251.  
 2008 Remembering While Forgetting: Depositional Practices and Social Memory at Chaco. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 81-108. School for Advanced Research Press, Santa Fe, NM.
- Mills, Barbara J. and T. J. Ferguson  
 2008 Animate Objects: Shell Trumpets and Ritual Networks in the Greater Southwest. *Journal of Archaeological Method and Theory* 15(4):338-361.
- Mills, Barbara J. and William H. Walker  
 2008a Introduction: Memory, Materiality, and Depositional Practice. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 1-24. School for Advanced Research Press, Sante Fe.  
 2008b *Memory Work: Archaeologies of Material Practices*. School for Advanced Research Press, Sante Fe.
- Minar, C. Jill and Patricia L. Crown  
 2001 Learning and Craft Production: An Introduction. *Journal of Anthropological Research* 57(4):369-380.
- Minister of Public Works and Government Services Canada  
 2003 *Report of the Auditor General of Canada to the House of Commons: Chapter 7, National Defence - Environmental Stewardship of Military Training and Test Areas*. Office of the Auditor General of Canada.
- Mitchell, Andy  
 2005 *The ESRI Guide to GIS Analysis Volume 2: Spatial Measurements and Statistics*. ESRI Press, Redlands.
- Mitchell, Donald H.  
 1971 Archaeology of the Gulf of Georgia Area: A Natural Region and its Culture Types. *Syesis* 4:1-228.

Mizoguchi, Koji

1992 A Historiography of a Linear Barrow Cemetary: A Structurationist's Point of View. *Archaeological Review from Cambridge* 11:39-49.

1993 Time in the Reproduction of Mortuary Practices. *World Archaeology* 25(2):223-235.

2005 Genealogy in the Ground: Observations of Jar Burials of the Yayoi Period, Northern Kyushu, Japan. *Antiquity* 79:316-326.

Mondor, D. Hardie and C.

1976 *Race Rocks National Marine Park: A Preliminary Proposal*. Indian and Northern Affairs/Parks Canada.

Montler, Timothy

1986 An Outline of the Morphology and Phonology of Saanich, North Straits Salish. Revision of Ph D thesis, University of Hawaii, 1984, University of Montana,, Missoula, Mt.

1991 *Saanich, North Straits Salish Classified Word List*. Mercury Series. Canadian Museum of Civilization, Hull, Quebec.

2009 Klallam Classified Word List. Accessed April 16, 2012, <http://www.cas.unt.edu/~montler/klallam/wordlist/>.

Mooi, E. and M. Sarstedt

2011 *A Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics*. Springer, New York.

Moore, Charles and Andrew Mason

2010 *Archaeological Inventory of Reef-Net Sites Using Side-Scan Sonar: Survey of Areas near Becher Bay, BC, April 2009*. Report on file at the British Columbia Archaeology Branch.

2011 Demonstration Survey of Prehistoric Reef-net Sites with Sidescan Sonar, Near Becher Bay, British Columbia, Canada. *International Journal of Nautical Archaeology*.

Moore, H.L.

1986 *Space, Text and Gender*. Cambridge University Press, Cambridge.

Morphy, Howard

1989 From Dull to Brilliant: The Aesthetics of Spiritual Power Among the Yolngu. *Man (N.S.)* 24(1):21-40.

1995 Landscape and the Reproduction of the Ancestral Past. In *The Anthropology of Landscape*, edited by E. Hirsch and M. O'Hanlon, pp. 184-209. Claredon Press, Oxford.

- Morrison, Sandra and Michael Blake  
 1995 *Excavations at The Scowlitz Site (DhRI16): Final Report of the 1995 Season*. Report on file at the British Columbia Archaeology Branch.
- Morrison, Sandra and Heather Myles  
 1992 The Sacred Mounds of Scowlitz. *The Midden* 24(4):2-4.
- Moss, Madonna L.  
 2011 *Northwest Coast: Archaeology as Deep History*. Society for American Archaeology Press, Washington, D.C.
- Muller, J. E.  
 1980 Geology of Victoria. Geological Survey of Canada, Map 1553A.
- Munn, Nancy D.  
 1992 The Cultural Anthropology of Time: A Critical Essay. *Annual Review of Anthropology* 21(1):93-123.
- Nakamura, C.  
 2004 Dedicating Magic: neo-Assyrian Apotropaic Figurines and the Protection of Assur. *World Archaeology* 36:11-25.
- Nielsen, Axel E.  
 2008 The Materiality of Ancestors: Chullpas and Social Memory in the Late Prehispanic History of the South Andes. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 207-232. School for Advanced Research Press, Sante Fe.
- Nilsson Stutz, Liv  
 2003 *Embodied Rituals and Ritualized Bodies: Tracing Ritual Practices in Late Mesolithic Burials* 46. Acta Archaeologica Lundensia.
- 2010 The Way We Bury Our Dead: Reflections on Mortuary Ritual, Community and Identity at the Time of the Mesolithic-Neolithic Transition. *Documenta Praehistorica* 634/636:33-42.
- Nuszdorfer, F.C., K. Klinka and D.A. Demarchi  
 1991 Coastal Douglas-fir Zone. In *Ecosystems of British Columbia*, edited by D. Meidinger and J. Pojar. B.C. Ministry of Forests, Victoria, B.C.
- O'Brien, Steven Thomas  
 1978 The Mortuary Practices of the Late Neolithic Peoples of Central Europe : A Study of Social Organization. Thesis (Ph D) - University of California, Los Angeles, 1978.
- O'Shea, John M.  
 1984 *Mortuary Variability: An Archaeological Investigation*. Studies in archaeology. Academic Press, Orlando.

- Oakes, Nicole  
2000 *An Archaeological Reconnaissance of Burial Mound Locations in Southwestern B.C., Chilliwack Forest District: Stólo Heritage Investigation Permit No. 2000-003.*
- Oakes, Nicole, Michael Blake and Dana Lepofsky  
2008 Mound-Building and the Mortuary Landscape of the Fraser Valley. Poster presentation at the 74th Annual Meeting of the Society for American Archaeology, Vancouver.
- Oestigaard, Terje  
2004 Kings and Cremations: Royal Funerals and Sacrifices in Nepal. In *Belief in the Past, BAR International Series 1212*, edited by T. Insoll, pp. 115-124. BAR, Oxford.
- Oliver, Jeff  
2010 *Landscapes and Social Transformations on the Northwest Coast: Colonial Encounters in the Fraser Valley.* The Archaeology of Colonialism in Native North America. University of Arizona Press, Tucson.
- Oliver, Laurent  
2001 Duration, Memory and the Nature of the Archaeological Record. In *It's About Time: The Concept of Time in Archaeology*, edited by H. Karlsson, pp. 61-70. Bricoleur Press, Goteberg.
- Ortman, Scott. G.  
2000 Conceptual Metaphor in the Archaeological Record: Methods and an Example from the American Southwest. *American Antiquity* 65(4):613-645.  
  
2012 Bowls to Gardens: A History of Tewa Community Metaphors. In *Religious Transformation in the Late Pre-Hispanic Pueblo World*, edited by D. M. Glowacki and Van Keuren, pp. 84-108, Tucson.
- Ortner, Sherry B.  
1989 *High Religion: A Cultural and Political History of Sherpa Buddhism.* Princeton University Press, Princeton.  
  
2006 *Anthropology and Social Theory: Culture, Power, and the Acting Subject.* Duke University Press, Durham.
- Oyama, Susan  
1985 *The Ontogeny of Information: Developmental Systems and Evolution.* Cambridge University Press, Cambridge.
- Pader, Ellen-Jane  
1982 *Symbolism, Social Relations and the Interpretation of Mortuary Remains.* BAR International Series 130, Oxford, England.

- Palumbo, G.  
1987 'Egalitarian' or 'Stratified' Society? Some Notes on Mortuary Practices and Social Structure at Jericho in EBiv. *Bulletin of the American Schools of Oriental Research* 267:43-59.
- Parish, Jane  
1999 The Dynamics of Witchcraft and Indigenous Shrines among the Akan. *African Arts* 69(3):416-447.
- Parker, John  
2004 Witchcraft, Anti-Witchcraft and Trans-Regional Ritual Innovation in Early Colonial Ghana: Sakrabundi and Aberewa, 1889-1910. *Journal of African History* 45:393-420.  
  
2006 Northern Gothic: Witches, Ghosts and Werewolves in the Savanna Hinterland of the Gold Coast, 1900s-1950s. *Africa* 76(3):352-380.
- Parker Pearson, Michael  
1982 Mortuary Practices, Society and Ideology: An Ethnoarchaeological Study. In *Symbolic and Structural Archaeology*, edited by I. Hodder, pp. 99-113. Cambridge University Press, Cambridge.  
  
1993 The Powerful Dead: Archaeological Relationships Between the Living and the Dead. *Cambridge Archaeological Journal* 3(2):203-229.  
  
2000 *The Archaeology of Death and Burial*. Texas A&M University Press, College Station.  
  
2001 Death, Being, and Time: The Historical Context of the World Religions. In *Archaeology and World Religion*, edited by T. Insoll, pp. 203-219. Routledge, London.
- Parker Pearson, Michael and Colin Richards (editors)  
1996 *Architecture and Order: Approaches to Social Space*. Routledge, London.
- Pauketat, Timothy R.  
2001a *The Archaeology of Traditions: Agency and History Before and After Columbus*. University Press of Florida, Gainesville.  
  
2001b Practice and History in Archaeology: An Emerging Paradigm. *Anthropological Theory* 1:73.  
  
2008 Founders' Cults and the Archaeology of *Wa-kan-da*. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 61-79. School for Advanced Research Press, Sante Fe.  
  
2011 King: The Social Archaeology of a Late Mississippian Town in Northwestern Georgia. *Journal of Field Archaeology* 36(1):70-71.

- 2013 *The Archaeology of the Cosmos: Rethinking Agency and Religion in Ancient America*.  
Routledge, New York.
- Pauketat, Timothy R. and Susan M. Alt  
2003 Mounds, Memory, and Contested Mississippian History. In *Archaeologies of Memory*,  
edited by R. M. V. Dyke and S. E. Alcock, pp. 151–179. Blackwell, London.
- 2004 The Making and Meaning of a Mississippian Axe-Head Cache. *Antiquity* 78:779-  
797.
- 2005 Agency in a Postmold? Physicality and the Archaeology of Culture-Making.  
*Journal of Archaeological Method and Theory* 12(3):213-236.
- Pauketat, Timothy R., L.S. Kelly, G.J. Fritz, N.H. Lopinot, S. Elias and E. Hargrave  
2002 The Residues of Feasting and Public Ritual at Early Cahokia. *Am. Antiq.* 67:257.
- Peebles, C.S.  
1972 Monothetic-Divisive Analysis of the Moundville Burials: An Initial Report.  
*Newsletter of Computer Archaeology* 8(2):1-13.
- Peebles, Matthew A.  
2011 Identity and Social Transformation in the Prehispanic Cibola World: A.D. 1150-  
1325, Arizona State University, Pheonix.
- Pels, P.  
1998 The Spirit of Matter: On Fetish, Rarity, Fact, and Fancy. In *Border Fetishisms:  
Material Objects in Unstable Places*, edited by P. Spyer, pp. 91-121. Routledge, New York.
- Percy, R.C.W.  
1974 The Prehistoric Cultural Sequence at Crescent Beach, British Columbia. M.A.  
thesis, Department of Archaeology, Simon Fraser University, Burnaby, B.C.
- Petrescu, Sarah  
2014 Attempt to Downplay Grace Islet Burial Ground Dismays Archaeologists. *Times  
Colonist* August 8, 2014. Victoria.
- Philip, G. and B. S. Ottaway  
1983 Mixed Data Cluster Analayis: An Illustration Using Cypriot Hooked-Tang  
Weapons. *Archaeometry* 25(2):119-133.
- Pickford, A.E.  
1947 Prehistoric Cairns and Mounds in B.C.: With a Report on the Duncan Burial  
Ground. *British Columbia Historical Quarterly* 11(4):237-263.
- Pinart, Alphonse  
1876 A French Scientist Explores the Indian Mounds of the Pacific Coast Indian  
Remains on Vancouver island. *Daily British Colonist*. Victoria.

- Pleog, A.  
2002 Comment: The Vines of Complexity: Egalitarian Structures and the Institutionalization of Inequality Among the Enga by Polly Wiessner. *Current Anthropology* 43(2):259.
- Pollard, Joshua  
2001 The Aesthetics of Depositional Practice. *World Archaeology* 33(2):315-333.  
  
2008 Deposition and Material Agency in the Early Neolithic of Southern Britain. In *Memory Work: Archaeologies of Material Practices*, edited by B. H. Mills and W. H. Walker, pp. 41-59. School for Advanced Research Press, Santa Fe.  
  
2009 The Materialization of Religious Structures in the Time of Stonehenge. *Part of a special issue: Materiality, Belief, Ritual: Archaeology and Material Religion* 5(3):332-353.
- Powers, M.C.  
1953 A New Roundness Scale for Sedimentary Particles. *Journal of Sedimentary Petrology* 23(2):117-119.
- Price, L.  
1993 Identifying Cluster Overlap with Normix Population Membership Probabilities. *Multivariate Behavioral Research* 28:235-262.
- Prufer, Keith M. and James Edward Brady  
2005 *Stone Houses and Earth Lords : Maya Religion in the Cave Context*. Mesoamerican Worlds. University Press of Colorado, Boulder.
- Rabinow, Paul (editor)  
1991 *The Foulcault Reader: An Introduction to Foulcault's Thought*. Penguin, London.
- Rackerby, F.  
1968 Lévi-Strauss, Poverty Point, and the Misuse of Analogy. *American Antiquity* 33(3):388-390.
- Rainville, Lynn  
1999 Hanover Deathscapes: Mortuary Variability in New Hampshire, 1770-1920. *Ethnohistory* 46(3):541-597.
- Ramsey, C.G. and H.R. Sleeper  
2008 *Architectural Graphic Standards, Student Edition*. John Wiley & Sons, Hoboken.
- Rappaport, Roy A.  
1967 *Pigs For The Ancestors; Ritual in the Ecology of a New Guinea People*. Yale University Press, New Haven,.  
  
1979 *Ecology, Meaning and Religion*. North Atlantic Books, Richmond.

- 1999 *Ritual and Religion in the Making of Humanity*. Cambridge Studies in Social and Cultural Anthropology. Cambridge University Press, Cambridge.
- Read, D.W.  
1982 Towards a Theory of Archaeological Classification. In *Essays in Archaeological Typology*, edited by R. Whallon and J. A. Brown. Center for American Archeology Press, Evanston.
- Read, D.W. and Glenn S. Russell  
1996 A Method for Taxonomic Typology Construction. *American Antiquity* 61:663-684.
- Reagan, Albert B.  
1917 Archaeological Notes on Western Washington and Adjacent British Columbia 7 (1):1-31.
- Reimer, P. J., M. G. L. Baillie, E. Bard, A. Bayliss, J. W. Beck, C. J. H. Bertrand, P. G. Blackwell, C. E. Buck, G. S. Burr, K. B. Cutler, P. E. Damon, R. L. Edwards, R. G. Fairbanks, M. Friedrich, T. P. Guilderson, A. G. Hogg, K. A. Hughen, B. Kromer, F. G. McCormac, S. W. Manning, C. B. Ramsey, R. W. Reimer, S. Remmele, J. R. Southon, M. Stuiver, S. Talamo, F. W. Taylor, J. van der Plicht and C. E. Weyhenmeyer  
2004 IntCal04 Terrestrial Radiocarbon Age Calibration, 26 - 0 ka BP. *Radiocarbon* 46:1029-1058.
- Renfrew, Colin  
1976 Megaliths, Territories and Populations. In *Acculturation and Continuity in Atlantic Europe*, edited by S. J. De Laet, pp. 198-220. Brugge, De Tempel.
- Rice, P.M. and M.E. Saffer  
1982 Cluster Analysis of Mixed-Level Data: Pottery Provenience as an Example. *Journal of Archaeological Science* 9:395-409.
- Richards, Colin  
1996 Monuments as Landscape: Creating the Centre of the World in Late Neolithic Orkney. *World Archaeology* 28(2):190-208.
- Richards, Colin and Julian Thomas  
1984 Ritual Activity and Structured Deposition in Later Neolithic Wessex. In *Neolithic Studies: A Review of Some Current Research*, edited by R. Bradley and J. Gardiner, pp. 189-218. British Archaeological Reports (British Series 133), Oxford.
- Richards, Janet  
2005 *Society and Death in Ancient Egypt: Mortuary Landscapes of the Middle Kingdom*. Cambridge University Press, Cambridge.

- Richardson, Edward M.  
1864 A Salish Grave, pp. Watercolour, no specific locale given.  
CollectionsCanada.gc.ca.
- Richardson, James  
1871 *Unpublished field notes from the Geological Survey of Canada*. Copies available from National Archives of Canada RG 45, Vol 171, File 1515, Reel T-20222.  
  
1872 *Unpublished field notes from the Geological Survey of Canada*. Copies available from National Archives of Canada RG 45, Vol 171, File 1517, Reel T-20222.  
  
1872-1873 *Unpublished field notes from the Geological Survey of Canada*. Copies available from National Archives of Canada RG 45, Vol 171, File 1518, Reel T-20222.
- Ripley, B.D.  
1977 Modelling Spatial Patterns (with discussion). *Journal of the Royal Statistical Society, Series B* 39:172-212.  
  
1981 *Spatial Statistics*. John Wiley & Sons, New York.
- Roddick, Andy  
2009 Communities of Pottery production and Consumption on the Taraco Peninsula, Bolivia, 200 BC-300 AD, Anthropology, University of California, Berkley.
- Rogers, Margaret  
2009 *Archaeological Impact Assessment of Proposed Subdivision along Northumberland Channel, Cable Bay, Southern Nanaimo, BC: Heritage Inspection Permit #2009 – 0239*. Report on file at the British Columbia Archaeology Branch.
- Romesburg, H.C.  
2004 *Cluster Analysis for Researchers*. Lulu Press, North Carolina.
- Rowan, Yorke M.  
2011 Beyond Belief: The Archaeology of Religion and Ritual. *Archeological Papers of the American Anthropological Association* 21(1):1-10.
- Roy, Susan  
2010 *These Mysterious People: Shaping History and Archaeology in a Northwest Coast Community*. Queen's University Press, Montréal.
- Sahlins, Marshall  
1985 *Islands of History*. University of Chicago Press, Chicago.
- Sampson, M.  
1972 *Indians of Skagit County*. Skagit County Historical Series, No. 2, Mount Vernon.

- Sangren, P. Steven  
1987 *History and Magical Power in a Chinese Community*. Stanford University Press, Stanford.
- Sassaman, Kenneth E.  
2005 Poverty Point as Structure, Event, Process. *Journal of Archaeological Method and Theory* 12(4):335-364.
- Sassaman, Kenneth E. and Wictoria Rudolphi  
2001 Communities of Practice in the Early Pottery Traditions of the American Southeast. *Journal of Anthropological Research* 57(4):407-425.
- Saunders, Nicholas J.  
2004 The Cosmic Earth: Materiality and Minerology in the Americas. In *Soils, Stones and Symbols: Cultural Perceptions of the Mineral World*, edited by N. Boivin and M. A. Owoc, pp. 123-143. UCL Press, London.
- Saxe, A.A.  
1970 Social Dimensions of Mortuary Practice. Ph.D dissertation, Anthropology, Michigan University.
- Sayer, Duncan and Michelle Wienhold  
2012 A GIS-Investigation of Four Early Anglo-Saxon Cemeteries: Ripley's K-function Analysis of Spatial Groupings Amongst Graves. In *Social Science Computer Review*. <http://sscr.sagepub.com>.
- Schiffer, Michael B.  
1976 *Behavioral Archeology*. Studies in Archeology. Academic Press, New York.
- Schmidt, Christopher and Steven A. Symes (editors)  
2008 *The Analysis of Burned Human Remains*. Elsevier, Boston.
- Schulting, Rick J.  
1995 *Mortuary Variability and Status Differentiation on the Columbia-Fraser Plateau*. Archaeology Press, Simon Fraser University, Burnaby.
- Schurr, Mark R.  
1992 Isotopic and Mortuary Variability in a Middle Mississippian Population. *American Antiquity* 57(2):300-320.
- Scott, David W.  
1992 *Multivariate Density Estimation: Theory, Practice, and Visualization*. John Wiley & Sons, Hoboken.
- Shanks, M.  
2005 Theory of Social Practice. In *Archaeology: The Key Concepts*, edited by C. Renfrew and P. G. Bahn, pp. 240-243. Routledge, London.

- Shanks, M. and C. Tilley  
 1982 Ideology, Symbolic Power and Ritual Communication: A Reinterpretation of Neolithic Mortuary Practices. In *Symbolic and Structural Archaeology*, edited by I. Hodder, pp. 129-154. Cambridge University Press, Cambridge.
- Shennan, Stephen  
 1997 *Quantifying Archaeology*. 2nd ed. Edinburgh University Press, Edinburgh.
- Sherratt, A.  
 1990 The Genesis of Megaliths. *World Archaeology* 22:147-167.
- Silverman, Helaine  
 2002 Introduction: The Space and Place of Death. In *The Space and Place of Death*, edited by H. Silverman and D. B. Small. Archaeological Papers of the American Anthropological Association Number 11, Arlington.
- Small, David B.  
 2002 Rethinking the Historical Dimensions of Mortuary Practices: A case from Nisky Hill Cemetery, Bethlehem, Pennsylvania. In *The Space and Place of Death*, edited by H. Silverman and D. B. Small. vol. Archaeological Papers of the American Anthropological Association Number 11. American Anthropological Association, Arglington.
- Smith, Harlan I.  
 1900 The Cairns of British Columbia and Washington. *Proceedings of the American Association for the Advancement of Science*:1-2. New York.
- 1907 Archaeology of the Gulf of Georgia and Puget Sound. In *Jesup North Pacific Expedition Publications*, pp. 303-441. vol. 2(6); 4(6). American Museum of Natural History, New York, N.Y.
- 1910 Ancient Methods of Burial in the Yakima Valley, Washington. *American Antiquarian and Oriental Journal* 32:111-113.
- Smith, Harlan I. and Gerard Fowke  
 1901 Cairns of British Columbia and Washington. In *Jesup North Pacific Expedition, Memoirs*, pp. 55-75. vol. 3:2. American Museum of Natural History, New York.
- Smith, Shyanne  
 2007 Garry Oak Savannah Stand History and Change in Coastal Southern British Columbia, Department of Geography, University of Guelph, Guelph.
- Snead, James E.  
 2006 Trails of Tradition: Archaeology, Landscape, and Movement. Paper presented at the The Landscapes of Movement Symposium, University of Pennsylvania Museum.

- Soja, Edward W.  
1996 *Thirdspace*. Blackwell, Malden (Mass.).
- Sommer, Ulrike  
2001 'Hear the instruction of thy father, and forsake not the law of thy mother'. *Journal of Social Archaeology* 1(2):244-270.
- Sorant, Peter E. and J. Richard Shenkel  
1984 The Calculation of Volumes of Middens, Mounds, and Strata Having Irregular Shapes. *American Antiquity* 49(3):599-603.
- Spier, L.  
1935 The Prophet Dance of the Northwest and its Derivatives. *General Series in Anthropology* 1:1—74.
- Stahl, Ann Brower  
1993 Concepts of Time and Approaches to Analogical Reasoning in Historical Perspective. *American Antiquity* 58(2):235-260.  
  
2002 Colonial Entanglements and the Practices of Taste: An Alternative to Logocentric Approaches. *American Anthropologist* 104(3):827-845.  
  
2004 Making History in Banda: Reflections on the Construction of Africa's Past. *Historical Archaeology* 38(1):50-65.  
  
2008 Dogs, Pythons, and Beads: The Dynamics of Shrines and Sacrificial Practices in Banda, Ghana, 1400-1900 CE. In *Memory Work: Archaeologies of Material Practices*, edited by B. J. Mills and W. H. Walker, pp. 159-186. School for Advanced Research Press, Sante Fe.  
  
2010 Material Histories. In *Material Culture Studies*, edited by D. Hicks and M. C. Beaudry. Oxford University Press, Oxford.  
  
2013 Archaeological Insights into Aesthetic Communities of Practice in the Western Volta Basin. *African Arts* 46(3):54-67.
- Stein, Julie K.  
1992 *Deciphering a Shell Midden*. Academic Press, San Diego.  
  
2000 *Exploring Coast Salish prehistory : the archaeology of San Juan Island*. Burke Museum monograph. University of Washington Press/Burke Museum of Natural History and Culture, Seattle.
- Stern, Bernhard J.  
1934 *The Lummi Indians of Northwest Washington*. Columbia University Press, New York.

- Stirling, Lea Margaret and David L. Stone  
 2007 *Mortuary landscapes of North Africa*. Phoenix. Supplementary volume ; University of Toronto Press, Toronto ; Buffalo.
- Stó:lō Nation  
 2012 T'xwelátse: Man Turned to Stone. Electronic document, <http://www.srrmcentre.com/StoneTxwelatse/1Home.html>, accessed April 20, 2013.
- Strathern, M.  
 1993 Making Incomplete. In *Carved Flesh/Cast Selves: generated Symbols and Social Practices*, edited by V. Broch-Due, I. Rudie and T. Bleie, pp. 41-52. Berg, Oxford.
- Stuiver, M., P.J. Reimer, E. Bard, J.W. Beck, G.S. Burr, K.A. Hughen, B. Kromer, F.G. McCormac, J. v. d. Plicht and M. Spurk  
 1998 INTCAL98 Radiocarbon age calibration 24,000 - 0 cal BP. *Radiocarbon* 40:1041-1083.
- Sumpter, Ian D., Daryl W. Fedje  
 2001 *Archaeological Site Survey of Lots 1 (Cavendish Property) and 5, Fort Rodd Hill National Historic Site*. Cultural Resource Services, Western Canada Service Centre, Parks Canada.
- Suttles, Wayne  
 1951 *Economic Life of the Coast Salish of Haro and Rosario Straits*. Ph.D. dissertation University of Washington Volume 1. 3 vols. Garland Publishing Inc., New York, N.Y.  
 1958 Private Knowledge, Morality, and Social Classes Among the Coast Salish. *American Anthropologist* 60:479-506.  
 1974 *Economic Life of the Coast Salish of Haro and Rosario Straits*. Garland Publishing Inc., New York.  
 1983 Productivity and Its Constraints: A Coast Salish Case. In *Indian Art Traditions of the Northwest Coast*, edited by R. L. Carlson, pp. 197-205. Department of Archaeology Publications, Archaeology Press, Simon Fraser University, Burnaby, B.C.  
 1987 *Coast Salish Essays*. Talonbooks, Vancouver, B.C.  
 1990 Central Coast Salish. In *Northwest Coast*, edited by W. Suttles. Handbook of North American Indians. vol. 7, W. C. Sturtevant, general editor. Smithsonian Institution Press, Washington, D.C.  
 1991 The Shed-Roof House. In *In A Time of the Gathering*, edited by R. Wright, pp. 212-222. University of Washington Press, Seattle.

Swanton, John R.

1905 Contributions to the Ethnology of the Haida. In *Jesup North Pacific Expedition Publications*, pp. 1-300. vol. 5; 8(1). American Museum of Natural History, New York, N.Y.

1908 *Social Condition, Beliefs, and Linguistic Relationship of the Tlingit Indians. 26th Annual Report of the Bureau of American Ethnology*. Bureau of American Ethnology, Washington, D.C.

Tainter, Joseph A.

1975 Social Inference and Mortuary Practices: An Experiment in Numerical Classification. *World Archaeology* 7(1):1-15.

1978 Mortuary Practices and the Study of Prehistoric Social Systems. *Advances in Archaeological Method and Theory* 1:105-141.

1980 Behaviour and Status in a Middle Woodland Mortuary Population from Illinois Valley. *American Antiquity* 45(2):308-313.

Taliaferro, Matthew S., Bernard A. Schriever and M. Steven Shackley

2010 Obsidian procurement, least cost path analysis, and social interaction in the Mimbres area of southwestern New Mexico. *Journal of Archaeological Science* 37(3):536-548.

Tambiah, Stanley J.

1979 A Performative Approach to Ritual. *Proceedings of the British Academy* 65:113-169.

1984 *The Buddhist Saints of the Forest and the Cult of Amulets : A Study in Charisma, Hagiography, Sectarianism, and Millennial Buddhism*. Cambridge Studies in Social Anthropology. Cambridge University Press, Cambridge.

Tarlow, Sarah

1999 *Bereavement and Commemoration: An Archaeology of Mortality*. Blackwell Publishers, Oxford.

Taussig, M.

1999 *Defacement: Public Secrecy and the Labor of the Negative*. Stanford University Press, Stanford.

Thacker, W.H.

1898 Mortuary Customs of the Puget Sound Indians. *The American Archaeologist* 2(4):97-98.

Thom, Brian

1992 Whalen Farm Revisited: 40 Years Later. *The Midden* 24(5):3.

1995 The Dead and the Living: Burial Mounds and Cairns and the Development of Social Classes in the Gulf of Georgia Region. Masters thesis, Department of Anthropology and Sociology, University of British Columbia, Vancouver, B.C.

- 2005 Coast Salish Senses of Place: Dwelling, Meaning, Power, Property and Territory in the Coast Salish World, Anthropology, McGill University, Montréal.
- Thomas, David Hurst  
 1978 The Awful Truth about Statistics in Archaeology. *American Antiquity* 43(2):231-244.
- Thomas, Julian  
 1990 Monuments From the Inside: The Case of the Irish Megalithic Tombs. *World Archaeology* 22(2):168-178.
- 1993 The Politics of Vision and the Archaeologies of Landscape. In *Landscape: Politics and Perspectives*, edited by B. Bender, pp. 19-48. Berg, Oxford.
- 2001 Archaeologies of Place and Landscape. In *Archaeological Theory Today*, edited by I. Hodder, pp. 163-186. Polity Press, Cambridge.
- 2004 *Archaeology and Modernity*. Routledge, London ; New York.
- Thomas, Julian and Joanna Brück  
 2001 Monuments, Power and Personhood in the British Neolithic. *The Journal of the Royal Anthropological Institute* 7(4):763-766.
- Thomas, Nicholas  
 1991 *Entangled Objects: Exchange, material Culture, and Colonialism in the Pacific*. Harvard University Press, Cambridge, Mass.
- Thomas, Richard  
 2014 *Grace Islet Protection*. Letter submitted to the Province of British Columbia.
- Thompson, M. Terry and Steven M. Egesdal  
 2008 *Salish Myths and Legends: One People's Stories*. Native literatures of the Americas. University of Nebraska Press, Lincoln.
- Thornton, Thomas F.  
 2008 *Being and Place Among The Tlingit*. University of Washington Press Seattle.
- Tilley, Christopher  
 1994 *A Phenomenology of Landscape: Places, Paths and Monuments*. Explorations in anthropology. Berg, Providence.
- 1996 The Powers of Rocks: Topography and Monument Construction on Bodmin Moor. *World Archaeology* 28(2):161-176.
- 1999 *Metaphor and Material Culture*. Social archaeology. Blackwell Publishers, Malden, Mass.

- 2004 *The Materiality of Stone: Explorations in Landscape Phenomenology, Volume 1*. Berg, Oxford.
- Tong, D.  
2010 Point pattern analysis. In *Encyclopedia of geography*, edited by B. Warf, pp. 2202-2203. SAGE Publications, Inc, Thousand Oaks, CA.
- Trouillot, Michel-Rolph  
1995 *Silencing the Past: Power and the Production of History*. Beacon Press, Boston.
- Tuck, James A. and Robert McGhee  
1975 Archaic Cultures in the Strait of Belle Isle Region, Labrador. *Arctic Anthropology* 12(2):76-91.
- Tuovinen, Tapani  
2002 The Burial Cairns and the Landscape in the Archipelago of Aboland, SW Finland, in the Bronze Age and the Iron Age, Department of Art Studies and Anthropology, University of Oulu, Oulu, Finland.
- Turner, Victor  
1964 Betwixt and Between: The Liminal Period in *Rites de Passage*. In *Symposium on New Approaches to the Study of Religion*, edited by J. Helm, pp. 4-20. University of Washington Press, Seattle.  
  
1969 *The Ritual Process: Structure and Antistructure*. Routledge & Kegan Paul, London.  
  
1974 *Dramas, Fields and Metaphors: Symbolic Action in Human Society*. Cornell University Press, Ithaca.  
  
1986 *On the Edge of the Bush*. University of Arizona Press, Tucson.
- Ucko, P.J.  
1969 Ethnography and the Archaeological Interpretation of Funerary Remains. *World Archaeology* 2:262-280.
- Upton, G. and B. Fingleton  
1985 *Spatial Data Analysis by Example. Volume 1: Point Pattern and Quantitative Data*. John Wiley & Sons, Chichester.
- Urban, Patricia and Edward Schortman  
2012 Monumentality, Territoriality, and Networks during the Middle Preclassic in Northwest Honduras. *Archeological Papers of the American Anthropological Association* 22(1):87-106.
- Van Dyke, Ruth M. and Susan E. Alcock (editors)  
2003 *Archaeologies of Memory*. Blackwell Publishing, Oxford.

- van Gennep, Arnold  
1960 *The Rites of Passage*. Translated by M. B. Vizedom and G. L. Caffee. University of Chicago Press, Chicago.
- Verdery, Katherine  
1999 *The Political Lives of Dead Bodies: Reburial and Postsocialist Change*. Columbia University Press, New York.
- Wagner, H.R.  
1933 *Spanish Explorations in the Strait of Juan de Fuca*. Fine Arts Press, Santa Ana.
- Walbran, J.T.  
1909 (1972) *British Columbia Coast Names, 1592-1906: To Which Are Added a Few Names in Adjacent United States Territory, Their Origin and History*. University of Washington Press, Seattle.
- Walker, William H.  
2008 Practice and Nonhuman Social Actors: The Afterlife Histories of Witches and Dogs in the American Southwest. In *Memory Work: Archaeologies of Material Practices*, edited by B. H. Mills and W. H. Walker, pp. 137-157. School for Advanced Research Press, Sante Fe.
- Walker, William H. and Lisa J. Lucero  
2000 The Depositional History of Ritual and Power. In *Agency in Archaeology*, edited by M. A. Dobres and J. Robb, pp. 139-147. Routledge, London.
- Waller, Lance A. and Carol A. Gotway  
2004 *Applied Spatial Statistics for Public Health Data*. John Wiley & Sons, Hoboken, New Jersey.
- Wand, M. P. and M. C. Jones  
1995 *Kernel Smoothing*. Chapman & Hall, London.
- Warner, W. Loyd  
1965 The City of the Dead. In *Death and Identity*, edited by R. J. Fulton, pp. 360-395. John Wiley & Sons, New York.
- Waterson, Roxana  
1995 Houses and Hierarchies in Island Southeast Asia. In *About the House: Lévi-Strauss and Beyond*, edited by J. Carsten and S. Hugh-Jones, pp. 47-68. Cambridge University Press, Cambridge.
- 2000 House, Place, and Memory in Tana Toraja (Indonesia). In *Beyond Kinship: Social and Material Reproduction in House Societies*, edited by R. A. Joyce and S. D. Gillespie, pp. 177-188. University of Pennsylvania Press Philadelphia.

- Watson, Aaron  
 2001 Round Barrows in a Circular World: Monumentalising Landscapes in Early Bronze Age Wessex. In *Bronze Age Landscapes: Tradition and Transformation*, edited by J. Bruck, pp. 205-216. Oxbow, Oxford.
- Webber, Ellen  
 1899 An Old Kwanthum Village—Its People and Its Fall. *American Antiquarian and Oriental Journal* 21:309-314.
- Weeks, S.  
 1985 Skeletal Remains from DeRt-2. In *The 1984 Excavations at the Canal Site (DeRt-1 and DeRt-2): Permit Report 1984-13*, edited by R. L. Carlson, pp. 78-118. Report on file at the British Columbia Archaeology Branch, Victoria.
- 1986 Skeletal Remains from DeRt-1 & DeRt-2. In *The 1985 Excavations at the Canal Site (DeRt-1 and DeRt-2): Permit Report 1985-10*, edited by R. L. Carlson, pp. 94-116. Report on file at the British Columbia Archaeology Branch, Victoria.
- Weiner, A.B.  
 1992 *Inalienable Possessions: The Paradox of Keeping-while-Giving*. University of California Press, Berkeley.
- Weiser, Andrea L.  
 2006 Exploring 10,000 Years of Human History on Ebey's Prairie, Whidbey Island, Washington, Archaeology, Simon Fraser University, Burnaby.
- Weiss-Krejci, Estella  
 2004 Mortuary Representations of the Noble House: A Cross-Cultural Comparison between Collective Tombs of the Ancient Maya and Dynastic Europe. *Journal of Social Anthropology* 4:368-404.
- Whallon, R.  
 1990 Defining Structure in Clustering Dendrograms with Multi-Level Clustering. In *New Tools from Mathematical Archaeology*, edited by A. Voorrips and B. Ottoway, pp. 1-13. Scientific Information Centre of the Polish Academy of Sciences, Warsaw.
- Wheatley, David and Mark Gillings  
 2000 Vision, Perception and GIS: Developing Enriched Approaches to the Study of Archaeological Visibility. In *Beyond the Map: Archaeology and Spatial Technologies*, edited by G. R. Lock, pp. 1-27. IOS Press, Amsterdam.
- 2002 *Spatial Technology and Archaeology: The Archaeological Applications of GIS*. Taylor and Francis, London.
- White, Kevin, Rob Bryant and Nick Drake  
 1998 Techniques for Measuring Rock Weathering: Application to a Dated Fan Segment Sequence in Southern Tunisia. *Earth Surface Processes and Landforms* 23:1031-1043.

- Wiessner, Polly  
 2002 The Vines of Complexity: Egalitarian Structures and the Institutionalization of Inequality among the Enga. *Current Anthropology* 43(2):233-269.
- Wike, Joyce  
 1941 Modern Spirit Dancing of Northern Puget Sound, Anthropology, University of Washington, Seattle.  
 1967 The Role of the Dead in Northwest Coast Culture. In *Indian Tribes of Aboriginal America*, edited by S. Tax. Cooper Square Publishers Inc., New York.
- Williams, Howard  
 1998 Monuments and the past in Early Anglo-Saxon England. *World Archaeology* 30(1).  
 2001a Death, Memory and Time: A Consideration of the Mortuary Practices at Sutton Hoo. In *Time in the Medieval World*, edited by C. Humphrey and W. M. Ormond. York Medieval Press, York.  
 2001b In ideology of Transformation: Cremation Rites and Animal Sacrifice in Early Anglo-Saxon England. In *The Archaeology of Shamanism*, edited by N. Price, pp. 193-212. Routledge, London.  
 2004 Death Warmed Up: The Agency of Bodies and Bones in Early Anglo-Saxon Cremation Rites. *Journal of Material Culture* 9(3):263-291.  
 2006 *Death and Memory in Early Medieval Britain*. Cambridge University Press, Cambridge.  
 2007 Depicting the Dead: Commemoration Through Cists, cairns and Symbols in Early Medieval Britain. *Cambridge Archaeological Journal* 17(2):145-164.  
 2008 Towards an Archaeology of Cremation. In *The Analysis of Burned Human Remains*, edited by C. Schmidt and S. A. Symes, pp. 239-269. Elsevier, Boston.
- Williams, W.T., M.B. Dale and P. MacNaughton-Smith  
 1964 An Objective Method of Weighting in Similarity Analysis. *Nature* 201:426.
- Willows, Erin  
 2008 *Archaeological Impact Assessment: Montreul Hill, 5419 Rocky Point Road, Metchosin, British Columbia. Heritage Conservation Act Site Inspection Permit 2007-385*. Report of file at the British Columbia Archaeology Branch.
- Willows, Erin, Kristina Bowie and Rebecca Wigen  
 2012 *Archaeological Impact Assessment, Archaeological Data Recovery and Monitoring, DeRu-36, 525 Towner Road, North Saanich, B.C. Heritage Conservation Act Inspection Permit 2008-0286, Alteration Permit 2008-0454*. Report on file at the British Columbia Archaeology Branch.

- Wilson, Ian R.  
 1987 *Excavation of a Burial Cairn DeRu 17, Piers Island, B.C.* Report on file at the British Columbia Archaeology Branch.
- 1988 *Burial Excavation at DhRx-44, Piper's Lagoon, Nanaimo B.C.* Report on file at the British Columbia Archaeology Branch.
- 1990 *Archaeological Impact Assessment, 4545 East Sooke Road, District of Metchosin, Southern Vancouver Island. Permit 1990-26.* Report on file at the British Columbia Archaeology Branch.
- Wilson, Ian R., Andrew Hickok and Margaret Rogers  
 2003 *Emergency Archaeological Salvage: DiSe 7 Deep Bay, Vancouver Island, Heritage Conservation Act Site Alteration Permit 2003-71.* Report on file at the British Columbia Archaeology Branch.
- Wilson, Ian R. and Brad Smart  
 1990 *Archaeological, Testing And Artifact Analysis Of DcRv 24. Metchosin, Southern Vancouver Island, Permit 1990-26B.* Report on file at the British Columbia Archaeology Branch.
- Wilson, Peter J.  
 1988 *The Domestication of the Human Species.* Yale University Press, New Haven.
- Winter-Livneh, Rona, Tal Svoray and Isaac Gilead  
 2012 Secondary Burial Cemeteries, Visibility and Land Tenure: A View from the Southern Levant Chalcolithic Period. *Journal of Anthropological Archaeology* 31(4):423-438.
- Witcher, R.E.  
 1999 GIS and Landscapes of Perception. In *Geographical Information Systems and Landscape Archaeology*, edited by M. Gillings, D. Mattingly and J. v. Dalen, pp. 13-22. Oxbow Books, Oxford.
- Wylie, Alison  
 1985 The Reaction Against Analogy. *Advances in Archaeological Method and Theory* 8:63-111.
- 1988 "Simple" Analogy and the Role of Relevance Assumptions: Implications of Archaeological Practice. *International Studies in the Philosophy of Science* 2:134-150.
- 1989 Archaeological Cables and Tacking: The Implications of Practice for Bernstein's "Options beyond Objectivism and Relativism" *Philosophy of the Social Sciences* 19:1-18.
- 1996 The Constitution of Archaeological Evidence: Gender Politics and Science. In *Disunity of Science. Boundaries, Contexts and Power*, edited by P. Galison and D. J. Stump, pp. 311-343. Stanford University Press, Stanford.

- Yorath, Chris and H.W. Nasmith  
1995 *The Geology of Southern Vancouver Island: A field guide*. Orca Book Publishers, Victoria.
- Yorath, Chris, A. Sutherland Brown and N.W. Massey  
1999 *Lithoprobe, Southern Vancouver Island, British Columbia: Geology*. Geological Survey of Canada, Bulletin 498, Ottawa.
- Youngman, M.  
1979 *Analyzing Social and Educational Research Data*. McGraw Hill Book Company, London.

## Appendices

## Appendix 1: Calibrated Radiocarbon Dates

Site	Site	Sample	Sample Number	Sample material	Method	Uncalibrated age	Sigma	Calibration dataset	Delta R
Pender Canal	DeRt-2	Burial 86-24	SFU 537	Human bone	Conventional	2620	50	Marine/No. Hcm	411 +/- 12
Pender Canal	DeRt-2	Burial 85-36	RIDDL 272	Human bone	AMS	3600	160	Marine/No. Hcm	411 +/- 12
Pender Canal	DeRt-2	Burial 84-12	RIDDL-100	Human bone	AMS	5170	220	Marine/No. Hcm	411 +/- 12
Pender Canal	DeRt-2	Burial 84-33	RIDDLE-104	Human bone	AMS	4430	170	Marine/No. Hcm	411 +/- 12
Qithvil	DhRl-16	Mound 1	BETA-56200	Human bone	AMS	1370	60	Marine/No. Hcm	411 +/- 12
Qithvil	DhRl-16	Mound 23	Beta-56217	Charcoal	AMS	1190	70	Intcal09.14c	n/a
Pedder Bay	DcRv-1	Floor 2/3		Charcoal	Conventional	1580	180	Intcal09.14c	n/a

Cont. from above

One sigma start (cal)	One sigma end (cal)	Probability	Two sigma start	Two sigma end	Probability	Description
380 B.C.	335 B.C.	0.37	398 B.C.	186 B.C.	0.63	First instance of cranial modification
1726 B.C.	1715 B.C.	0.02	1911 B.C.	1087 B.C.	0.98	Direct assoc. with spoon
3903 B.C.	3873 B.C.	0.03	3073 B.C.	3071 B.C.	0.00	Early midden inhumation
2868 B.C.	2428 B.C.	0.98	3073 B.C.	3071 B.C.	0.00	Early midden inhumation
A.D. 1005	A.D. 1127	0.92	A.D. 907	A.D. 916	0.01	Human bone in Mound 1
A.D. 769	A.D. 898	0.79	A.D. 682	A.D. 982	1.00	Charcoal below sand surface
A.D. 320	A.D. 644	0.91	A.D. 53	A.D. 782	0.99	Charcoal between floors 2 and 3

### Sources

Pender Canal: (Carlson and Hobler, 1993:32-33)

Qithvil: (Lepofsky, et al. 2000:400)

Pedder Bay: DcRv-1 site form, on file at the British Columbia Archaeology Branch

## Appendix 2: Coast Salish Phonemic Orthography

IPA	Suttles	Montler (Americanist)	SENĆOŦEN (Dave Elliot)	Approximate phonetic values
ʔ	ʔ	ʔ	ʔ	Glottal stop, like “bo’le” for “bottle”
a	a	a	O	f <u>a</u> ther, d <u>o</u> t, p <u>o</u> t
ə	ə	ə	E	Between b <u>i</u> t and p <u>u</u> t, <u>a</u> bout and gall <u>o</u> p
ɛ	ɛ	e	A	b <u>e</u> d, p <u>e</u> t
ei			Ɔ	s <u>a</u> y, e <u>i</u> ght
e			Á	b <u>a</u> ke, t <u>a</u> ke
tʃ	č	č	Ć	<u>ch</u> ick, <u>ch</u> ocolate
h	h	h	H	<u>h</u> ide, c <u>o</u> h <u>o</u> rt, <u>h</u> ope
i	i	i	I	p <u>e</u> ek, b <u>e</u> at, mach <u>i</u> ne
k	k	k	C	<u>k</u> elp, <u>k</u> ee <u>p</u>
kʷ	kʷ	kʷ	Ɔ	<u>q</u> uick
kʷ		kʷ	Q	<u>q</u> uock
l	l	l	L	<u>l</u> eg, <u>l</u> ittle
tʃ	ł	ł	Ɔ	Affricate, like English <u>tl</u> or <u>kl</u>
m	m	m	M	<u>m</u> otion, <u>l</u> im <u>b</u> er, sw <u>i</u> m
n	n	n	N	<u>n</u> othing, <u>n</u> ada
ŋ	ŋ	ŋ	Ņ	<u>r</u> ing, b <u>a</u> ng,
p	p	p	P	<u>p</u> ainful, st <u>o</u> p
q	q	q	Ɔ	Like <u>k</u> (but pulling tongue to back of uvula)
qʷ		qʷ	K	
qʷ	qʷ	qʷ	Ɔ	A labialized q (like <u>k</u> but pulling tongue to back of uvula)
qʷ		qʷ	Ɔ	
s	s	s	S	<u>s</u> inger, bl <u>i</u> ss
ʃ	š	š	Ś	<u>sh</u> ip, <u>sh</u> ape
ɬ	ɬ	ɬ	ɬ	Combination of <u>l</u> and <u>th</u> (lateral fricative, with tongue in position of an l)
t	t	t	T	<u>t</u> iny, <u>t</u> eeth
tʰ	z	tʰ	Ɔ	Like <u>thin</u> , <u>thorn</u> (but with a /tʃʰ/affricate: pressing tongue against teeth and releasing)
θ	θ	θ	Ɔ	Like <u>thin</u> , <u>thorn</u> (but with a /s/) )
u	u	u	U	<u>du</u> e, <u>mo</u> o
w	w	w	W	<u>w</u> ater, <u>w</u> ood
xʷ	x	xʷ	Ɔ	<u>h</u> uman, <u>h</u> uge (but with tongue in position for k)
χ	χ	χ	X	B <u>a</u> ch, l <u>o</u> ch (called back-x)
χʷ	χʷ	χʷ	Ɔ	<u>h</u> uman, <u>h</u> uge (but with tongue in position for k and lips rounded)
j	y	y	Y	<u>y</u> es, <u>y</u> ou

### **Appendix 3: The Ethnographic History of Rocky Point**

During the signing of the Douglas Treaty in 1850 and subsequent census of 1856, James Douglas identified two Rocky Point groups: the *Kakyaakan* and the *Chewhaytsum* (Duff 1969:19). Douglas, however, ignored, or was ignorant of the complexities of indigenous land use and tenure, drawing arbitrary lines indicating “ownership” by just one group for each piece of land and ignoring overlapping areas of aboriginal use (Duff 1969:46). Furthermore, it is unclear what kinds of specific social relations these groups represented; whether village groups or local groups who may or may not have resided with other local groups in winter villages (Kennedy and Bouchard 1995:17). The Metchosin/Parry Bay people, identified by Douglas as the *Kakyaakan* (transcribed by Boas as *k'ēk'āyek'En*, Duff as *qaqa'yagan*, and Suttles as *quqa'yəqən*), were situated between Albert Head and Pedder Bay. Their treaty signatories were notated as *Quoite-to-kay-num* and *Tly-a-hum*, “descendants of the chiefs, ancient possessors of this district.” Duff’s Songhees informant Edward Joe stated that the *quqa'yəqən* had lived on Witty’s Lagoon and later moved to Becher Bay, where more Klallam from the American side of the Strait joined them. The other group was the *Chewhaytsum*.

In the 1850 treaty, Douglas considered the *quqa'yəqən* to be one of the “families” comprising the “Clallum tribe.” This is substantiated by Suttles’ Scia’new informant Henry Charles, who identified one of the Victoria Treaty *quqa'yəqən* signatories, and likely both, as Klallam (Suttles 1974:9). Furthermore, Duff’s Lekwungen informant Jimmy Fraser stated that the *quqa'yəqən* spoke Klallam, lived on the point near Race Rocks lighthouse and were now all dead (Duff 1951). Boas, however, identified the *quqa'yəqən* as one of the Lekwungen local groups (Boas 1890b). Suttles ultimately viewed the *quqa'yəqən* as a Lekwungen group, with the boundary between them and the neighbouring T’sou-ke in the vicinity of Pedder Bay, rather than Albert Head. This is also a position more recently advocated by Keddie, who asserts that the *quqa'yəqən* were a Lekwungen group who moved from the Victoria area in 1851 to Witty’s Lagoon and then on to Parry and Pedder Bays (Keddie 2003:58). Keddie contends that the *quqa'yəqən* then went on to intermarry with recent Klallam arrivals in Becher Bay, both groups likely claiming some right to this place through existing marriage ties with the T’sou-ke. While Keddie states that the *quqa'yəqən* and Klallam intermarried with the T’sou-ke at Becher Bay, Duff’s account has the T’sou-ke vacating the Rocky Point area to take over the mouth of the Sooke River. Duff, Suttles, and Keddie all agree that it was the T’sou-ke who was in Becher Bay prior to the Klallam.

There is less discussion about the *Chewhaytsum*, the other Rocky Point treaty group that Douglas attributed to the area between Pedder Bay and Sooke Inlet (Figure 101). The name *Chewhaytsum* is likely the same as Chowitzen Bay (also transcribed by Hill-Tout (Hill-Tout 1907b) as *Tc̄iwétsum*), an early name for Becher Bay (Suttles 1974:10; Walbran 1909 (1972):41,90). Keddie believes the *Chewhaytsum* were a Klallam group, historic arrivals from the village of Tse-whit-zen (čixʷícən) near Port Angeles (Keddie 2003:58). Suttles cautions, however, that it is unclear if the *Chewhaytsum* were Klallam, or northern Straits Salish predecessors (Suttles 1974:10).

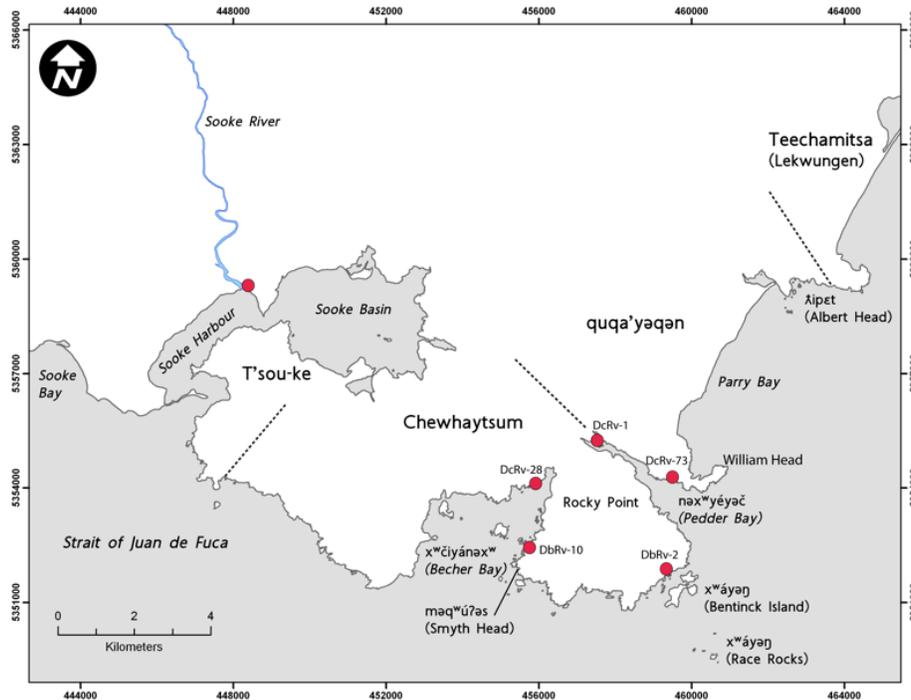


Figure 101: Placenames and groups discussed in the text.

Becher Bay elder Henry Charles stated that it was the T'sou-ke who “originally had their winter village at the head of Pedder Inlet and in the summer they had a camp at the point at the east shore of the mouth of Becher Bay (Smyth Head) where they had a reef net location” (Suttles 1974:9). According to Duff’s Songhees informants, Sophie Misheal and Ned Williams, Albert Head (*sc’əʔa* or *ʔipet*) was considered it to be the boundary between Lekwungen territory and the T'sou-ke, although Suttles placed it as far west as Parry Bay and William Head (Suttles 1974:13).

According to Duff (1969:29), the people then living at the mouth of the Sooke River were the *skʷaʔnəʔəs* (Skwanungus) local group. The T'sou-ke attacked and displaced the *skʷaʔnəʔəs*,

taking possession of the Sooke River, abandoning their Rocky Point villages to move there. Subsequent to the attack, the *skʷaʔnə́ŋəs* moved out to Sooke Bay where, soon after the arrival of Europeans, the remaining *skʷaʔnə́ŋəs* were killed by the Makah, at the urging of the Tʼsou-ke, who offered intermarriage with the Makah. Shortly after that, around 1848, the Tʼsou-ke themselves were almost wiped out by a combined attack of Cowichan, Klallam, and Nitinat peoples (Walbran 1909 (1972):465). Some were taken and sold as slaves; their chief *waʼnsiə* (*Wanseea*) escaped and took refuge with the Songhees (Walbran 1909 (1972):465). It is interesting that the Tʼsou-ke did not include their earlier sites on Pedder and Becher Bays as part of the Douglas treaty, but did include Sooke Bay, the last home of the *skʷaʔnə́ŋəs* (Duff 1969). In establishing the boundaries, Douglas seemed content to accept the situation, as it existed in 1850, rather than try to reconstruct what it had been prior to the turmoil brought about by smallpox and subsequent European contact.

One issue that has not been addressed is the reason for the Tʼsou-ke to leave Rocky Point and move to the mouth of the Sooke River. Interestingly, they seem to have aggregated into a single village, when presumably there were several Tʼsou-ke villages between Pedder Bay and Becher Bay. Speculatively, this move may have been to consolidate families hard-struck by European diseases, or perhaps to improve defensiveness. There might also be an economic explanation. The Sooke River is the largest salmon bearing river on the southern-most part of Vancouver Island (although there are small streams elsewhere, such as Esquimalt Harbour), so it may have been to capitalize on the salmon runs there. The Sooke River has fall runs of chinook, coho, chum and spring salmon—although it was best known for its chum salmon (Suttles 1951:142). The reef netting location at Smyth Head and adjacent islets was extremely good (Easton 1985; Moore and Mason 2010; Suttles 1974), so it is unclear if the availability of salmon was the motivator. The reef-net, as Suttles has pointed out, was a device uniquely associated with the Straits Salish, with which they harvested the runs of salmon migrating from the ocean to the mouth of the Fraser River. It could be used only at those few locations where salmon passed close to shore over shallow reefs extending from points of land. There are no such locations along the southern shore of Juan de Fuca Strait, but on Vancouver Island there were at least four: Otter Point west of Sooke, a point at the eastern entrance of Sooke Inlet, Beechey Head just west of Becher Bay, and a point just east of Becher Bay. Duff's Songhees informants called this last one *muqʷaʔas* (the present-day Klallam place name for Smyth Head is *məqʷuʔas* (Montler 2009),

although it has also been referred to as *Mukwaas*). This is almost certainly Smyth Head, a well-known reef net locality (Easton 1985).

While the Sooke River may have offered a greater range of salmon throughout more of the year, perhaps reef-netting (which focused mostly on sockeye and pink salmon) required much more technical gear, labour organization, and ritual knowledge which may have been difficult to organize due to the large numbers of people killed by European-introduced diseases. The T'sou-ke fished in the Sooke River using harpoons and gaffs and was not known to build weirs or other traps (Suttles 1951:142). The T'sou-ke continued to use reef net sites, along with the Beecher Bay Klallam, by cutting channels through kelp beds at reef-net sites before the sockeye run to harpoon spring salmon. But while the Beecher Bay people then used these channels for reef-netting, some of the T'sou-ke used the channels only for harpooning (Suttles 1951:167) and, unlike all other Straits Salish groups studied by Suttles (1951:191-192), the T'sou-ke had not used reef nets within the lifetime of any informant. So again, this suggests the possibility of a change in salmon fishing strategy by the T'sou-ke during the historic period, moving away from reef-netting (or deemphasizing it at least) and focusing instead on harpooning and gaffing.

The movement of the Klallam to the Rocky Point and Beecher Bay area is summarized by Gunther (1927:179) and Suttles (1974:11). According to Gunther, when the T'sou-ke moved to the mouth of the Sooke River, a Klallam group led by a man named *Yō'kum* travelled from Port Angeles (likely the village of *Tse-whit-zen*) across the Strait of Juan de Fuca around 1865 because it was a well-known fishing place. The Klallam found Beecher Bay unoccupied, although they knew it to be T'sou-ke territory. After quarrelling with the T'sou-ke, the group returned to *Tse-whit-zen*. *Yō'kum* and his brother led the group back to Beecher Bay after trouble with whites in Port Angeles but found their former site occupied by whites, so the Klallam settled on the east shore of Beecher Bay. Gunther identified the settlement on the west shore as *x'čiyánəx* (transcribed as *Tcia/nux*) and the one on the east shore is *məq'wúʔəs* (transcribed as *MEq!o'os*). At *x'čiyánəx*, there were two large houses; one owned by *Yō'kum* and three other men, and the other house owned by *K!l̥/xem*, who Gunther refers to as the chief of the village (a "Tly-a-hum" signed the Kakyakaan treaty). There were eleven smaller houses as well. At *məq'wúʔəs* on the east shore of Beecher Bay, there were also two large houses, one again owned by *Yō'kum* and a cousin and their sons, and the other by a man named *StEk!ē'nim*, who had 50 wives. Gunther's account differs from that of Scia'new elder Henry Charles, who told Suttles that *scəqe'nəm* (Gunther's *StEk!ē'nim*) was a chief

from Port Angeles who moved to Victoria after the arrival of the Europeans to make shingles and plant potatoes. Subsequently,  $\text{Ḳ}é'ixəm$  (Gunther's *Kllē/xem*) moved to Witty's Beach at Albert Head, where the  $quqa'yəqən$  tribe had formerly lived (Suttles 1974:11). From Witty's Beach, the group then moved to Becher Bay. Hill-Tout (Hill-Tout 1907b:307) listed three villages at Becher Bay as  $x'čiyánəx$  (transcribed as *Tcianuk*), on the west side of Becher Bay, *Nukstlaiyum* (the Klallam word for themselves) and *Tcīwetsun*. Suttles interprets *Tcīwetsun* (which he transcribes as *Tcīwétsun*) as the name for the T'sou-ke group that lived in Becher Bay before the Klallam (Suttles 1974:9-10, 17). Speculatively, *Tcīwétsun* may be a derivation of  $čix'icəm$  (also transcribed as *Tse-whit-zen*), the Klallam winter village near present-day Port Angeles.

Gunther suggests that the Klallam found Becher Bay an attractive location due to its productive fishery, the Klallam having learned reef netting from the Lekwungen and T'sou-ke after moving to the north side of the Strait of Juan de Fuca. According to Henry Charles,  $\text{Ḳ}é'ixəm$  established a reef netting location off of Smyth Head, at the eastern head of Becher Bay (Suttles 1974:12), a spot no longer fully used by the T'sou-ke. According to Suttles' informant Mrs. Tom James, a Lekwungen woman with Becher Bay and Cowichan ancestry, her grandfather was a man named *sətəqe'nəm* (likely Suttles' *scəqe'nəm* and Gunther's *StEk!ē'nim*), who had a stockade (defensive feature) at Becher Bay. Furthermore, when the Klallam came to Becher Bay in her Grandfather's time, they found a deserted village with the bones of the first inhabitants still there (Suttles 1974:12). Speculatively, this may have been the tragic result of an earlier smallpox epidemic. Mrs. James said her grandfather had earlier used the Smyth Head reef netting location later used by  $\text{Ḳ}é'ixəm$ , and significantly, that the Klallam were already coming across the Strait for reef netting before this. As Suttles points out, there is not necessarily any conflict in the accounts of his informants and those of Gunther. The Klallam who settled at Becher Bay did so because of the sockeye reef net locations off of Smyth Head, and the fact that they were related to the T'sou-ke, who may have used this location before them. The Klallam may have been exercising their privileges, acquired through marriage, to travel from Tse-whit-zen to use Becher Bay and the Rocky Point area prior to the T'sou-ke leaving for their present village near the mouth of the Sooke River (Suttles 1974: 13).

## ***Appendix 4: Field Survey and Recording Methods***

This appendix briefly outlines the field methods used to identify and record funerary petroforms. Of particular importance to archaeologists practicing in the region are some criteria for identifying funerary petroforms on southern Vancouver Island, which may also be relevant to other parts of the Coast Salish ethnolinguistic area.

### ***Field Survey Techniques***

An intensive surface survey program was implemented to identify all archaeological features at Rocky Point. A crew of three to five archaeologists walked systematic transects with a 2 m interval between surveyors, marking each suspected petroform feature with a high-visibility pin flag. Each pin flag was labeled with the feature number. Each cemetery was traversed east-west in this manner, then again north-south to ensure thorough coverage. The site was surveyed 200 m beyond site boundaries in each direction to ensure that all features associated with the cemetery were accounted for. Despite this intensive level of effort, additional features were invariably identified during the recording phase of the project. This resulted in virtually every topographic high point being closely inspected to determine whether it was a cultural or natural feature. In addition, low-lying areas and wetlands in association with each cemetery were surveyed during the summer months with the same level of intensity to insure that no archaeological features were present, accounting for the possibility of changing hydrology in the subsequent to the site being used as a cemetery.

In addition to the visual survey, judgmentally placed evaluative units were excavated in select circumstances where the certainty of a feature as a funerary petroform was unclear. This was particularly effective at identifying deflated and partially buried funerary petroforms. Tests were conducted adjacent to potential funerary petroforms, evaluating the depth of stones below ground surface along the edges of the feature, as well as looking for burned bone, thermally altered stone, and other cultural materials potentially associated with funerary ritual (particularly the cremation of human remains and the burning of food for the dead). Evaluative tests measured approximately 50 x 50 cm wide, and were excavated in 10 cm units within natural strata. All sediments were screened through 1/8" and a 25% bulk sample was retained for microscopic inspection at low powers of magnification.

The scope of this study was limited to the identification, recording, and analysis of funerary petroforms. I suspect that other forms of funerary ritual and mortuary practice occurred within these cemeteries through time—including surface exposure of the corpse.

### ***Spatial Data Collection***

Collection of spatial data was done prior to the detailed feature recording. Once all features were identified during the field survey, spatial data was collected. All mapping, a great deal of data acquisition, and much of the subsequent analysis for this project was accomplished with the use of ESRI ArcInfo 10.1, a geographic information system (GIS). Archaeological feature provenience was collected with a sub-metre accuracy Trimble 2005 GeoXT global positioning system (GPS). Based on the capability of the instrument and the specific satellite telemetry during data collection, accuracy was estimated between 0.3-0.5 m. To verify GPS accuracy, each funerary petroform was also provenienced with a Brunton compass and 30 m tape from datum points established within each cemetery. Both the GPS and compass/tape data was imported in the project GIS for comparison.

Digital orthographic photographs<sup>38</sup> were important in spatial data acquisition and visualization. They supplemented the fieldwork by providing a secondary source for spatial information, particularly for terrain and hydrological features. The Department of National Defence provided high-resolution colour orthophotos, with each orthophoto pixel equating to 20 cm of on-the-ground distance. This high level of resolution made it possible to pick out individual trees and bedrock exposures on the landscape, allowing for very detailed mapping of terrain features. During the field component, terrain features such as bedrock exposures and water features were verified in field on colour orthophotos. All mapped features were then digitized as layer files and imported into the GIS.

### ***Morphological Data Collection: Detailed Feature Recording***

To insure consistency in data recording, a standardized form was used in the field. The form contained fields for provenience and association, metric attributes, and fields concerning the types and sizes of stones, the relative proportion of soil, and so forth. Data from these forms were entered into a Filemaker Pro Advanced 12 database (Figure 103). All funerary petroform

---

<sup>38</sup> Sources of distortion were removed to equilibrate photo units with real life distances.

data, including transcribed field notes, analysis notes, and photo logs, are stored in this project database.

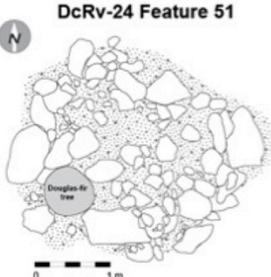
The Rocky Point Mortuary Landscape Project (2003-2012)						Darcy Mathews Department of Anthropology		University of Victoria														
<b>Borden Designation</b> DcRv-24		<b>Feature</b> 51		<b>Site Name</b> Yates Site		<b>Property</b> [REDACTED]		<b>Recorders</b> Darcy Mathews		<b>Date Recorded</b> 15/09/2009		<b>ID</b>										
<b>Easting</b>				<b>Northing</b>				<b>Provenience Method</b> Trimble 2005 GeoXT		<b>Provenience Accuracy</b> 0.5												
<b>Ad Hoc Type</b> Cairn		<b>Feature Outline</b> Oval		<b>Feature Profile</b> Concave		<b>Feature Definition</b> Good						<b>Original Comments</b>										
<b>Length</b> 3.05		<b>Width</b> 2.59		<b>Min_Height</b> 0.35		<b>Max_Height</b> 1.1		<b>Volume</b> 4.55		<b>Orientation</b> 310												
<b>Stone Depth</b> Shallow (>75% showing)				<b>Dissertation Type</b> 1				<b>Certainty as Cultural</b> Definite														
<table border="1"> <tr> <th>Visuals</th> <th>Construction</th> <th>Associations</th> <th>Analysis</th> <th>Updates</th> </tr> <tr> <td colspan="5"> <b>Original Photo Record</b>            15/09/2009: 1-2 looking 348 degrees            15/09/2009: 3-8 looking 139 degrees            15/09/2009: 9-10 - soil aggregate inside and outside cairn.         </td> </tr> </table>													Visuals	Construction	Associations	Analysis	Updates	<b>Original Photo Record</b> 15/09/2009: 1-2 looking 348 degrees 15/09/2009: 3-8 looking 139 degrees 15/09/2009: 9-10 - soil aggregate inside and outside cairn.				
Visuals	Construction	Associations	Analysis	Updates																		
<b>Original Photo Record</b> 15/09/2009: 1-2 looking 348 degrees 15/09/2009: 3-8 looking 139 degrees 15/09/2009: 9-10 - soil aggregate inside and outside cairn.																						
																						
																						
<p>The minimum height of this feature was measured uphill and the maximum height, downhill. This cairn has an outer perimeter of very large bedrock boulders and interior fill of cobble and boulded-sized bedrock and rounded till no larger than 70 cm in diameter. It is built at the base of an approximately 10 m high bedrock outcrop. The cairn is 130 cm downslope from the base of some bedrock. There is a Douglas-fir tree 35 cm in diameter growing on the SW (downhill) side of the cairn, only minimally disturbing it. Most of the outer perimeter rocks are set on edge. The soil fill has deflated somewhat, producing a concave centre. There is an aggregate of pebble soil on top of this cairn.</p>																						

Figure 102: Example entry for the FileMaker Pro project database.

### The Morphological Attributes

The attributes collected for each feature, many of which were used in the morphological and spatial analyses, are outlined below. This discussion also includes field methods used to record these attributes.

**Provenience:** The location of a newly recorded feature was recorded and the method used to determine provenience was noted. Most funerary petroforms were located with a sub-metre accuracy global position system (Trimble 2005 GeoXT). Establishing a series of datum points in each cemetery corroborated each GPS location and then using a Brunton compass and 30 m tape to verify the accuracy of the plotted feature.

**Feature Outline:** The outline shape of each feature fit into one of five categories: oval, circular, square, rectangular, and irregular.

**Length:** Length is the maximum extent of the feature measured along its long axis. Features with right-angled sides were measured parallel to the sides and not obliquely along the hypotenuse. Measurements were taken from the definite edges of the feature and excluded adjacent rocks, such as those that may have rolled off the feature. Measurements were taken to the nearest centimeter. The length of funerary petroforms built against erratics was recorded with and without the erratic. In the analysis, only the built part of the funerary petroform was included. The rationale for this is discussed shortly.

**Width:** This is the maximum extent of the feature perpendicular to the length measurement. Like length, width was taken to nearest centimeter from the definite edges of the feature. As with length, measurement for those features built against an *in situ* erratic included the width with and without the associated erratic.

**Height:** The minimum height of the feature is the lowest point on the feature that is still a definite part of the structure. Typically, the minimum height is along one of the edges of the funerary petroform, and excluding loose rocks. The maximum height is the highest point on the feature. A line level was extended from the highest point to the ground to insure accuracy. Both height measurements were taken to the nearest centimeter and excluded erratics if they did not appear to have been moved into place. The locations of the minimum and maximum height measurements were noted on the feature sketch.

**Feature Volume:** Feature volumes were calculated using standard geometric formulae, and for simplicity regular shapes were supposed; as such, some error was accepted. Since all of the features appear to have been affected by deflation, the dimensions calculated do not necessarily reflect the original volumes of these features. In addition, features are likely not proportionally affected by site formation issues, with age, location, different proportions of materials, etc. determining the rates of deflation and further complicated by *in situ* pedogenesis. I calculated feature volume for features with oval, circular and irregular outlines using the volume of a half ellipsoid, split along the horizontal plane:

$$V = \frac{2}{3}\pi abH$$

Where *a* and *b* are the length and width and *c* is the maximum height of the feature above the ground surface. This is slightly different than the formula that I think Lepofsky et al. (2000) used for calculating the volume of the Qithyil mounds. Although they didn't specify which formula they used, it was likely:

$$V = \frac{\pi}{2} abH$$

Where  $a$  and  $b$  are the radii of the length and width and  $H$  is the maximum height of the feature above the ground surface. Their calculation produces a slightly different volumetric result, slightly under-representing the volume of these features.

For features with square or rectangular outlines and square profiles, I used this formula:

$$V = ab$$

Very few features, however, are so regularly shaped, so this may slightly over estimate or underestimate some features depending upon their profile (rounded versus square, etc.). For features with square and rectangular outlines but rounded, concave and irregular profiles, I used the same formula for a half ellipsoid, recognizing that while it would underestimate the amount of material around the base of the feature, it would more accurately estimate the material on the top half of the feature. The formula for a cube greatly over-estimates feature volume except for those few features that are cube-shaped.

The point is that there is no perfect way for expediently measuring the volume of irregular features such as funerary petroforms, unless one maps them with enough data points for a micro-topographic volumetric analysis (e.g., Sorant and Shenkel 1984). Others who have studied funerary petroforms have used the simpler equation of length  $\times$  width  $\times$  height (e.g., Tuovinen 2002:157), but this is a measure of the volume of a rectangular solid and therefore greatly inflates the volume of these kinds of burial features. The measure I use will tend to underestimate the volume of features with a square and rectangular area. But volume is only an approximate indicator of the original size of every funerary petroform, as most features have been affected to an unknown degree by site formation processes such as deflation and pedogenesis.

**Long Axis orientation:** The orientation of the long axis was recorded relative to true north with a sighting compass using an 18° east declination. Measurements were taken to the nearest degree. For features with no definable long axis, the orientation of the length measurement was recorded. As the long axis of each feature actually consists of two opposing degrees, the degree closest to true north was recorded as the long axis orientation.

**Certainty as Cultural:** The confidence in which a feature was believed to be cultural was defined by one of three categories: definite, probable, and possible. This attribute was important in selecting features that would be appropriate for morphological and spatial analysis.

**Condition:** The condition of each feature was recorded as undisturbed, partially disturbed, disturbed, destroyed, or indeterminate. This attribute was an important determinate in selecting features for analysis. Features that are undisturbed are the best candidates for detailed analysis. Features that are partially disturbed, such as a funerary petroform having a small tree growing next to it, are also generally good candidates for detailed analysis. When the condition of the feature could not be reliably assessed, it was categorized as indeterminate and also excluded from analysis. The cause of any impacts to features, such as natural phenomena like tree growth, or historic disturbance like land clearing, was documented.



**Figure 103: Examples of funerary petroforms affected by natural site formation processes. Deflation (left, feature DbRv-35:12) and conifer encroachment (right, DcRv-24:26) are the most significant factors affecting funerary petroform condition at Rocky Point.**

**Type and relative proportion of rock:** There were two basic sources for the rocks used to build funerary petroforms at Rocky Point: till and bedrock. Till consists of ice-proximal glaciofluvial sediment and reworked till, and is generally rounded or subrounded and consists largely of igneous rocks such as granodiorite and diorite<sup>39</sup>. The feldspar content in these rocks appears quite high, accounting for the generally light coloured character of the rocks. Till is locally available, plentiful and typically occurs throughout the site. Much smaller amounts of sandstone and conglomerate till were also available. Gabbro bedrock was also used to build funerary petroforms. It occurs throughout Rocky Point site in a series of low weathered outcroppings. The gabbros consist mainly of gray, calcium-plagioclase feldspar, dark greenish pyroxene crystals and small reddish crystals of olivine. The gabbro is cut in places by white veins and dyklets composed of fine to medium grained quartz and feldspar (Yorath and Nasmith

---

<sup>39</sup> Till also includes other non-local materials, such as sandstone, although in much fewer amounts than granodiorite.

1995:122). Gabbro bedrock is generally angular or occasionally subrounded, depending upon the degree of weathering. Many bedrock outcroppings are quite weathered and are exfoliating, making removal of loose rock relative easy. An ordinal scale was developed in which to visually assess the relative proportion of till and bedrock.



**Figure 104:** Example of funerary petroform built primarily with gabbro bedrock (left, feature DbRv-3:R8) and granodiorite glaciofluvial till (right, feature DbRv-3:C144).

**Stone Size:** The method used to record the size of the clasts used in the construction of each feature is based on a modified Wentworth Scale, which is used to define grain size by imposing logarithmic subdivisions on a natural continuum of clast size. Measured at maximum clast diameter, three sizes of rocks were recorded. All rocks between 5 and 30 cm in diameter are classified as cobbles (rocks smaller than 6 cm in diameter are excluded from analysis as they tend to be the size of naturally occurring pebbles in the surrounding sediment). Anything larger than 30 cm is classified as a boulder. The scale was modified during this study to divide boulders into two categories. For this study, any boulder between 30 cm and 70 cm in diameter was arbitrarily classified as a “boulder” and any rock exceeding 70 cm in diameter identified as a “large boulder.” The justification for this is that there is a significant difference in the amount of effort necessary to move a boulder 35 cm in diameter as opposed to one 90 cm in diameter. This distinction may have important implications in determining the intensity of labour invested in the construction of a feature. This attribute excludes erratics that were obviously not moved into position. They are discussed as separate attributes.

A scale was developed during this research to record the relative proportions of cobbles, boulders and large boulders for each feature. This scale has 15 categories of clast size, ranging from cobbles to large boulders. It is not a truly ordinal scale in the sense that it has categories for equal or mixed proportions of different sizes of rock. The relative abundance of each clast size is

based on a visual assessment of the overall distribution of rocks in each feature. This was done in the field and reassessed during data entry by examining feature diagrams and field photographs.

**Stone Sphericity:** This attribute is a measure of the degree of roundness of the rocks within a feature. For descriptive purposes, the gradation of roundness is broken up into a small number of divisions, each referred to as a roundness class (Powers 1953). Three roundness classes are employed in this study. Rocks classified as “rounded” are curving in shape with corners and edges smoothed and few or no flat sides. Rocks that are “subrounded” have the edges and corners rounded to smooth curves but the original form is still evident and may have small flat surfaces. Rocks classified as “angular” have relatively sharp edges and corners with little or no rounding.

An ordinal scale was developed during this research to record the relative proportions of the overall sphericity of rocks for each feature. This scale has 12 categories of clast roundness, ranging from rounded to angular. The relative abundance of each roundness class is based on a visual assessment of the overall distribution of rocks in each feature during field recording.

**Number of External Stones:** This attribute is a count of the total number of rocks visible on the external part of the cairn. Rocks smaller than cobbles (5 cm in diameter) were excluded from the tally since they are small enough to have been transported onto a feature with soil fill.

**Relative Percentage of Soil Fill:** The presence of soil fill is a common occurrence on the surficial burial features at Rocky Point. An ordinal scale of the relative proportion of soil fill to rock was established to document this. This visual assessment utilizes six categories, including: no soil fill, <25% soil fill, 25-50% soil fill, 50-75% soil fill, >75% soil fill, and indeterminate. The category indeterminate was used when it was unclear if the soil on top of a feature was natural pedogenesis or the result of human agency. As previously mentioned, the two were distinguished based on the presence of small pebbles, which are common within the Rocky Point sediment. There are no natural processes that could transport a significant number of pebbles from the ground onto the feature. It was assumed during this study that a lack of pebbles within the soil covering a feature was an indication that the soil was an *in situ* pedogenic development and likely not the result of human action.



**Figure 105: Example of funerary petroform with minimal sediment (Feature DbRv-3:C83, foreground) and feature made primarily with sediment (Feature DbRv-3:C82, background)**

**Presence and Location of *in situ* erratic:** This attribute is a presence or absence of whether a feature was built against or actually incorporate a glacial erratic into the feature. The erratic is usually conspicuously larger than the rest of the cairn. Glacial erratics at Rocky Point are usually large rounded granodiorite boulders. Although some features do incorporate smaller erratics in their construction, which were clearly moved into place, the erratics recorded in this category are ones that do not appear to have been moved, and are generally partially buried, while the adjacent cairn is not.



**Figure 106: Example of feature built against erratic (Feature DbRv-3:C63).**

**Measurements including *in situ* erratic:** Whereas the primary burial features measurements excluded adjacent or incorporated erratics, this category is a measure of the size of a feature including any erratics, using the same procedures outlined for the main feature measurements outlined above. In addition to the length, width, minimum and maximum height

measurements, the location of the erratic, measured to the nearest degree, was recorded relative to the feature.

**Bedrock Association:** This category is a presence or absence of whether a feature is built against a bedrock exposure or outcropping. It was measured to the nearest degree and noted against which face of the bedrock the cairn was constructed.



**Figure 107: Funerary petroforms built against exposed bedrock. Feature DbRv-3:R57 (left) and Feature DbRv-3:R55 (right).**

**Vegetation Removal:** Many features required some vegetation removal, particularly in areas with dense invasive plant species such as Scotch Broom. Accumulated forest detritus was also removed as necessary, although extreme care was taken to leave the sediment and stones on the features intact. Roots of plants were left in place to minimize subsequent erosion and cleaning was a balance between exposing the feature enough to allow accurate recording, ensuring the continued preservation of the feature, and preserving the natural environment<sup>40</sup>.



---

<sup>40</sup> Each funerary petroform is its own micro-ecosystem, and is home to snakes, salamanders, and other animals.



Figure 108: Sequence of photos showing clean up procedure for removing invasive floral species, (Feature P11).

**Associated Features:** Any obviously associated cultural features were noted.

**Related Documents:** A number of features had additional notes or detailed diagrams associated with them, which were completed on separate pieces of paper. This field is a record of the type and location of those documents.

**Photographic Record:** Each feature was photographed with a scale, north arrow and photo board using a digital camera. Images were identified according to the date of the photograph and numbered in the order that they were taken that day.

**Comments:** This field is for any additional observations about the feature not adequately covered by any other category, or a further explanation of an observation.

**Scale feature sketch:** A detailed scale sketch was made of every feature. Included were the location of significant attributes, erratics, and areas of disturbance, if any. The minimum and maximum heights of the feature were also plotted on the feature sketch. A mapping square was used to record a sample of funerary petroforms in greater detail (Figure 109).



Figure 109: Mapping square used to produce detailed plan view maps of funerary petroforms (Feature 28, Bentinck Island—Emily Benson mapping).

### ***Criteria Used to Identify Funerary Petroforms on Southern Vancouver Island***

This section briefly outlines the methods and criteria I used for both finding funerary petroforms, and the criteria I used to discern archaeological petroforms from natural or historic ones. This is based on substantial experience recording funerary petroforms, including Rocky Point (Mathews 2004b, 2006b), other localities in Metchosin (Mathews 2004a), the Uplands of Oak Bay (Mathews 2002b; Mathews, et al. 2011), and the Gulf Islands (Eldridge and Mathews 2005; Mathews 2010b, 2011).

#### **1. Field Methods**

The following have proven particularly effective in the survey for and identification of funerary petroforms at Rocky Point:

- Systematic survey with very tight transects (2 m width), closely inspecting any concentration of stones or mounds of sediment;
- Examine feature with a focus on discerning an identifiable shape, structure, or patterned use of materials;
- Use shallow probing, when necessary, to identify soil compactness and stone inclusions;
- Clear vegetation from possible features when necessary to better observe feature structure (taking care not to disturb soil or stones, and in consultation with First Nations);
- Flag and label all possible features quickly, since it may be difficult to keep track of many potential features during recording;
- Carefully inspect feature surface and area around it, looking for bone (burned and unburned), fauna, charcoal, shell, or other archaeological materials;

- Identifying proximity to other funerary petroform sites, village sites, culturally modified trees, camas fields, and other cultural features;
- Evaluating potential natural causes of possible features;
- Evaluating the potential to be a historic or post-European contact feature (e.g., field clearing resulting in linear rows around the edges of fields, presence of blast-rock, etc.);
- Evaluate natural site formation history, including distinguishing between funerary petroform and tree-throw (the latter have an oval-shaped root well depression with uneven mounding of unsorted sediment on one side); and
- Consider deflation, looking for a concentration of gravel and small cobbles, possibly in association with a loose configuration of larger stones

## 2. External Attributes Used to Identify Funerary Petroforms

The following are structural patterns used to build funerary patterns, using soil and stones in specific ways to produce an effect.

- Features consist of a combination of stone and soil and appear to have a distinct form relative to the surrounding area, including:
  - Concentrations of stone and soil, (which may vary in ratio);
  - Concentrations primarily of stone, (which may also incorporate soil);
  - Mounds of compact soil, (which may also have visible stone inclusions);
- **Patterned structure:**
  - The overall size and composition of a funerary petroform can range from a few small stones (likely only covering part of the buried corpse) to features 10 m in length an containing many hundreds or thousands of stones;
  - Funerary petroforms often have a distinctly straight-sided or curvilinear (oval/circular) outline;
  - Largest stones may be placed along the external edges of a feature, with smaller stones in the centre;
  - All stones may be conspicuously similar in size throughout feature;
  - May include stones that have been placed against one another in ways that do not appear natural (e.g., horizontally-placed slabs, rectangular stones placed “upright” on most narrow end, etc.);
  - May include stones that appear “stacked”;
  - May include a large or distinct “capstone” on top of the funerary petroform;
  - May have a sunken area in the centre of the feature, likely where the internal enclosure containing the corpse collapsed;
  - May be built against, or incorporate, very large boulders and *in situ* glacial erratics; and
  - May be built against bedrock outcrops.

- **Construction Material**
  - There may be some preference for a single material type (e.g., granodiorite) when there are several available options;
  - May be constructed of similar-sizes of stone;
  - May be constructed with specific shapes of stone<sup>41</sup> (e.g., mostly round stones);
  - May consist of sandstone slabs, which are placed horizontally on the top of the feature. This seems particularly common in the Gulf Islands; and
  - May include types of “fill”, such as beach pebbles or shell midden.
- **Associated Cultural Material**
  - May be associated with burnt shell, fauna, and thermally altered rock (ritual feeding/burning);
  - Human bone (cremated, partially burned, non-cremated, whole, or fragmented) may be visible, particularly if the feature is eroding or otherwise impacted;
  - May be associated with mortuary architecture (e.g., wood poles/boards); and
  - May be constructed directly on shell midden, in house depressions, and within former village locations.
- **Site Formation Processes**
  - Funerary petroforms may be partially buried by natural pedogenesis;
  - Feature may show signs of soil deflation. A feature constructed using local soil, but with an increased pebble content relative to surrounding matrices suggests that more soil was present at the time of construction but has eroded over time;
  - Funerary petroforms may be located along or eroding from shorelines; and
  - Funerary petroforms may have been disturbed or altered by people (e.g., to create steps along trails, to construct fire-pits, etc.).

### 3. Assessing Possible Funerary Petroforms

Attributes that increase confidence in the identification of a feature as a funerary petroform include:

- Proximity to one or more definite funerary petroforms (these features rarely occur alone, where there is one obvious one, there may be many less obvious ones);
- Proximity to other cultural features and sites, such as shell midden, house depressions, Douglas-fir culturally modified trees, etc.;
- The presence of charcoal, burnt faunal remains, or shell; and
- The presence of other materials that have been brought to the location, such as beach pebbles, shell midden, or stones with attached barnacles.

---

<sup>41</sup> Stone sphericity/shape is often correlated with material type. Glaciofluvial granodiorite till is rounded and subrounded, whereas local weathered bedrock is generally angular.

Attributes that reduce confidence in the identification of features as funerary petroforms:

- Possible feature is built directly on exposed bedrock;
- Possible feature is made primarily/entirely out of bedrock that appears to have eroded from adjacent bedrock exposures;
- Possible feature is down-slope from a bedrock exposure or eroding bank;
- Possible feature has blast rock, garden debris, or is built along the edge of a garden or field (historic field clearing can produce sinuous cairn-like concentrations of stone, although material is otherwise not patterned in its placement);
- Possible feature is located in a wet/poorly drained area (although in some cases, features may be located in these areas as a result of hydrological change over time, such as a change to the water table or sea level);
- Feature is not distinct from surrounding area when vegetation is cleared off; and
- Stones are not “well-sorted” (i.e., they appear randomly placed and/or vary greatly in size).

#### **4. Common Locations for Funerary Petroforms**

Although based on qualitative data and untested correlations, funerary petroforms seem commonly associated with the following sites:

- In close proximity to shell midden sites (particularly large villages). They may be along the sides or behind the village deposits;
- Some funerary petroforms located on top of village midden, occupation surfaces, or house platforms (this seems less common on southern Vancouver Island and more common in the Gulf Islands and Fraser Valley);
- On islets and small islands—particularly on islets and small islands located in proximity to village sites or other funerary petroforms cemeteries;
- There may be a very strong correlation between funerary petroforms and camas meadows/Garry oak ecosystems<sup>42</sup>;
- Along (water or land-based) travel corridors;
- Between the locations of former village sites;
- In areas that are well drained and dry year-round. It may be that funerary petroforms are not built directly on top of bedrock because the ubiquitous moss and lichen that grows on it gets saturated with water, and vernal pools form during the winter months;

---

<sup>42</sup> Space did not permit me to explore this issue further, but the largest funerary petroform sites on southern Vancouver Island seem to correlate with dense concentrations of blue camas and/or Garry oak (e.g., Beacon Hill, Uplands/Cadboro Bay). Clearing fields of stones and burning of the landscape may be related to using those stones to build funerary petroforms, thus intricately entangling food production with funerary ritual.

- In areas with bedrock exposures, glacial till, or sandstone;
- In flat/gently sloping areas;
- In proximity to wetlands but set back from the edge to avoid seasonally changing water levels;
- Close to the ocean shore, but often set back on the lee side of bedrock exposures to protect the funerary petroforms from spray and southeasterly winter winds;
- On soil-covered tombolos connecting islands; and
- In proximity to large boulders and glacial erratics.

## ***Appendix 5: Methods of the Dispositional Typology***

Cluster analysis has historically been the most common multivariate method used in the analysis of burial data (e.g., Goldstein 1980; Hodson 1990; Huggett 1995; Manly 1996; O'Shea 1984; Pader 1982; Tainter 1975). This stems from the goal of attempting to find meaningful groups in burial data; groups that are presumed represent different social categories in the living society (McHugh 1999:62). Archaeologists studying mortuary data understand that univariate analyses are unlikely to capture the complex social practices that produce and interplay of a multitude of variables at play during funerals. Cluster analysis in theory is well suited to this objective. Applications of cluster analysis in burial data, however, have overwhelmingly focused on identifying the vertical dimension of the social persona - such as identifying different status or rank groups. A few notable exceptions have considered other social aspects, such as kin groups (e.g., Howell and Kintigh 1996). Most cluster analyses applied to mortuary data have also focused on grave goods and demographics and considerably less attention has been paid to other aspects of the social world of the living expressed through a classification of the burial form itself. While much of the use of cluster analysis in mortuary context was done by processualist researchers looking at the burial data as a fairly direct reflection of social organization (e.g., Binford 1971; Saxe 1970; Tainter 1975), the paradigm shift in mortuary studies in the early 1980's de-emphasized cluster analysis (e.g., Hodder 1982b), recognizing that groupings in mortuary data may not be a direct representation of social groupings. While cluster analysis draws attention to the complexities of burial data that often confound attempts at classification, processual archaeologists, however, had unrealistic expectations for cluster analysis to identify meaningful aspects of social structure (Brown 1987).

Despite theoretical perspectives, however, patterns do exist in cemeteries and these patterns can be assumed to have some social meaning, be they ideological or otherwise. While the naive processual hope that burial patterns discernible by multivariate quantification would give absolute results, the equally polarized post-processualist position that social practice, particularly burials, are unquantifiable is also not acknowledging ways of discerning patterns. The question is then, what are the expected results of statistical analysis in the analysis of burial data? The difficulty is in the middle ground between the definitiveness of statistical methods and output and the fuzziness that is the reality of social relationships and practice. The answer lies in the testable hypotheses offered by the social theoretical and ethnographic model outlined in

Chapter 6. This model is historically and culturally contingent so unlike the generalizing models of processualists (e.g., Binford 1971; Goldstein 1980; Saxe 1970).

So while I rely on the theoretical model to explore the social significance of any patterning that may be evident in the Rocky Point morphological data, I require a method to discern patterning and the nature of that patterning in the data. Furthermore, I require a methodology that can integrate both quantitative and qualitative perspectives on the burial data. Such an approach, blending theoretical models with cluster analysis have been used by archaeologists such as Pader (1982) to examine the relationship between ritual, symbolism and social structure. Hodson (1990; 1977) also used cluster analysis to identify status groupings. While many of the earlier positivist archaeologists studying mortuary data with cluster analysis assumed that structure was discernible in the results of cluster or other multivariate and dimension-based analysis, and that this structure was in turn was an adequate and realistic portal of the kind of structure that may have existed in the society being analyzed, is not tenable. Rather, cluster analysis used in mortuary contexts like that at Rocky Point is more of a heuristic tool to identify patterns.

Understanding structure is only possible in the context of situating the results of cluster analysis is a historically and culturally contingent framework, and recognizing that the fuzziness of mortuary data is a reflection of the fuzziness of social practice. In that sense, I am interested in how the different tropes of material and space were being used, recognizing that I also lack any biographical or biological data concerning those encased within the funerary petroforms. I also recognize that burial of the dead is often a highly symbolic or metaphoric process and that no algorithm or similarity matrix can discern a symbolic attribute from a mundane one. Furthermore, each variable need not have a single meaning and that a few elements can symbolize different meanings depending upon the context and that within a single cemetery similar roles or personas may be differently symbolized (Pader 1982). Different methods may be used to symbolize the same meaning as well. This means then that a level of reflexivity is required in the process of cluster analysis, recognizing that this is a complex and highly symbolic dataset and that a cluster solution is not a definitive statement of any social structure, rather any cluster is simply the sum total of its collectively overlapping attributes.

### ***The Nature of the Rocky Point Data and Implications for Cluster Analysis***

The widespread use of clustering procedures has revealed a number of problems with cluster analysis, foremost among which is that the objective nature of cluster analysis is compromised by the subjective choices of attribute selection, attribute inclusion and exclusion, coding, weighting, standardization, the measure of similarity and the clustering algorithm. For these reasons it is necessary to discuss the nature of the Rocky Point data and the decisions made for the cluster analysis of this large and complex dataset.

The Rocky Point data concerning feature morphology is very complex and a level of ‘fuzziness’ is inherent in the data set. Based on the ethnographic model, the complexities of social practice, and observations in the field during recording, this was expected. The data are not clearly bounded and easily categorized beyond the simple *ad hoc* typologies of *cairns* and *mounds*. A common critique of cluster analysis is the stringency of the method. There are concerns that the application of a numerical taxonomic approach such as that applied in biology is too constrictive and not well suited to the nature of archaeological data. Aldenderfer and Blashfield, for example, (1984) state that a pragmatic approach in archaeology is better. This echoes the call that the application of multivariate methods to archaeological studies in general must be pragmatic (Baxter 1994). In this way, an archaeological application of cluster analysis employed in the analysis of the Rocky Point data is not so much numerical taxonomy as it is exploratory data analysis.

As such, the aim of the cluster analysis of the Rocky Point data is not so much the identification of a single morphological classification, but rather to acknowledge that there are likely a number of different valid classifications within the same set of data depending upon the attributes included in the analysis and the methods of similarity matrix construction and clustering. In this way, cluster analysis is a recursive process of attribute inclusion and exclusion, and experimenting with different means of attribute coding and variable inclusion and exclusion. The final cluster solution, then is not the only possible cluster solution, it is simply the one that best fits the purposes of the study. There is value in also considering the results of several different cluster analyses as they relate to the final cluster solution. In this study, I produced two final cluster solutions, but these final two runs were informed by earlier cluster analyses trials which indicated there were other possible ways to understand patterning in the morphological data depending on the input variables, similarity matrix, and so on.

In this analysis, I use Polythetic Agglomerative Hierarchical Cluster analysis (PAHC). I need a process that can handle mixed-level data, equally considers all attributes, and can produce a hierarchy of relationships between different features based on the similarity of attributes. PAHC combines similar entities into classes or groups and arranges these groups into a hierarchy, within which a relationship is expressed between the things being classified based on the extent of similarities in the traits they possess. PAHC technique uses the information on all the variables (i.e., polythetic), with entity initially assigned as an individual cluster. PAHC agglomerates these in a hierarchy of larger and larger clusters until finally a single cluster contains all entities. Agglomerative analysis builds groups, whereas the alternative, divisive analysis breaks things into groups. Agglomerative approach is also polythetic, in that it considers all variables, whereas divisive clustering can be polythetic or monothetic (considering only one variable). One of the strengths of PAHC is that it is purely descriptive and has few assumptions inherent in it, although like other clustering techniques it can certainly structure the data in specific ways. One assumption that PAHC has is that the variables are uncorrelated, so effort must be made to avoid uncorrelated variables as much as is possible.

Cluster analysis requires a range of sometime arbitrary decision to be made regarding the data to be clustered and the way it will be clustered. Deciding on which variables to include and exclude can introduce noise. The inclusion of “meaningless” data may substantially affect the results and the inclusion of more variables does not necessarily clarify clustering (McHugh 1999:65). Noise cannot be completely eliminated and some level of data uncertainty cannot be avoided. It is difficult to discern which variables are important to the analysis and which are not. The Rocky Point burial data may be, if effect, a collection of attributes that operate at multiple levels of meaning and significance. What could be significant at one cemetery or at one point in time may not be significant at place to time. Some attributes may also be fixed, socially meaningful, and pertinent to the ritual process while others could be random or normative. In other words, the selection and placement of one stone over another could be intentional and socially meaningful, but the selection and placement of that same stone could also be socially inconsequential or simply what was “at hand” to accomplish the larger project. Adding attributes that were not socially meaningful to cluster analysis would produce “noise” and could therefore skew the results or even mask other socially meaningful attributes.

To address the problem of attribute selection, simple univariate and bivariate analysis was undertaken before multivariate analyses. This exploratory data analysis in effect was a process to pre-screened the variables and help clean up the technical problems of multivariate analysis (Christensen and Read 1977; Thomas 1978). These problems include correlating variables, coding of variables, and determining which variables may, or may not be socially meaningful. This meant excluding not only correlating variables but also the most subjective ones as well. Out of the 28 morphological attributes recorded per feature in the field, that only 12 of these variables were included in the cluster analysis. While it is contradictory to the objectives of numerical taxonomy, such as that applied in biological classification, in archaeology the number of variables should be limited to the smallest number required to adequately capture patterning in the data and the heterogeneity of the analyzed populations (Milligan 1989:260). In archaeology, we are attempting to find structure and pattern in incomplete data often when we often do not know what data might be missing or what data is significant and what data is noise.

Another important decision to make regarding the morphological data was the decision to not standardize the continuous variables. Standardization is a common process that recasts the attributes into dimensionless units, thereby allowing the attributes to contribute more equally to the similarities between objects (Romesburg 2004:78). The use of standardized data, however, may eliminate the discriminatory effects of the variables that best distinguish those groups (Aldenderfer and Blanshfield 1984; Manly 1994:134). Univariate analysis of the variable *volume*, for example, indicated a distinct skewness in feature size, with many small features and a very few large ones. This is an important characteristic of the data that I did not want mediated by standardization.

It is important to recognize that clustering algorithms have different properties and will tend to impose a certain amount of structure on the data (Aldenderfer and Blanshfield 1984). The imposition of structure is particularly acute when the input data are not structured compatibly (Aldenderfer and Blanshfield 1984) resulting in an incorrect cluster solution and even a distortion of the archaeological problem to conform to the structure of the clustering models themselves (Brown 1987:297). For this reason, the justification for the selection of constructing the similarity or dissimilarity matrix and the clustering algorithm must be explicitly stated.

With the tree diagram produced, a decision must be made as to where to make the “best cut” and decide upon the “correct” number of clusters. Although stopping rules exist, they are biased towards particular clustering methods (Aldenderfer 1982). However, the definition of what actually constitutes a cluster may make a formal decision impossible (Everitt 1979) and in practice stopping rules, archaeologists rarely use best-cut procedures and other cluster validation protocols. Like choosing the clustering algorithm itself, determining the number of clusters for analysis is often done by looking at the dendrogram and selecting a stopping point that produces useful or meaningful groupings of data. But while archaeologists usually just consider the “best” result or level in the tree for analysis, there is much information in multiple levels of the dendrogram that should be considered (Baxter 1994:155; Youngman 1979). This is the approach I take. I do not use formal stopping rules. Rather cluster validation and the number of clusters elected was based on process of examining the internal homogeneity of each cluster and the external heterogeneity of them at multiple levels in the dendrogram. I also considered the role of the similarity and clustering methods in the production of the cluster solution, recognizing that any cluster solution is in part a result of the particularities of the methods used. This approach reflects the fact that there is not just one correct cluster classification and that there are different structures by which the dead might have been classified.

Cluster analysis was a mainstay of processual archaeology in the study of mortuary practice with the intention, in most instances, of identifying status within a society. King (1978) for example identified 8-9 clusters in a Central California mortuary assemblage using monotheistic divisive cluster analysis; clusters that were representative of the same number of social personae in the society. Schurr (1992) equated nine clusters at a Mississippian burial mound site with nine “mortuary categories”, inferring that each cluster was socially meaningful. Tainter (1975) used cluster analysis to identify “socially distinctive aggregates” defined in terms of the energy expenditure and representing different social ranks.

In his cluster analysis of Jericho EB IV tombs, Palumbo (1987) used the unweighted pair group method using Gower’s coefficient for the similarity matrix and average linkage for the clustering algorithm. He had an assemblage of 377 rock-cut chamber tombs, with 37 variables coded primarily as binary and nominal data. His variables include body disposition, grave goods, as well as the morphological aspects of the tomb itself. Although others have argued against social stratification in the Jericho EV tombs, attributing differentiation to chronological differences and

ethnic funerary practices, Palumbo maintains that some details in the mortuary practices recorded at Jericho suggest a social "differentiation" based on wealth, because within each typological group is evidence of some kind of differentiation (Palumbo 1987:49). Palumbo's work is significant to the present study as it uses the same similarity matrix and clustering methodology. Palumbo's work seems to produce a fair amount of chaining in the dendrogram, which is undesirable as it means that during one of the initial clustering steps, that two objects merge to form a single cluster and throughout the remaining cluster steps this cluster grows ever larger by annexing lone objects that have not yet clustered, progressively adding less similar objects a few at a time. Palumbo concludes that differentiation observed in the burial practices is more horizontal than vertical, with differentiated ethnic segments of the society. But superimposed on this ethnic differentiation was also a social differentiation, represented in the burial practices by three types of body treatment and by variation (even if it is not especially clear) in the composition of the grave goods. Both characteristics are also evident in the statistical analysis. Although the statistical analysis is a good "test" for this hypothesis, it cannot be considered "proof," as the numbers are also subject to personally or ideologically-oriented interpretations. Interestingly, an earlier ad hoc typology aligned reasonably well with the results of the cluster analysis.

As with all archaeological applications of cluster analysis to burial data, chronology has a complicating influence in determining the results of cluster analysis. At Rocky Point, like most cemetery studies, there is little chronological control. When chronological units are available, it can be desirable to run a separate cluster analysis on each temporal period and then compare the results between clusters (e.g., Bard 1988). It must be acknowledged, therefore, that some of the patterning and variability in the dataset is related to temporal variation over an unknown duration. While cross-dating elsewhere in the region places the practice of building these kinds of burials between cal A.D. 500-1400 (Oakes, et al. 2008), it is possible that the practice is both older and more recent than this cross-dating suggests. There is no evidence at Rocky Point to indicate distinct periods and so all burials are considered together. O'Shea (1984:182, 186) for example, noted a chronological effect in his cluster analysis of Arikara Plains Indians burials. The divisive cluster analysis seemed more affected than the agglomerative hierarchical one as the first division in the divisive clustering was based on the presence or absence of glass trade beads, a "frequently occurring but relatively insignificant and time-dependent-type" (O'Shea 1984:186)

which bifurcated the entire cluster solution. So it must be acknowledged that the variability and patterning of the Rocky Point morphological data is partially a result of chronology, with tensions between the forces of stability associated with tradition and the incremental change in practice through time (e.g., Mizoguchi 1993) simultaneously at play with patterning resulting from social distinction.

The underlying commonality between most applications of cluster analysis to mortuary data has been looking for status differences, with the expectation that status and social persona are somehow reflective of the cluster solutions. Every cluster interpreted as having definite meaning, even though the meaning of each cluster is usually only vaguely identified. Furthermore, status distinctions have been inferred primarily from graves goods. Less considered, but with interpretive potential is the morphology of the burial device or feature and the placement of that feature relative to other burials and aspects of the natural and cultural landscape. Although our knowledge of funerary petroforms is still very limited, it is clear that most features excluding the very large mounds do not have grave goods associated with them. This could in part be a site formational issue, if grave goods were of a perishable nature, or a cultural factor such as ritual burning of goods on top of or beside the burial. So while traditional cluster analysis has focused on grave goods, and grave goods are rare or absent in most funerary petroforms, then there is a stronger case for classifying these burial features based on their morphology (although the biological data of sex, age, etc. would ideally be factored into the classification if such data existed).

### ***Rationale for Using Polythetic Agglomerative Hierarchical Cluster Analysis***

When conducting cluster analysis with burial data, deciding on the method to use has proven to highlight different patterns in the data, and by extension, different patterns of social practice. The first decision is whether to use a polythetic or monothetic approach<sup>43</sup>. As the following examples illustrate, each approach produces very different results, with the results often selected because they fit the expected theoretical model, which negates the purpose of cluster

---

<sup>43</sup> In a monothetic scheme cluster membership is based on the presence or absence of a single characteristic (variable). Polythetic schemes use more than one characteristic. For example, classifying funerary petroforms solely on the basis of their volume is a monothetic classification, but if both volume and other attributes are used, the classification is polythetic.

analysis in the first place. Peebles, for example, specified that a monothetic divisive analysis of Moundville burial data revealed two main dimensions, one based on distinctions between age and sex, and the other on wealth (Peebles 1972:10). He argued that polythetic approaches, while more theoretically aligned with his approach, were less clear in revealing these dimensions. So while Peebles advocates for a monothetic approach, which produces types in which all members are identical on all characteristics, a polytheistic approach produces types in which all members are similar. Tainter (1975) advocated for a monothetic approach because it produced results consistent with his expectations to cluster burial data into socially distinctive burial groups based on differing levels of energy expenditure. Braun (1981), however, criticized Tainter's approach and conclusions for a number of reasons, including the fact that Tainter considered polythetic analysis a failure because it did not conform to his expectations. Furthermore, Tainter stated that polythetic methods would only be useful if there is a great deal of redundancy in the burial data. As Braun points out however, citing Saxe (1970), both systems of rank and burial "systems" become increasingly redundant with increases in social complexity. As such, Braun concluded the opposite of Tainter that the polythetic approach was likely the most appropriate approach for attempting to distinguish levels of rank in burial data, where distinctive and redundant symbolized rank is present. Conversely, it could be that Tainter's perceived failure of polythetic methods to identify distinct levels of social ranking could be due to the absence of social ranking in the first place, as Saxe implies that redundancy correlates with complexity. Furthermore, Tainter does not acknowledge the possibility that these clusters might represent some other dimension rather than energy expenditure or rank (McHugh 1999:68). As the energy expenditure model is in part implicated in understanding concepts of social complexity on the northwest coast (larger mounds are inferred as greater status differentiation) then understanding the classifications of burial features using a method that does not rely on verifying *a priori* concepts is particularly significant.

O'Shea (1984) used both a polythetic and a monothetic approach in his cluster analysis of plains Indians cemeteries, where at one cemetery, both approaches produced similar results. At a second cemetery, however, the monothetic divisive approach highlighted a different aspect of burial organization, which O'Shea understood to be a de-ritualization of mortuary practice. O'Shea's work highlights the fact that different clustering methods applied to the same funerary data, which by its symbolic nature is often redundant and patterned, can produce partial or

complete cluster overlap as well as the identification of different cluster membership. It must also be remembered that different burial attributes may be exclusive to different groups, but that other attributes can also cross-cut social groups and express aspects of social distinction other than status (Parker Pearson 2000). The social model derived in this dissertation also highlights that a certain amount of flexibility and permeability is likely present in the dataset and that distinct groupings, if they exist, need not be consistently defined by a specific set of attributes. This is further compounded by the fact that different cluster methods will likely produce two different outcomes. This need not be a weakness of the approach however, if different cluster methods are used with the same dataset in an attempt to identify different patterns, or different levels of patterns, in the dataset. Following the success of O'Shea (1984) in using two simultaneous cluster analysis approaches for the same burial data, I conducted two cluster analyses—one using Gower's coefficient with multi-state data and the other using Jaccard's coefficient for binary coded data.

### ***The Similarity Matrix and Clustering Algorithm: Gower's Coefficient and Multistate Data***

The Rocky Point data consists of variables in several different states or data types: nominal, ordinal, binary, and continuous. Most archaeological objects have both qualitative and quantitative attributes. There are two fundamental strategies for dealing with multi-state data in cluster analysis. The first is to recode the data to a binary absent/present scale. This can often result in a loss of data fidelity and care must be taken to select a clustering method like Jaccard's Coefficient that does not make pairwise matches of absent-absent cases (a false level of similarity based on the mutual absence of a variable). The second option is to use a coefficient that can handle mixed variables. There are two such coefficients, Gower's Coefficient (a similarity coefficient) and Anderberg's Coefficient (a dissimilarity coefficient). Gower's General Coefficient of Similarity (GSI) (Gower 1971) is the more widely used and better supported by clustering software. Gower's coefficient has an advantage over other similarity procedures which would require transformation of the attributes to different data types, most likely a binary present or absent scale, which results in loss of data fidelity. Gower's coefficient has been used successfully in several archaeological applications of cluster analysis (e.g., Gamble, et al. 2001; Howell and Kintigh 1996; Mackie 1995; Mathews 2006b; Pader 1982; Palumbo 1987; Peeples 2011; Philip and Ottaway 1983; Rice and Saffer 1982). GSI has been recommended by Johnston (1976) as

the best of 25 indexes he investigated, as it does not score negative matches (like Jaccard's) and maintains equality over all pairs in the sample.

Gower's general coefficient of similarity gives a measure of similarity between pairs of objects when the attributes are a mixture of quantitative and qualitative attributes. For binary data, it uses the Jaccard coefficient (see below), producing a score of 1 for a present-present match and 0 for a mismatch. For absent-absent matches, the variable is omitted which is desirable since we do not want to have similarities based on mutual absences of attributes (Shennan 1997:228). For ordinal and nominal data, Gower's coefficient uses a simple matching coefficient. For nominal attributes, the Gower score is 1 if the two cases belong in the same category and 0 if they do not, thereby ignoring increasingly greater differences between numeric categories (Drennan 2010:280). For nominal data, the absolute value of the difference between the values for the two cases is divided by the number of ranked categories the variable has. The quotient is then subtracted from 1 to produce the Gower score in the form of a similarity. Continuous data are treated similarly, except the absolute value for the two cases is divided by the range of measurements in the entire batch, which is in effect a distance-based city block metric, similar to the Euclidean distance coefficient. Gower's coefficient works by first partitioning the data matrix into the three kinds of attributes. The data from each partition are then run through an appropriate part of the coefficient's formula, and all are mathematically blended into one value that is an overall measure of similarity (Romesburg 2004:172). Gower's coefficient welds together these three coefficients, with the resultant similarity being a mean of all the scores. Gower scores have a minimum of 0 and a maximum of 1. Gower's coefficient is capable of flexible weighting of attributes and therefore allows the user the possibility of varying the relative importance of the various attributes. Gower suggests (1971, p. 861) that although this is not advisable as an initial procedure, it ought to be reasonable once certain attributes can be seen to be more significant than others.

### ***Jaccard's Coefficient and Binary Data***

Jaccard's coefficient is a similarity measure in which data are coded as "1" meaning the attribute is present and "0" when that attribute is absent. The Jaccard coefficient is defined as the size of the intersection between cases divided by the size of the union of cases. Put another way, the Jaccard coefficient is defined as the number of attributes that are coded as 1 for both cases in a pair-wise match divided by the number of attributes that are coded as 1 for either or both cases.

As mentioned above, the Jaccard coefficient is particularly useful when 0-0 matches give no information or would otherwise be an erroneous match.

One of the benefits of using a binary coefficient is that the data never needs to be standardized (Romesburg 2004:142) but it may involve a process of data transformation from other scales of measurement into a binary scale, which I have previously discussed. The Jaccard coefficient is widely used in biological numerical taxonomy and has also had a wide application in archaeology (refs).

### ***Unweighted Pair Group Method using Arithmetic Averages***

I also use Unweighted Pair Group Method using Arithmetic Averages (UPGMA), also called Average Linkage, in the cluster analysis of funerary petroforms at Rocky Point. Summarizing Romesburg (2004:12-23), this clustering method proceeds in the pairwise matching of the two most similar cases (based on the correlation between attributes). These two cases (A and B) form the nucleus of the cluster. At this stage the average similarity within the cluster is then calculated. To determine which case (C) is added to the cluster, UPGMA compares the similarity of the remaining cases to the average similarity of the cluster. The next case to be added to the cluster is the one with the highest similarity to the average similarity value for the cluster. Once this third case has been added, the average similarity within the cluster is recalculated. The next case (D) to be added to the cluster is the one most similar to this new value of the average similarity, and so on, until a dendrogram is produced. At the top of the dendrogram are all cases as a single cluster, and at the bottom are all cases as individual clusters. The analyst must decide where to 'cut' the dendrogram and determine the best number of clusters within the resulting cluster solution.

I employ UPGMA because it is particularly good at picking up outliers in the data (Baxter 1994:179) and tends to produce clusters with rather low within-cluster variance (Mooi and Sarstedt 2011:252). In other words, the method is a good balance between defining larger classes of funerary petroforms that share similar attributes, while retaining sensitivity to single out those features that are categorically different (Romesburg 2004:22).

### ***Attribute Selection***

Philip and Ottaway (1983) conclude that there is a strong, often unconscious, tendency for the topologist to base their classification overwhelmingly on one attribute. In the case of

burial cairns and mounds, these features are traditionally classified by the relative amount of soil to stone, and secondarily to their volume (e.g., Lepofsky, et al. 2000; Oakes, et al. 2008; Thom 1995). Other aspects of funerary petroform morphology, however, have not been considered and to date no satisfactory patterning in the morphology of these features has been identified in the region.

The morphological analysis entailed three dimensions of feature construction: the metric attributes of *volume* and *number of visible stones*; the morphological attributes of *outline*, *peripheral structure*, and *percentage of soil fill*; and stone constituents including *peripheral and interior stones types* and *peripheral and interior stone sizes*. Finding the best cluster solution was in itself a heuristic process of attribute inclusion and exclusion, attribute coding, the selection of a similarity matrix and cluster algorithm, different methods of “cutting” the dendrogram and validating the final cluster solution. This range of decisions must be made with regard to the nature of the data being clustered and the research objectives.

The first step is deciding which attributes to include and exclude from cluster analysis. This involves assessing which variables might be potentially socially meaningful, a difficult proposition since the idea of cluster analysis is to demonstrate the significance of patterns in the data that would otherwise be hidden from archaeologists. But the decision of what variables to include and exclude will affect the overall “correctness” of the results and the kind of social information that might emerge in the analysis (McHugh 1999:71). The inclusion of attributes that are not socially significant, however, can produce noise (Milligan 1989). Also, adding more variables does not necessarily clarify clustering and may even negatively affect it: “rather than adding variables to a cluster clustering problem as to maximize information potential, they should limit the number of variables to the smallest number required to adequately capture the heterogeneity of the analyzed populations” (Price 1993:260). The attributes to be included must be defined and selected carefully and redundancy and interdependence of variables should be avoided (Read 1982). In the Rocky Point assemblage, some attributes were excluded for the similarity matrix. Deliberately leaving some attributes out of the data matrix obviously gives them a zero weight and they are not factored into the similarity matrix (Romesburg 2004:211). This had to be done carefully as it is in fact a form of weighting. The justification for this relates to a second type of weighting in cluster analysis: conducting an R-analysis of the data to identify highly correlated variables. Correlated variables are surrogates of each other and introducing

highly correlating attributes, such as length and width, in the similarity matrix means that this aspect of feature morphology is counted twice. To counteract this, correlating attributes such as *length*, *width* and *height* were expressed as *volume* for purposes of the similarity matrix, reducing three correlating attributes to one variable representing the three metric ones.

Non-correlating attributes were also excluded from the similarity matrix. These include the attributes of *feature profile*, *built against erratic*, *built against bedrock*, *horizontally placed stones*, *vertically spaced stones*, *capstones*, and *endstones*. The attribute *profile* was removed because it was very subjective to evaluate in the field and was likely affected by deflation and other site formational issues. Excluding the other attributes, I am following the cautionary advice of Read and Russell (1996:667), who state that in many cases we do not know which attributes we have measured will be relevant to the patterning of the data and so archaeologists take many measurements to be prudent. But the presence of irrelevant variables can actually hide structure present in the other variables if their distributions are independent of the significant ones and they are analyzed together (Shennan 1997:259). Furthermore, efforts should be made to avoid very rare present/absent binary attributes, where the many absent scores can lead to artifacts being grouped together on the basis of attribute absence and not attribute presence. I nullified this effect however by my choice of Gower's coefficient for the similarity algorithm, which ignores 0-0 matches (Shennan 1997:232). For the initial iterations of the cluster analysis process, I included all attributes. This resulted in very poor clustering, with the resultant clusters lacking internal homogeneity and external heterogeneity. I determined after a process of running 10 iterations of cluster analysis using the same similarity matrix and clustering algorithm which attributes produced noise and which seemed to produce useful and heterogeneous clusters. This recursive and heuristic process ultimately meant removing all attributes, which occur in only a small number of cases. In effect, feature morphology was evaluated on the overall shape of the feature, the dimensions of the feature, the type and size of stone used to build them, and the relative proportion of soil to stone.

The other important attribute excluded from the cluster analysis was provenience. In general, spatial data has not been directly factored into archaeological applications of cluster analysis. More commonly, for studies incorporating more than one cemetery, a cluster analysis is conducted for each cemetery, a spatial analysis based on the results of the cluster analysis is then conducted for each cluster within each cemetery, and then a comparative analysis of the intra-

cemetery cluster and spatial analyses concludes each study (e.g., Goldstein 1976, 1980, 1981; O'Shea 1984; Pader 1982). Conducting a cluster analysis for each individual cemetery is a *defacto* and *a priori* form of spatial clustering, but this bifurcation is often tied to research objectives, such as comparing two different populations of people and their burial practices.

Conducting a cluster analysis independent of spatial data provides an opportunity to independently determine if the morphological cluster analysis will produce spatially correlated results when the spatial dimension is reintroduced into the morphological cluster solution. In other words, conducting a separate morphological cluster analysis and then examining the spatial results of that analysis might determine if certain kinds of burial features are specifically situated within certain places or heterogeneous in their distribution between cemeteries, rather than presupposing that their location is a significant attribute in understanding the manner of funerary petroform construction.

### **Data Coding**

Coding of data is vitally important as it determines the results of any subsequent statistical analysis (McHugh 1999:63). Hodson pointed out that coding data for cluster analysis must not break up cohesive information into non-relatable fragments (Hodson 1990:16). Coding of the Rocky Point data involved decisions about what information regarding funerary petroform morphology and construction was significant. This was aided in part by the results of the univariate and bivariate statistics, but a level of subjectiveness is still involved. For example, even if an attribute was significant to the people who made these features, was the number or specific placement of that element, such as a granodiorite boulder, important or was the significance simply the presence or absence of that boulder? The decision on what attributes to include and how they were coded was, therefore, also based on experiential knowledge learned through many years of observing and recording these features and noticing patterns or themes in the use and placement of stones and soil that occurred throughout the large assemblage of funerary petroforms. Coding and attribute inclusion was a recursive process involving 15 iterations of cluster analysis before I settled on a set of coded attributes that produced meaningful clusters. The final attributes selected for cluster analysis, their data type, and their coding is illustrated in Table 26 below. As mentioned above, there are also problems in collapsing attribute classes into single binary variables if the role of absent-absent matches is not considered.

### **Missing Data and Excluded Attributes**

Using a program that is capable of handling missing data was also necessary. Although there were only a few cases missing data, it is important that spurious clusters are not created as a consequence of missing data (O'Brien 1978:247). Clustan is capable of ignoring missing fields of data, which was important to this dataset.

Non-correlating attributes were also excluded from the similarity matrix. These include the attributes of *feature profile*, *built against erratic*, *built against bedrock*, *horizontally placed stones*, *vertically spaced stones*, *capstones*, and *endstones*. The attribute profile was removed because it was very subjective to evaluate in the field and was likely affected by deflation and other site formational issues. Excluding the other attributes, I am following the cautionary advice of Read and Russell (1996:667), who state that in many cases we do not know which attributes we have measured will be relevant to the patterning of the data and so archaeologists take many measurements to be prudent. But the presence of irrelevant variables can actually hide structure present in the other variables if their distributions are independent of the significant ones and they are analyzed together (Shennan 1997:259). Furthermore, efforts should be made to avoid very rare present/absent binary attributes, where the many absent scores can lead to artifacts being grouped together on the basis of attribute absence and not attribute presence. I nullified this effect however by my choice of Gower's coefficient for the similarity algorithm, which ignores 0-0 matches (Shennan 1997:232). For the initial iterations of the cluster analysis process, I included all attributes. This resulted in very poor clustering, with the resultant clusters lacking internal homogeneity and external heterogeneity. I determined after a process of running 10 iterations of cluster analysis using the same similarity matrix and clustering algorithm which attributes produced noise and which seemed to produce useful and heterogeneous clusters. This recursive and heuristic process ultimately meant removing all attributes that occur in only a small number of cases. In effect, feature morphology was evaluated on the overall shape of the feature, the dimensions of the feature, the type and size of stone used to build them, and the relative proportion of soil to stone.

### **Weighting**

In cluster analysis, every funerary petroform is considered on the basis of all its chosen attributes, which is the greatest advantage of cluster analysis over conventional archaeological

classification methods. There are situations, however, where differential weighting of variables is appropriate to the research question (De Soete, et al. 1985; Hall 1965; Williams, et al. 1964). The decision to weight variables should not be done in advance of trials with unweighted variables (Philip and Ottaway 1983) but it is reasonable when certain attributes are determined to be more significant than others (Gower 1971:861) or when it can improve cluster recovery appropriate to the research question (De Soete, et al. 1985; Hall 1965; Williams, et al. 1964).

The Gower coefficient cluster analysis was initially conducted without weighting any variables. This produced some good smaller clusters, but the larger clusters lacked internal homogeneity and external heterogeneity due to the overweighting of the attributes *peripheral and internal stone size* due to the way it was coded. This was a *de facto* form of weighting that over-emphasized the *stone size* attributes in the similarity matrix, accounting for 6 out of 13 attributes. When considering the *peripheral and interior material* attributes as well, attributes relating to the just the kind of stones accounted for 8 of the 13 feature attributes, at the expense of other feature attributes. Attempts were made to re-code *stone size* as two attributes instead of six, but it was clear that valuable data regarding the different proportions of stone sizes were being lost. I decided to weight the *feature morphology* and continuous variables of *volume* and *number of stones*, meaning that each attribute contributed twice towards the resemblance between objects and in turn affected the similarities of the objects in the dendrogram (Table 26). In this sense, I am not weighting variables because I deem them to be more significant than others; I am weighting them so they will have an equal contribution to the similarity matrix, counteracting the weighting imposed by attribute coding. The Jaccard coefficient cluster analysis did not require any weighting because the other non-stone related attributes contributed more equally to the similarity matrix by virtue of the binary coding (Table 27).

### **Variable Standardization and Factor Scores**

I did not standardize the continuous data, which is a common procedure when dealing with variables with larger variances. The idea is that standardizing recasts the values in dimensionless units, thereby removing the arbitrary effects and makes the attributes more equally contribute to the similarities between objects (Romesburg 2004:78). I did not use standardization for three reasons. First, I am unaware of any study critically examining how standardization works with a mixture of categorical and numerical variables (Milligan and Cooper 1988:183). Second, the use of standardized data may actually eliminate the discriminatory effects of the

variables that best distinguish groups (Aldenderfer and Blanshfield 1984; Manly 1994). Lastly, the traditional z-score formula is not an especially effective for of standardization (Milligan and Cooper 1988) and is the only form of standardization or transformation available in the Clustan program I used (and this is the only commercially available package that uses Gower's similarity coefficient).

**Table 26: The Gower coefficient attributes, data type, coding, and similarity contribution used in the cluster analysis of funerary petroforms at Rocky Point.**

Feature aspect	Attribute	Data type	Coding	Similarity weight	Similarity contribution
Morphology	Outline	Nominal	1. curvilinear 2. straight 3. irregular	2	4
	Soil fill %	Ordinal	1. 1-25 2. 26-50 3. 51-75 4. 76-100 5. Indeterminate	2	
Stones	Peripheral material	Nominal	1. mostly till 2. mostly bedrock 3. equal till/bedrock 4. soil only	1	8
	Interior material	Nominal	1. mostly till 2. mostly bedrock 3. equal till/bedrock 4. soil only	1	
	Peripheral cobbles present	Binary	0. absent 1. present	1	
	Peripheral boulders present	Binary	0. absent 1. present	1	
	Peripheral large boulders present	Binary	0. absent 1. present	1	
	Interior cobbles present	Binary	0. absent 1. present	1	
	Interior boulders present	Binary	0. absent 1. present	1	
	Interior large boulders present	Binary	0. absent 1. present	1	
Metrics	Volume	Continuous	Value (unstandardized)	2	4
	Number of stones	Continuous	Value (unstandardized)	2	
Attribute weights total:				16	16

It is also common practice to use factor scores, calculated prior to cluster analysis, and then included as attributes in a cluster analysis. O'Shea noted, however, that using factor scores

resulted in a lack of structure in his cluster solution and as a consequence, he used the raw data for input which produced meaningful structure (O'Shea 1984:172).

**Table 27: The Jaccard Coefficient attributes, data type, coding, and similarity contribution used in the cluster analysis of funerary petroforms at Rocky Point.**

Feature aspect	Attribute	Similarity Matrix	Coding	Similarity contribution
Morphology	Feature outline	Curvilinear outline	0=absent, 1=present	3
		Straight-sided outline	0=absent, 1=present	
		Irregular outline	0=absent, 1=present	
	Soil fill %	Soil fill 1-25%	0=absent, 1=present	4
		Soil fill 26-50%	0=absent, 1=present	
		Soil fill 51-75%	0=absent, 1=present	
		Soil fill 76-100%	0=absent, 1=present	
	Indeterminate	M=missing		
Stones	Peripheral material	Mostly till	0=absent, 1=present	4
		Mostly bedrock	0=absent, 1=present	
		Equal till/bedrock	0=absent, 1=present	
		Soil only	0=absent, 1=present	
	Interior material	Mostly till	0=absent, 1=present	4
		Mostly bedrock	0=absent, 1=present	
		Equal till/bedrock	0=absent, 1=present	
		Soil only	0=absent, 1=present	
	Peripheral stone size	Cobbles	0=absent, 1=present	3
		Boulders	0=absent, 1=present	
		Large boulders	0=absent, 1=present	
	Interior stone size	Cobbles	0=absent, 1=present	3
		Boulders	0=absent, 1=present	
Large boulders		0=absent, 1=present		
Metrics	Volume	Class 1 (0.08-4.07m <sup>3</sup> )	0=absent, 1=present	4
		Class 2 (4.17-13.2m <sup>3</sup> )	0=absent, 1=present	
		Class 3 (16.27-34.6m <sup>3</sup> )	0=absent, 1=present	
		Class 4 (56.2-102.9m <sup>3</sup> )	0=absent, 1=present	
	Number of stones	Class 1 (0-31 stones)	0=absent, 1=present	4
		Class 2 (78-150 stones)	0=absent, 1=present	
		Class 3 (34-75 stones)	0=absent, 1=present	
		Class 4 (170-300 stones)	0=absent, 1=present	
Total attribute weight				29

## **Appendix 6: Point Pattern Analysis Methodology**

This appendix covers those aspects of point pattern analysis methodology not outlined in Chapter 9. It includes a discussion on kernel density analysis, multi-distance spatial cluster analysis (Ripley's  $K$ -function)

### **Estimating Intensity: Kernel Density Estimation**

An initial step in analyzing spatial point patterns is to summarize the data set in terms of the intensity of the distribution. The Rocky Point dataset has a clustered distribution of events, but the definition of spatial cluster membership is difficult to define because of the 'fuzzy' nature of the boundaries defining concentrations of burial features. The problem of how to best define cluster location and size in this case may be by an approach that describes the changing density of the features. These approaches fall under the category of *intensity analysis* and allow archaeologists to describe and visualize the changing frequency of events that occur within a given area, to compare different phenomena within the same area, or against the same phenomenon in different areas (Conolly and Lake 2006:175-176). A contour or surface plot of the density function for a heterogeneous Poisson process is an exploratory measure useful for indicating areas with higher and lower probabilities of an event occurring (Waller and Gotway 2004). Variations in point density across an area can often be seen by eye, but a coloured or contoured map can be useful to visualize hot spots and gradients in event density.

Kernel density estimation can be used to assess and visualize probability distributions (Bailey and Gatrell 1995; Diggle 2003). Conceptually, distance bands are assigned around each event and where they overlap for neighbouring events, the height of the surface increases, representing an estimate of spatial intensity. The density function is higher in areas with many events and lower in areas with few events, which is often expressed with contour lines like a topographic map, or a colour gradient. A smooth, symmetric function called the *kernel* is placed over events, typically a Gaussian probability density function. The kernel values associated with each observed event are summed, producing a smooth surface estimating the density function. The *bandwidth*, or spatial extent, of each kernel controls the overall amount of smoothness in the estimated intensity surface with larger bandwidths corresponding to smoother surfaces. Essentially, the kernel takes each observation and spreads its influence over a local area corresponding to the kernel function.

In applying kernel estimation, we must specify two items: the kernel function and the bandwidth. I use the Gaussian probability density function because it typically produces smoother surfaces, appears regularly in the literature, and has well-studied theoretical properties. The differences between estimates based on different kernel functions are often small and any symmetric kernel is adequate (Waller and Gotway 2004:132). I use the spatial statistics program PAST to conduct the kernel density analysis, because unlike ArcGIS, PAST allows the user to select the shape of the kernel placed over the event (Hammer, et al. 2001). ArcGIS is limited to a quadratic function, whereas PAST allows a Gaussian probability density function.

The precise form of the kernel only weakly influences intensity estimates; it is the bandwidth that has a greater effect on the results (Waller and Gotway 2004:133). The appropriate choice of bandwidth depends on the purpose intended for the smoothed estimate, with large bandwidths producing more smoothing and smaller bandwidths retain more local features but exhibiting spikes at isolated events locations (Conolly and Lake 2006:177). Exploratory analyses may consider several bandwidths to determine general patterns, and the analyst may determine somewhat subjectively the sensitivity of the intensity estimate to the choice of bandwidth (Waller and Gotway 2004:133). There is a more formal process of defining the kernel size, called the Asymptotic Mean Integrated Squared Error, or AMISE (Scott 1992; Wand and Jones 1995).

Kernel density estimation is a useful exploratory tool for the identification of hot spot and cool-spot analysis. While it is not strictly a form of cluster analysis, it does function as such since the density function identifies areas with many events (de Smith, et al. 2007:211-212), although the boundaries as such are more fuzzily defined than a hierarchical nearest neighbour or K-means clustering process. The benefit of using kernel density analysis to define possible hot-spots and cool-spots is that in addition to identifying spatial clusters of features, it also demonstrates the intensity of the features within each cluster.

### ***Multi-Distance Spatial Cluster Analysis (Ripley's K-function)***

Multi-Distance Spatial Cluster Analysis, based on Ripley's K function, is a statistical tool commonly used in point pattern analysis to analyze completely mapped spatial point data for all events in a pre-defined study area (Ripley 1981). It is a measure of dispersion used to estimate the presence of spatial dependence among events. Ripley's *K*-function is used for testing hypotheses

about data randomness, clustering, and regularity. This technique uses the distance measure between all possible combinations of points to calculate inter-event distances. More information is available about point patterns using Ripley's  $K$ -function than any other PPA method (Boots and Getis 1988:56). It can be used to summarize a point pattern and hypothesize about that pattern using bivariate or multivariate data to describe relationships between two or more point patterns (Dixon 2002:1796).

In this method, the number of neighbouring features is counted within a given distance of each feature. If the number of features found within the distance is greater than random distribution, the distribution is clustered. Ripley's  $K$ -function defines a measure of clustering or dispersion of points using the distance between them, but unlike nearest neighbour analysis, the  $K$ -function includes all neighbours within a given distance, not just the distance to each feature's single nearest neighbour (Mitchell 2005:97). In many feature pattern analysis studies, such as Nearest Neighbour, the selection of an appropriate scale of analysis, often in the form of a distance threshold, is required. One of the main advantages of Ripley's  $K$ -function, however, is the ability to summarize spatial dependence (feature clustering or feature dispersion) over a range of distances. Ripley's  $K$ -function can detect different scales in point patterns. It is quite common that points are clustered at small scales but the clusters are dispersed, or, conversely, points may avoid each other locally but cluster at larger scales. Most spatial processes are scale dependent, and their characteristics may change across scales (Krivoruchko 2011:556). The ability of Ripley's  $k$  function to analyze point data at multiple scales is advantageous because it is expected that funerary petroform spatial patterns will show different clustering at both larger and smaller scales, with patterns changing depending upon particular spatial processes at play. For example, there may be Village-specific burial practices at the larger scale and family specific practices at the smaller scale. Ripley's  $K$ -function illustrates how the spatial clustering or dispersion of feature centroids changes when the neighbourhood size changes, which cannot be done with other PPA tools such as Nearest Neighbour methods. Because nearest neighbour is affected by the size of the study area and the process does not allow for statistical validation of the results (Conolly and Lake 2006:165). Recently, there have been archaeological applications of Ripley's  $K$ -function (e.g., Bevan and Conolly 2006; Sayer and Wienhold 2012) that have demonstrated its utility for examine the nature of clustering at multiple scales within archaeological sites and landscapes.

Summarizing Mitchell (2005),  $K$  refers to the concentric distance bands that are established around each point. The process first calculates half the maximum dimension of the study area, which becomes the maximum distance. It then divides this distance by the number of specified intervals. The more distances used, the smoother the resulting data curve. The points enveloped within the increasing distance bands are counted and these counts are averaged over all central points. For a Poisson pattern, this results in a curve where the number of points increases smoothly as the square of distance. Departures from Poisson can be detected by a Monte Carlo procedure, simulating a large number of random point patterns to produce (pointwise) confidence envelopes. This calculation of inter-event distances allows for tests of statistical significance, making it a form of second order statistical analysis. The resulting plot produces a parabolic line as the number of points increases with the square of distance. I use Ripley's  $K(l)$ -function, which is a square root function, to produce a straight and thus easier to interpret line (e.g., Sayer and Wienhold 2012).

The principle assumption necessary for using Ripley's- $K$  function is the assumption of stationarity, meaning that there should be no covarying effects on the point pattern distribution. In the case of Edye Point, covarying effects would be the low-lying and marsh areas, as well as the bedrock exposures, which constrain the places where people could conceivably build funerary petroforms. At the Yates Cemetery, a covarying effect would likely be slope. Measures must be taken to mitigate these covarying effects. This can be done through a statistical estimation of the degree of the covarying effects on the spatial point pattern, and then factor that in the  $K$ -function; an approach that would be appropriate for the Yates Cemetery. Another way, when possible, would be to define the study area as a series of polygons encapsulating all of the funerary petroforms so that the features are all within environmentally homogenous units; an approach that would work with Edye Point since the features are all built on relatively flat till fields.

The simplest use of Ripley's  $K$ -function is to test for complete spatial randomness for bivariate events (event type and location). For the Rocky Point data, this means that feature types can be tested for CSR within each cemetery. This entails the calculation of inter-event distances based on the expected number of pairs of points in a Poisson process of CSR. Ripley's  $K$ -function compares the number of observed pairs with the expectation of the number of pairs at all distances, taking into consideration the density of points, the borders and the size of the sample (Boots and Getis 1988:57). The output of the procedure is a chart with the  $K$  values on the y-axis

against the distance on the x-axis. If at any given distance, the line for the observed values is above the line for CSR, the distribution is more clustered than expected for a random distribution. If the value line is below the CSR line, the distribution is more dispersed (Mitchell 2005:99). With increasing distance, a peak in the chart means clustering at that distance while a dip in the line below CSR means that the distribution is less clustered at a distance.

It is also possible to use this function to test hypotheses using multivariate data, which would be useful if considering the interplay between different variables within and between the cemeteries. For example, Ripley's  $K$ -function can be used to evaluate whether one type of burial feature tends to be surrounded by funerary petroforms of the same type.

The conventional way to normalize the  $K$ -function (Ripley, 1981) is to transform it to the  $L$  function, which I do, using Besag's (1977) transformation of Ripley's  $K$ -function for a spatial point pattern. This command computes an estimate of the  $L$ -function for the spatial point pattern  $X$ . The  $L$ -function is a transformation of Ripley's  $K$ -function:

$$L(r) = \text{sqrt}(K(r)/\pi)$$

where  $K(r)$  is the  $K$ -function.

Ripley's  $K$ -function is used for exploratory purposes, but it can also be used as the basis for statistical inference. It is possible to incorporate a Monte Carlo test to the  $K$ -function for each value of  $r$  (distance). When the observed  $K$ -function falls outside of the envelope, there the points lie outside the typical range of values of the  $K$ -function for a completely random pattern (Baddeley and Turner 2005:120). The Monte Carlo test is a test based on simulations from the null hypothesis and has been applied to spatial statistics by Ripley (1977, 1981). Applied to the  $K$  function, Monte Carlo tests consider the probability of the observed pattern falling outside of the simulated curved. A test which rejects the Null hypothesis is one in which the observed  $K$  function falls outside of the simulated envelope.

### ***Nearest Neighbour Hierarchical Cluster Analysis Methodology***

For nearest neighbour hierarchical clustering (NNH), a specific probability level is specified by the researcher, which the GIS uses to calculate the distance within which features will be considered for a cluster. This confidence interval is the range in which the distance between two features may occur simply by chance, factored within the overall area of the sample window (Mitchell 2005:154). If the measured distance is greater than the high end of the range,

the features are farther apart than would be expected by chance. NNH uses the lower end of the range, called the *threshold difference*, to find those features that are closer than would be expected by chance (in other words, clusters). The confidence interval is calculated using the mean distance, measured in a Euclidean, or straight-line, distance that would occur between points in a random distribution, called the *mean random distance*. The GIS determines the confidence interval by calculating the standard error for the distribution of points, measuring how much the mean random distance varies around its average. The GIS then uses the specified probability level to look up at value (t) in a Student's t-distribution table. The higher the probability, the wider the confidence interval and the lower the threshold distance, since features must be closer to be part of a cluster. The lower the probability, the narrower the confidence interval and the higher the threshold distance, meaning that the GIS will include points farther apart as a cluster.

Once the GIS calculates the threshold value, it measures the distance between a pair of points and assigns a cluster to all point pairs having a distance less than the threshold. Any point outside this threshold is not considered for the cluster. As such, a cluster can consist of just two points, but the user must specify the minimum number of points required to form a cluster. In practice, this is typically based on the researchers knowledge of the features they are analyzing (Mitchell 2005:156). If a cluster has fewer than the minimum number of points specified, the cluster is dissolved. Any points not included within a threshold of one of the clusters will remain outside of any cluster, thereby separating statistically valid clusters from potential noise. After creating the clusters, the GIS finds the median centre for each cluster and calculates a new confidence interval and threshold distance based on the centres and then assigns the centres to new clusters, continuing this process while creating clusters at several spatial scales.

The resulting clusters are displayed using standard deviation ellipses, and it is common for several deviations to be used for each ellipse to cover the features at the centre of any cluster, as well as those in the periphery of the cluster, thereby giving some sense of the spatial extent of each cluster and the relative level of dispersion or concentration of clusters. Of course, NNH only identifies a collection of points that are close together, it does not explain why they are together. For that, additional research and analysis is required. Clustering could be due, for example, to attributes of the landscape that promote a location over others as an appropriate place to bury the dead, or spatial segregation for certain peoples be buried in specific places. To begin examining the causes for clustering, it is necessary to compare the clusters to a control group.

The principle method is to use all burial features as a control group and then to compare the clustering of each type against the entire assemblage (Mitchell 2005:160).

To conduct NNH, I used the *CrimeStat 3.3* software (Levine 2007, 2006), and while developed for law enforcement, is essentially analyzing spatial point pattern processes, be they crimes or human burials. I used the *CrimeStat* software because it has extensive point pattern analysis functionality including NNH, which is not found in ArcGIS. Output from CrimeStat, however, is compatible with a variety of GIS and was imported into ArcGIS 10.1 for mapping and further analysis. To conduct the analysis, I set the clustering algorithm to use a minimum of three points in cluster formation, with a 99.9% confidence interval assigned to it, running 99 Monte Carlo simulations. Each NNH analysis was done within the area of each site-specific study window. I also ran a user-defined and arbitrary NNH to form clusters with a minimum membership of 5 features set at a 50m threshold. Standard deviations for CrimeStat come in 1, 1.5, and 2 standard deviations.